

THE GLASGOW SCHOOL OF ART

Magennis, Maeve (2014) Drawing Mackintosh's masterpiece: the Glasgow School of Art, a sectional study [dissertation]. The Glasgow School of Art, Glasgow.

<http://radar.gsa.ac.uk/5453>

Copyright and moral rights for this dissertation are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This dissertation cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the dissertation must be given

**Drawing Mackintosh's Masterpiece:
The Glasgow School of Art
A Sectional Study**

Maeve Magennis

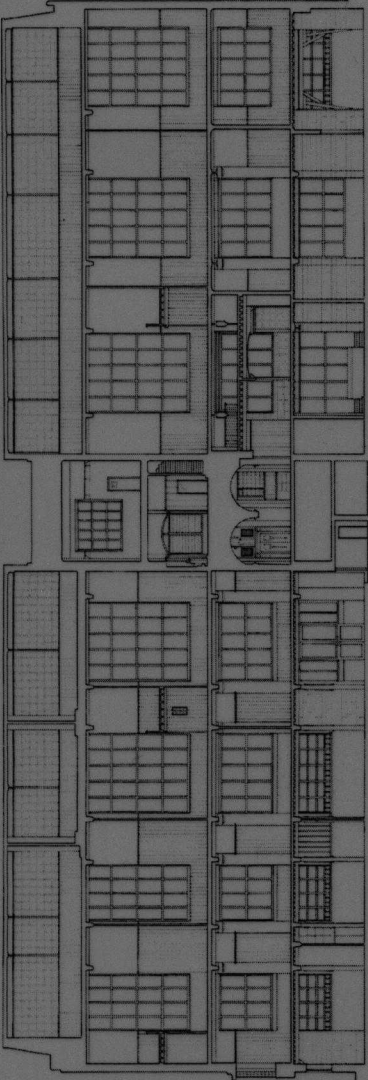
Contents

- 1 Acknowledgements
- 2 Glasgow School of Art Sections
- 5 Introduction
- 6 Mackintosh and Modernity
- 13 Mackintosh's Architectural Language
- 17 A Sectional Study
 - Section A
 - Section B
 - Section C
- 29 Conclusion
- 31 Bibliography
- 37 Appendix
 - Selection of Mackintosh Drawings –Original Plans and Sections
 - Longitudinal, South Facing Sections Drawn by Sorrell Challands, 2003
 - Study of The Glasgow School of Art
 - Initial Sectional Study Sketches
 - Survey Sketches and Rough Work

Acknowledgements

I am honoured to have been granted the opportunity to study Charles Rennie Mackintosh's Glasgow School of Art in detail, and would like to express my gratitude to Mark Baines for that opportunity.

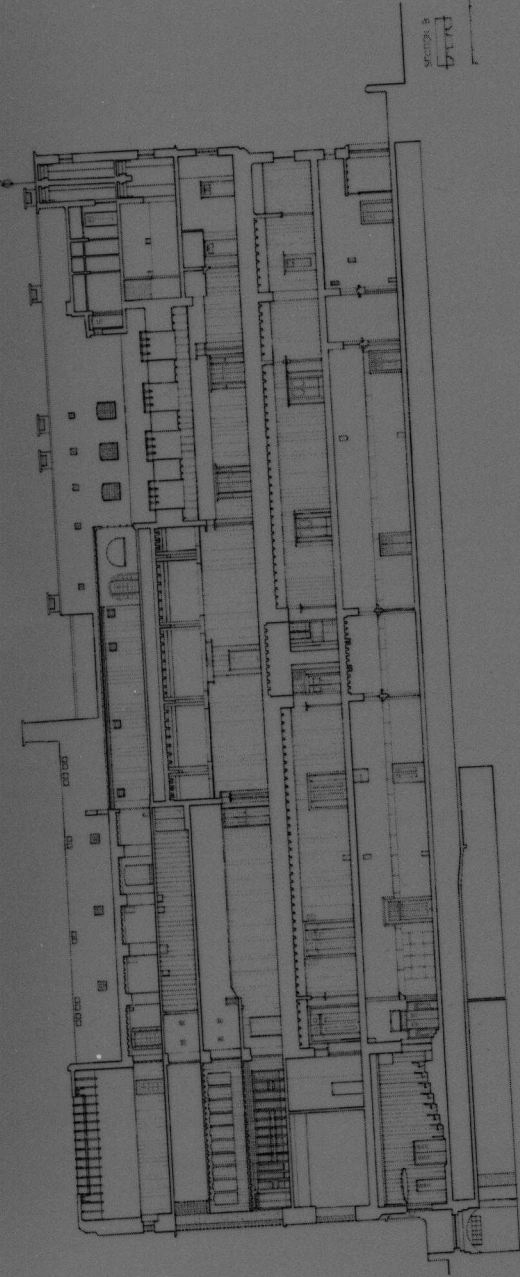
Thank you, also, to Peter Trowles, Curator of The Mackintosh School of Art, for granting me access to spaces which few other students have been permitted and for sharing his expertise. An extended thank you to the staff of The School of Art for their accommodation and patience during the surveying stages of the project, and to the Estates and Archive Departments for their contribution towards my research.

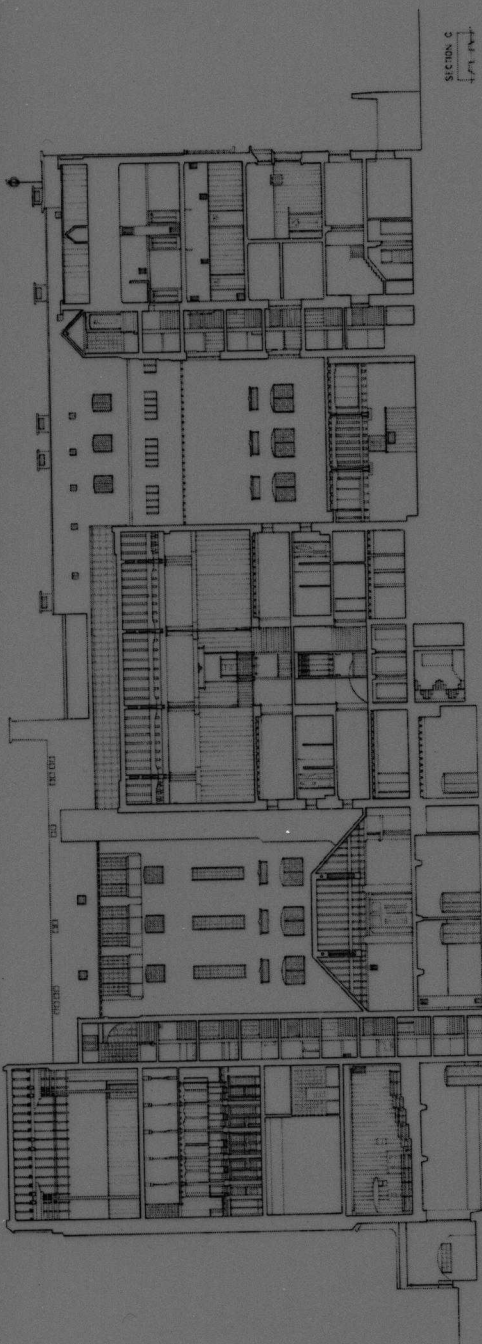


SECTION A



SECTION 2
PLAN





Introduction

The work of Glaswegian architect and designer, Charles Rennie Mackintosh, is celebrated all around the world. Dubbed the 'Father of modern Architecture'¹, Mackintosh is now recognised as a leader in the modernisation of architecture despite his brief career.

I have spent some months studying in detail his principal project, one of the most celebrated buildings in Britain², The Glasgow School of Art. I have prepared three longitudinal, north facing sections to complement an existing, south facing study completed in 2003. I will use these sections to give an insight into the architect's intentions that drove modernistic ideas forward in architecture. I will also explore examples of his architectural expression, technological exploration and sensitivity to the context as demonstrated throughout the design of The School of Art. In using the longitudinal sections as a means of discovery, I plan to investigate elements of Mackintosh's design that have not been explored from this perspective.

¹Gavin Stamp, "Mackintosh, Burnet and Modernity", in *The Age of Mackintosh*, (Edinburgh, University Press, 1992) pp.11

²The Glasgow School of Art was voted Britain's favourite building over the past 175 years by a poll conducted by The Sunday Times this year. Stuart MacDonald, (*Mackintosh is Britain's Favourite Building*), The Sunday Times, accessed 24th March 2014, http://www.thesundaytimes.co.uk/sto/news/uk_news/article170540.ece, Mackintosh building is Britain's favourite | The Sunday Times, www.thesundaytimes.co.uk

Mackintosh and Modernity

*'We must clothe modern ideas with modern dress.'*³ - Charles Rennie Mackintosh

It was Mackintosh's radical approach to design that guided many to a new Modernist architecture. He rebelled against the tired tradition of imitating history and past styles. Instead he sought to revolutionize this new age of industry and mass production with an attuned and complimentary architectural expression to mark the day. Paul Heyer, Professor of Architecture and Design in The New York School of Interior Design describes Mackintosh's approach; "Through creative initiative (he) encapsulates the evolution of our modern premise for existence and challenges more established, conventional norms."⁴

Mackintosh's appreciation for past architectures is not questioned as his sketchbooks relentlessly portray investigation and respect for historical buildings throughout Scotland, England and Italy (fig. 1.1)⁵. However, it seems he was aware that in a pioneering context such as Glasgow at the turn of the 20th century, an architectural revolution was inevitable, as he quotes;

"How absurd is it to see churches, theatres, banks, museums, exchanges, municipal buildings, art galleries etc, made in imitation of Greek temples. I am quite conscious of the dignity of Greek

³ Charles Rennie Mackintosh, 'Seemliness', in *Mackintosh's Masterwork; The Glasgow School of Art* ed. William Buchanan (Glasgow; Richard Drew, 1989) pp.23

⁴ Paul Heyer, "Charles Rennie Mackintosh: Links to the Founders of the Modern Tradition", in *Four studies on Charles Rennie Mackintosh* ed. Susan Lovell (New York: New York School of Interior Design, 1996) pp. 29

⁵ Elaine Grogan, *Beginnings; Charles Rennie Mackintosh's Early Sketches* (Oxford: Architectural Press, 2002)

temples... but to be imported into this country and set up for such varied purposes, they must surely lose all their dignity.”⁶

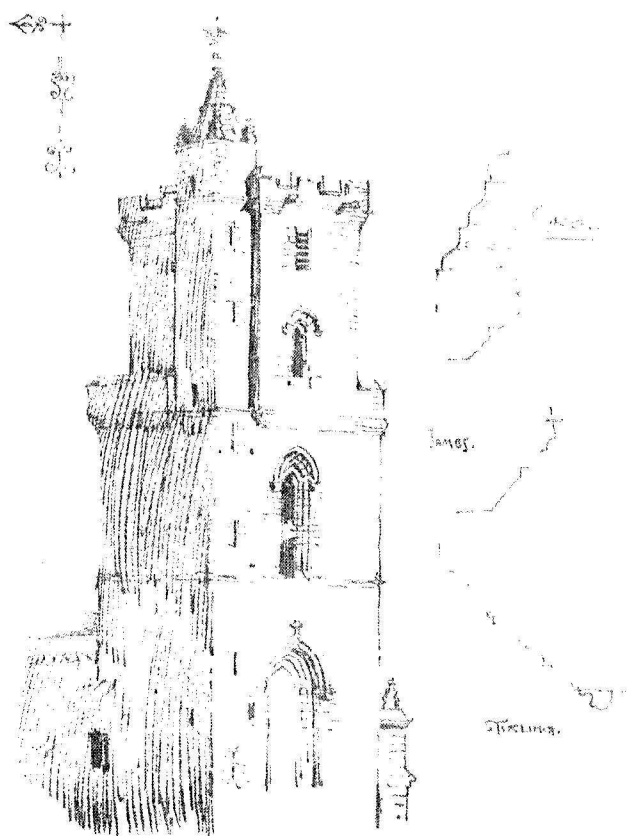


Fig 1.1

Mackintosh's sketch of the west tower of the Holy Church of Rude, Stirling. Studying Baronial architecture around Scotland

Dutch architect Aldo Van Eyck describes Mackintosh, “He shifted across the panorama of architecture like a true magician, taking with him what he wanted – little – and inventing the rest.”⁷

This ‘inventiveness’ is one of three descriptive labels used by author Alan Crawford to sum up Mackintosh’s achievements, along with intellect and originality.⁸ For me, these labels articulate the means by which the architect gained his authority and position in Architectural History and the Glasgow School of Art is, undoubtedly, the best artefact in which to read these qualities.

⁶ Charles Rennie Mackintosh, ‘Seemliness’, in *Charles Rennie Mackintosh: the architectural papers*, ed. Pamela Robertson (Glasgow: White Cockade, 1990) pp. 207

⁷ Aldo Van Eyck, *The Architects’ Architect, Charles Rennie Mackintosh*, Ed. Murray Grigor and Richard Murphy, (London: Bellew Publishing Company, 1993) pp. 48

⁸ Alan Crawford, *Charles Rennie Mackintosh* (London; Thames and Hudson, 1995) pp.204

Although his radical approach to design rejected the falsities of adhering to a 'style', he was highly influenced by a number of architectural themes, for example; Art Nouveau, Arts and Crafts, Japanese Modernism, Scottish Baronial, Vernacular – he drew on these in a bid to find a new modern architecture.

Arguably most recognised is his affinity with the Art Nouveau, which saw the application of richly crafted, symbolic, decorative motifs throughout the building. Mackintosh's relationship with friend and contemporary, Herbert McNair and the McDonald sisters, Margaret and Frances, who would become their respective wives, was a catalyst for his creative life. Known as 'The Glasgow Four', they shared an interest in this short lived Art Nouveau movement employing, 'line and form as a means of expressing meaning'⁹. The famous 'Glasgow style' was soon inspired. This novel movement bore its originality by intertwining Celtic and mythical parallels throughout its symbolism, "It appeared that what distinguished the Glasgow style of the Mackintosh group was its manifest character of a specifically local idiom: a certain relationship was present between the art of this new movement and 'the local spirit of Scotland.'¹⁰ The elaborate eeriness portrayed in these designs earned the group another affectionate name of 'The Spook School.'¹¹ This stylistic aspect of Mackintosh's work assured him recognition throughout Europe, reflected in numerous publications with the German magazine, *Dekorative Kunst* and a strong affiliation with the Secessionists in Vienna.¹²

The strong Scottish themes characteristic to Mackintosh's symbolism are an indication of his affiliation with his home, Glasgow, and the sensitivity he employs whilst designing in his native land. A theme of locality is apparent and strengthened by a contextual understanding in his approach to

⁹ Robert Mantho, "Challenges for an Architectural Language", in *Speculations on an architectural Language*, ed. Robert Mantho, Drew Plunkett (Glasgow, Charles Rennie Mackintosh Society, 2007) pp.10
¹⁰ William Eadie, *Movements of Modernity The Case of Glasgow and Art Nouveau*, (London: Routledge, 1990) pp.101
¹¹ MACKINTOSH, DVD, Murray Grigor (Scotland: IFA, 1963)
¹² Peter Trowells, "Charles Rennie Mackintosh: The European Connection", in *Four studies on Charles Rennie Mackintosh* ed. Susan Lovell (New York: New York School of Interior Design, 1996) pp.19

the Art School building. The use of blonde sandstone on all three of the street facades reflects the domestic tenements surrounding the school, perched high on the summit of Garnet Hill. The school sits comfortably facing north onto Renfrew Street, designed specifically to fit within the Glaswegian grid as the building absorbs the entire width of the block. Rendering the rear facade with harling over brick, a less expensive treatment, also imitates the utilitarian response of the Glaswegian tenement. Furthermore, the influences of Scottish baronial architecture are prominent within his School of Art. Featuring the turret form, complete with narrow oriel windows, discretely climbing the front and east facades (fig 1.2), led David Brett to conclude; "It is clear that he (Mackintosh) regarded vernacular architecture as 'natural', and therefore as rational and good."¹³

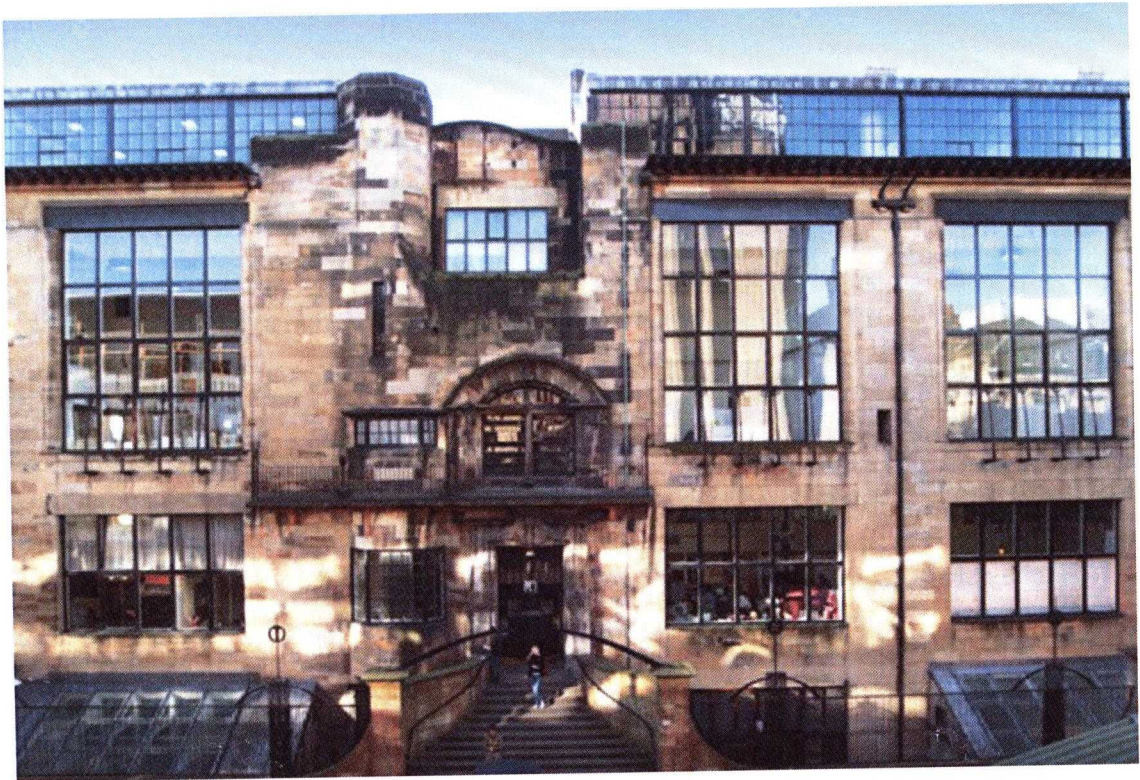


Fig 1.2
Glasgow School of Art entrance, notice the baronial style turret and oriel window suggesting the authority of the director's office, central to the studios on either side.

¹³ David Brett, *C.R. Mackintosh, The Poetics of Workmanship*, (London: Reaktion books, 1992) pp.44

The social context of his School of Art also holds an imperative authority within its design. At a time when Glasgow was “a spawning ground for the arts”¹⁴, we must understand how the conditions of the city were consequential to his legacy and his architecture. The strong craftsmanship, utilitarian materiality and hardy nature of the school resonate with the industrial processes which were prominent in Glasgow at that time. David Brett describes Mackintosh’s ‘working environment’ and how his close proximity to the industry of ship building was inescapable. When “the professional and trade context of the decorative arts was not one of patient craftsmanship, but of high-speed, technically advanced, semi industrial production.”¹⁵ Mackintosh sought to utilize this craftsmanship within his design, to celebrate it, in a manner similar to John Ruskin and the arts and crafts movement.

The influence of ship design and manufacture is evident in Mackintosh’s approach to structuring the School of Art. There are many scenarios throughout the building where one detects this, for example, the thin internal structure of exposed steel girders in the eastern wing and the rolled members in the later western wing.¹⁶ This assemblage of structure is depicted in the sections that accompany this essay (see section A). Additionally, the cantilevered nature of the ‘Hen Run’, (a glass and steel constructed pavilion linking the east and west wings of the second floor) follows a construction inextricably similar to that of a ship’s deck.¹⁷ This is documented in Section B. The inventive architect utilised this technology in the second phase of construction, to avoid a detrimental blocking of light into the Museum space below.

¹⁴ Heyer, “Links to the Founders of the Modern Tradition”, in *Four studies on Charles Rennie Mackintosh* pp.32

¹⁵ Brett, *The Poetics of Workmanship*, pp.18

¹⁶ George M. Cairns, “The Glasgow School of Art: The Leading Edge of Technology”, in *Architecture 1900*, ed. Peter Burman, (Shaftesbury; Donhead, 1998) pp.53

¹⁷ *Ibid*, pp.53

The forward thinking architect took advantage of the new technologies and opportunities of his time, making use of electricity, central heating, machine finished timber and plate glass.¹⁸ Mackintosh adopted a plenum system providing the School of Art building with both heating and air conditioning. The decorative grills, by which warm and clean the air was delivered, were effortlessly integrated within his architecture, illustrated in section B. The central plant is located under the main entrance, and due to the complex distribution and irregularity of room size and shape throughout the School, the duct system to service this is extensive.¹⁹ The author was granted access to this long service space that lies directly under the circulation of the basement, and similarly stretches east to west. The walls are lined with wooden hatches that begin each of the air ducts leading to the aforementioned ventilation grills in the spaces above. Each of the hatches is simply labelled with its coordinating space (fig 1.3) and would have been manually opened and closed by the school's janitors as necessary. On the occasional hot summer's day, a block of ice is believed to have been placed in the plenum, cooling the air.²⁰ This central heating and ventilation system was decommissioned in the 1920's and replaced with the radiator system that exists today.²¹

Remembered as the individualistic genius, "poised on the threshold of the modern movement"²², his modernistic motivations pushed the evolution of architecture forward. Mackintosh left the recurring recall and application of past historicism behind and propelled towards an inventive and expressive trend of originality and technology whilst conscious of his Glaswegian context throughout. David Brett interprets Mackintosh's work as "an attempt to create what recently has been called, 'critical

¹⁸ Andrew MacMillan, "A Modern Enigma: A Paradox of Reduction and Enrichment", in *Mackintosh's Masterwork: The Glasgow School of Art*, ed. William Buchanan (Edinburgh: Chambers 1994) pp.56

¹⁹ Cairns, "The Leading Edge of Technology", in *Architecture 1900*, pp.58

²⁰ Raheela Fitzgerald, Glasgow School of Art Tour Guide, Interview with Maeve Magennis, Personal Interview, Glasgow, 18th March 2014

²¹ Cairns, "The Leading Edge of Technology", in *Architecture 1900*, pp.57

²² Reyner Banham, *Age of Masters* (Toonbridge: Architectural Press, 1975) pp.12

regionalism', in which modernity of feeling, universal technology and a respect for locality are all held in balance"²³



Fig 1.3
Wooden slats that were manually operated allowing clean warm air around the building. Labels indicating corresponding spaces attached to each slat – this example states 'Shop store and room 25.'

²³Brett, *The Poetics of Workmanship*, pp.14

Mackintosh's Architectural Language

*'There is hope in honest error, none in the icy perfections of the mere stylist.'*²⁴

- Charles Rennie Mackintosh

Mackintosh has often been associated with the Arts and Crafts movement, as reflected in his celebration and exploitation of the industry and craftsmanship of Glasgow at the time. Furthering this notion is Mackintosh's holistic approach to the Glasgow School of Art building, designing everything from the contrasting yet unifying four facades of the school, to the intricately formed metal and glass light fittings of the library. William Buchanan, author of 'Mackintosh's Masterwork: The Glasgow School of Art', attempts to read the building and understand Mackintosh's motivations concluding; "a fundamental belief that art, architecture and the crafts were one creative whole."²⁵ The inherent architectural expressionism of The School of Art building is consistent with this arts and crafts association.

Mackintosh's regard for the 'natural and authentic' expression of a building's symbolic or functional meaning to convey its 'character' is fundamental.²⁶ In terms of the exterior, this architectural expression exists elusively and in a contrasting manner on each facade. It is reflected within the composition of windows, within the texture of the sandstone and the sculptural ornament that frames each of the entrances. Moreover, Mackintosh's interiors reflect this intimate and personal expression in abundance,²⁷ "When the status of the room justified it, he was happy to empty out a

²⁴ Charles Rennie Mackintosh, 'Seemliness', in *Mackintosh's Masterwork ; The Glasgow School of Art*, ed. William Buchanan (Glasgow; Richard Drew, 1989) pp.21

²⁵ Buchanan, *Mackintosh's Masterwork*, pp.21

²⁶ Johnny Rodger, "Putting Holl and Mackintosh in multi-perspective: the new building at the Glasgow School of Art", *arq*, vol. 17, no. 1 (2013)

²⁷ Mantho, "Challenges for an Architectural Language", in *Speculations on an Architectural Language*, pp.10

cornucopia of idiosyncratic ornament which played confidently with the conventions of architectural language.”²⁸

There is an undeniable essence of Mackintosh himself, expressed through his architecture; “what is to be heard, most clearly above all, in its corridors and staircases, its rooms and its studios, is the strong, clear, passionate voice of its creator.”²⁹ The personal fancies and romantic connotations of Mackintosh’s decorative designs provide an insight into some of his personal qualities. These are often revealed through the symbolism throughout the building. Most prominent is a respect of the natural form. The seed form, which occurs often throughout the School of Art (fig 2.1), is said to represent learning and as Mackintosh himself explains;

*“Art is the flower. Life is the green leaf. Let every artist strive to make his flower a beautiful living thing.”*³⁰

His sometimes cryptic narratives makes use of stained glass, engineered wrought iron and embossed wood to tell stories of love, learning, to celebrate life and as a consequence offer glimpses into his character. The decorative Art Nouveau ornamentation littered throughout the Glasgow School of Art is “an expression of Mackintosh’s intensely period, sensitive and neurotic personality.”³¹ It is interesting to note how the nature of the symbolism changes through time. The development of the building, built in two stages with a ten year gap in construction, captures the evolution of Mackintosh’s architectural aesthetic values. Mackintosh’s enthusiasm for the naturalistic line and

²⁸ Drew Plunkett, “The interiors of Charles Rennie Mackintosh”, in *Four studies on Charles Rennie Mackintosh* ed. Susan Lovell (New York: New York School of Interior Design, 1996) pp.11

²⁹ William Buchanan, *Mackintosh’s Masterwork ; The Glasgow School of Art*, (Glasgow: Richard Drew, 1989) pp.48

³⁰ Mackintosh, ‘Seemliness’, in *Mackintosh’s Masterwork ; The Glasgow School of Art*, pp.32

³¹ Banham, *Age of Masters*, pp.12

form had evolved within the time between these two stages³². This symbolism changes to a more orthogonal, ordered and geometrical device. This is seen in the rational composition of the western facade, the rigid detail of the wooden doors on the west wing and the decorative compositions of square tiles along the vertical circulation, (fig 2.2) all added in the second phase.

This change in style is often debated; some suggest the decade of practice and technical instruments had caused him to favour these orthogonal forms.³³ Some suggest he was influenced by his contemporaries in Vienna and the emerging rationalism in Europe.³⁴ Others would suggest it was Mackintosh's desperate bid to keep up with the ever changing architecture of the time. David Walker describes the severity of the decision to "cling to his own decorative style of subtly curving forms, which time was slowly but surely passing by, or adopt the severe rectilinear geometric idiom of Hoffman and his friends in Vienna. It was no light step for a man who had received a hero's welcome in that city to become a follower rather than a leader. Yet that is exactly what he did."³⁵

³² Drew Plunket, "From the Tendril to the Triangle", in *Speculations on an Architectural Language*, ed. Robert Mantho, Drew Plunkett (Glasgow; Charles Rennie Mackintosh Society, 2007) pp.14

³³ Plunkett, "The interiors of Charles Rennie Mackintosh", in *Four studies on Charles Rennie Mackintosh*, pp.12

³⁴ Plunket, "Challenges for an Architectural Language", in *Speculations on an architectural Language*, pp.10

³⁵ Stamp, "Mackintosh, Burnet and Modernity", in *The Age of Mackintosh*, pp. 20 - .21



Fig 2.1

Directors door, stained glass inlet depicts seed head, Mackintoshs symbol for learning.

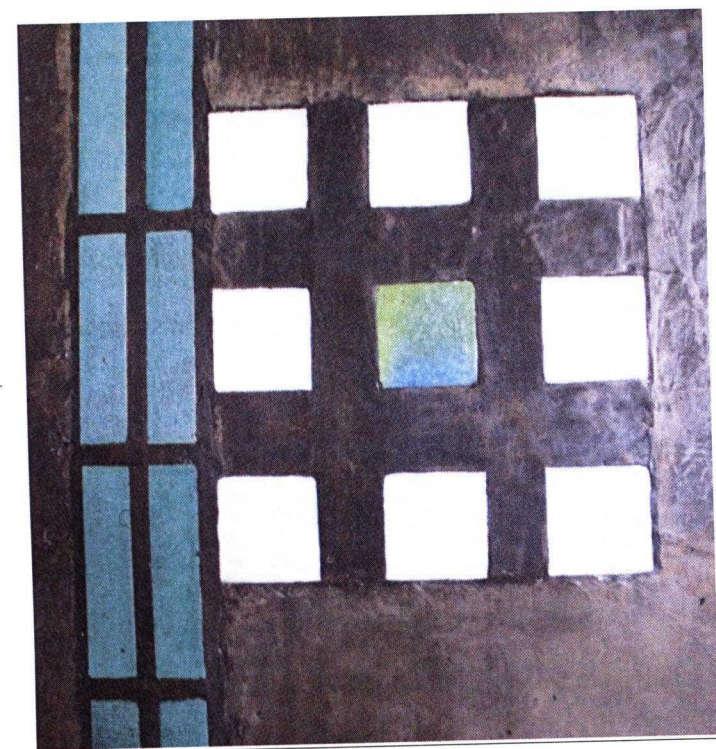


Fig 2.2

Orthogonal tile compositions that feature along the stairwells added in the second phase of construction

A Sectional Study

As a student of architecture at The Glasgow School of Art, Charles Rennie Mackintosh has fascinated me since the beginning of my architectural education. I was keen to take advantage of my proximity to his masterpiece and to explore his famous contribution to architecture in depth. As described, the building portrays Mackintosh's evolution from a young designer in the very early stages of his career, to a mature, pragmatic architect ten years later. This transition presents the School of Art building as one of Mackintosh's earliest and concluding projects as an architect in Glasgow. I felt that undertaking this project would provide an opportunity to explore his work to a much greater extent.

The three sections I have studied complement existing south facing sections completed by Sorrell Challands in 2003 (see Appendix pp.42 - 44). The south facing drawings represent the 'concept of journey', illustrating the building relative to how the viewer would perceive it.³⁶ As one observes the building, one experiences a natural tendency southwards; perhaps it is the approach into the building through the northern entrance, following the orthogonal axis of Glasgow's grid. Perhaps it is the plentiful moments when one stumbles upon expansive views of Glasgow's south, beyond the river. (Fig. 2.3) Spaces often direct your attention southward, and therefore sections demonstrating these elevations are possibly more recognisable.

The northern sections however, demonstrate much of the finesse and detail with which Mackintosh designed, illustrating the skill and understanding of spatial composition that he possessed. It is difficult to explore the building in totality without such drawings. The numerous cross sections that Mackintosh drew, from the conception of the project at competition entry right through to the

³⁶ Sorrel Challands, "The Glasgow School of Art: A History in Section" (Arch diss., Glasgow School of Art, 2003) pg 8

completed work, deliberately celebrate the sloped condition of the site (fig 2.4) Of course this is worthy of exploration, as the gradient of Garnethill is almost completely absorbed by the breadth of the building, however, Mackintosh's ever resourceful approach to this challenge can only be partially illustrated within the short section. The study is completely understood with reference to the longitudinal sections. The contrast in size and form of each particular space is documented from section to section. The building is basically designed in three layers of spaces; these layers each boast a completely distinct nature. Section A cuts through the generous volumes of the studios to the north of the building. The centralized circulation dividing the functional spaces to the north and south is explored in Section B. Section C depicts how the southern spaces are stacked in a tower like fashion, dealing with the changing levels presented by the site. The nature of the spaces throughout the section cleverly vary from exceptionally large to suitably small, this juxtaposition of volume can be fully explored throughout the building using these longitudinal sections.

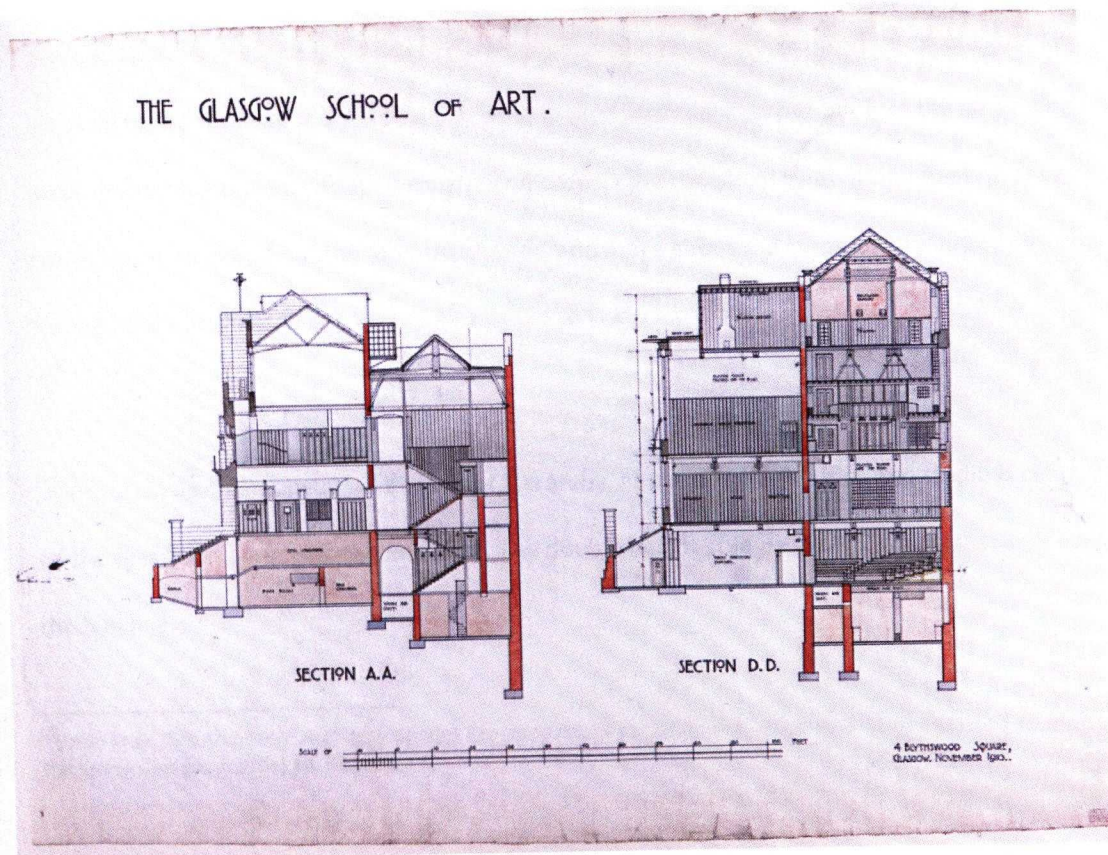


Fig 2.3

Windows to the south are often gridded, framing moments of Glasgow city.

Fig 2.4

Mackintosh's cross sections of Glasgow School of Art, 1910



Section A

Section A features the north facing studios and the iconic windows that portray the front elevation of the building, allowing a closer inspection of the asymmetrical skew of the North façade. The sheer scale of the northern windows and the impact they have in forming the industrial and institutional expression of the building relates strongly to the functionality from within, equipping the art students with the most ideal light conditions for the studio environment. This section also allows us to understand the much debated entrance to the school. When drawn, the contrasting interplay between this entrance space and the studios is understood. Experientially, the heavy arched pillars drape over dense spaces, similar in nature to a crypt of an ancient church. After climbing the procession of steps from the street, aware of the 'factory like' windows initiating an expectation of enormity, the deliberate domesticity of the entrance is conspicuous. This entrance has proved to be the source of some critique. Although celebrated by many, Leon Krier's well known simile tortuously describes it; 'the scale of a factory with the door of a cottage.'³⁷ In his essay for 'The Architect's Architect', Krier questions the legitimacy of this entrance, within a public building such as The School of Art, describing it as unwelcoming and pretentious. From an alternative perspective however, the entrance could be viewed as a subtly pronounced threshold. The sweeping steps up to the small door are framed by a sandstone wall that reaches out into the street like open arms, welcoming one in. Ornate wrought iron crowns the threshold symbolising the entrance, communicating less about the 'domestic' door, and more about the ceremonial journey upwards through the threshold. (Fig 1.2)

The section also demonstrates a sense of hierarchy, as the director's office and studio is centralised on the first floor, surveying the entrance. The double height studios spread from either side across the building.

³⁷ Leon Krier, *The Architects' Architect*, Charles Rennie Mackintosh, Ed. Murray Grigor and Richard Murphy, (London: Bellew Publishing Company, 1993) pp. 48

Section B

Section B distinguishes the logical circulation of the building. The corridors are long and consistently stretch from east to west. Various devices are employed by the architect to invite you through the spaces. For example, roof lights floating over head, or seating booths offering a relaxing moment for passersby. The constantly varying atmosphere is achieved by the numerous ways Mackintosh welcomes or denies light into the space. He is described by Venetian architect, Hans Hollein as; “a master of circulation, not in a functional sense like a factory, but as a creator of shifting experience as you move through his buildings.”³⁸ The circulation is functionally direct but celebrated as a ‘journey’ through the building rather than merely a link from room to room. The second floor circulation is an exemplary moment in the building where Mackintosh pairs the highly exposed glass pavilion, (fig 3.1) with the heavy arched, dungeon like experience of the loggia (fig 3.2). These instances distract one, luring them through the architecture, creating experiences. Professor Christopher Platt describes his first impressions of the building; “Mackintosh’s architecture ‘seduces’ rather than directs the visitor.”³⁹ This ‘seduction’ extinguishes the need for signage and allows the visitor to freely explore, evoking a comforting sense of ‘familiarity’, intriguing for an institutional building.

Section B also clearly depicts the distinctive nature of each of the doors leading into the studios. A unique stained glass inlet, a thoughtful shelf for a fresh cut rose, or a subtly inscribed studio number, Mackintosh’s romantic gestures offer clues to the creativity that is nourished behind these doors.

³⁸ Hans Hollein, *The Architects’ Architect, Charles Rennie Mackintosh* ed. Murray Grigor and Richard Murphy (London: Bellew Publishing Company, 1993) pp. 72

³⁹ Christopher Platt and Roderick Kemsley, *Dwelling with Architecture* (London: Routledge, 2012) pp.21

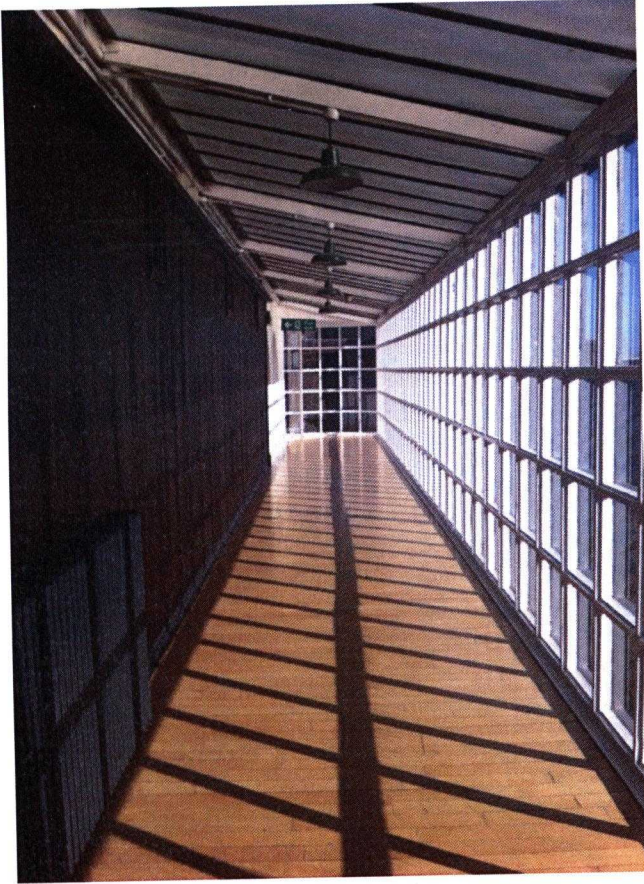


Fig 3.1

'The Hen Run', a lightly constructed, cantilevered glass pavilion on second floor used as circulation

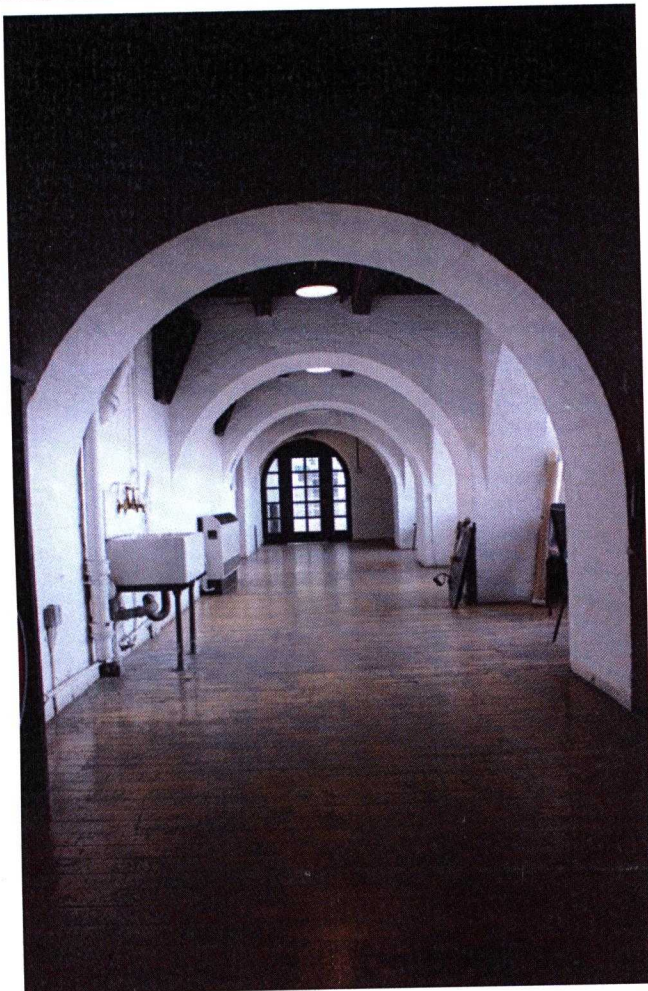


Fig 3.2

The Loggia, a heavily constructed crypt like space on second floor used as circulation

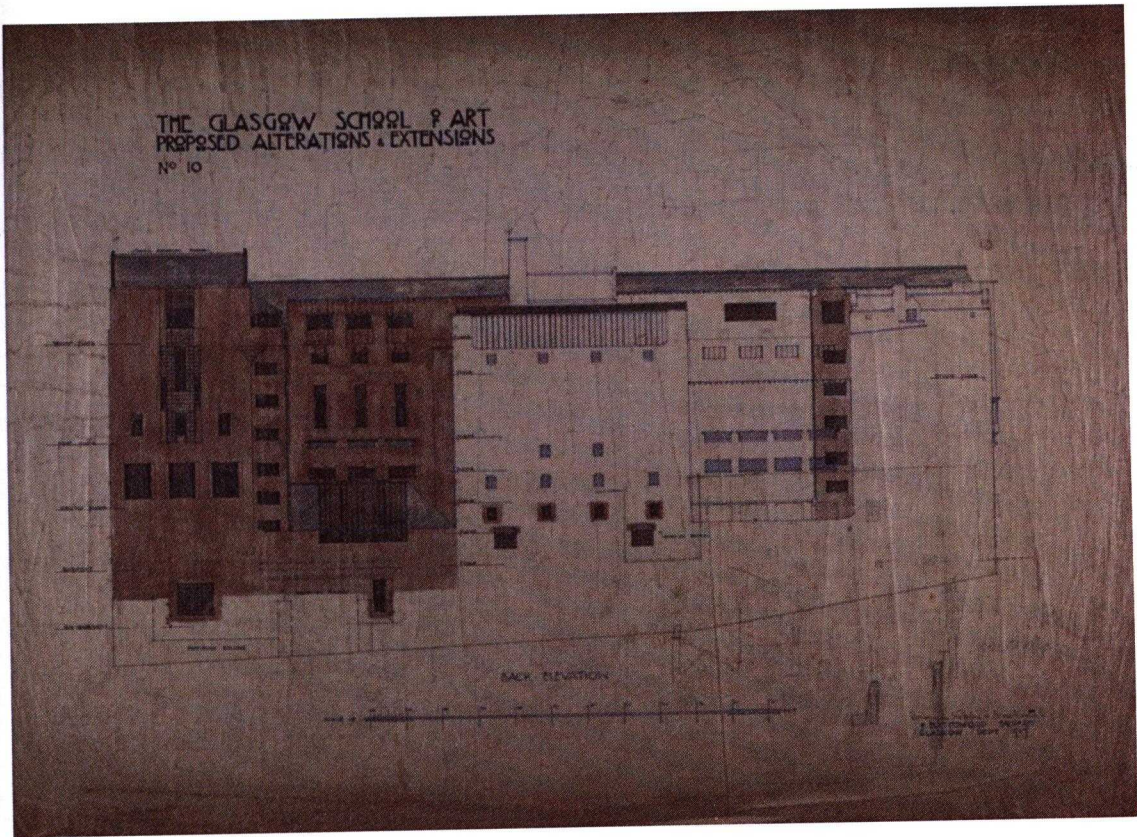


Fig 3.3

Rear elevation of Glasgow School of Art



Fig 3.4

Harling used as wall treatment of rear elevation, similar to tenement

Section C

Section C depicts the most southern spaces within the school, clipping the ends of the E-shaped plan as the three arms extrude southwards, exposing hints of the southern elevation. The building overlooks Sauchiehall Street and an impressively large expanse of Glasgow city. The form of the building along with the steep nature of Garnet hill accentuates an aspect of massiveness that relates again to the baronial style that Mackintosh favoured in his earlier career. Despite this seemingly functional approach to the south elevation, on closer analysis one recognises the modular schemes of symmetry used to create a different identity of each of tower. (fig 3.3) What seems at first glance a hap-hazard puncturing of small windows becomes an array of understood compositions that accentuate each turret individually whilst servicing the needs of the interior rooms.

The most memorable space within the building is the Library, dubbed as the 'most intense architectural space in Britain' by Andy Macmillan, former head of Architecture in Mackintosh School of Architecture.⁴⁰ It stands out as a space designed for one to absorb, and to absorb one. The dark timber columns stretch up through the two stories, seemingly supporting a mysterious canopy. With hanging planes of decorated timber, physical volumes of light and intricate configurations of metal and glass light fittings surrounding one, the space evokes a forest like atmosphere. (Fig 3.5) There are many layers to the experience, not only is the visual impact imposing but the reminiscent smell of the timber as one enters still lingers after a hundred years. The configuration of space as one enters through the modest door from under the condensed mezzanine generates a sense of curiosity, as one is drawn to the relief supplied by the widened tubes of light of the tall western windows. The noise of the room whispers and the creak from floor boards mimic that of a cracked branch under foot as one steps through the forest. This space, for many people including the author, is an enriching place of refuge and invaluable for an architectural student seeking inspiration.

⁴⁰ *Ibid*, pp.27



Fig 3.5

Dark timber, ornately crafted interiors and volumetric tubes of light formed by the tall, bayed windows deliver a spatial quality unique to Mackintosh's library

Mackintosh's interest in timber structure and Japanese construction is most successfully explored in Section C. The numerous examples of roof construction techniques exploited by Mackintosh in The School of Art are remarkable. Various studios from the second floor to the basement are playfully assembled to celebrate the materiality, craftsmanship and various spatial qualities obtained by the construction. Brett describes this investigative approach as a 'growing unity between structure and decoration.'⁴¹ The various forms of assembly allow unique lighting conditions, often suited to the original function or intended nature of the space. A key example is the Museum on the first floor. (Fig 3.6) The exhibition space is continuously flooded with light as glass makes up the majority of the roof. Each truss varies slightly from the next, with symbolic motifs of hearts and seeds, cut from their centres. Posts rise from the central stair well, suggestively load bearing but in fact, not at all. Instead, the verticals organise and divide the space symmetrically.



⁴¹Brett, *The Poetics of Workmanship*, pp.67

Fig 3.6

Museum - Timber construction is meticulously explored by Mackintosh throughout the Glasgow School of Art



Fig 3.7

Western stair curiously wrapping around what used to be the external window of the original board room.

This final section also depicts the two fire stairs situated in the east and west wings of the building, both added in the second phase. The last minute construction of the western stair however was due to the addition of the second floor studios in 1909. Changes in Scottish building regulation resulted in the need for the stairwell which had not initially been planned for. This unscheduled addition can be recognised in Section C depicting the side step of the stair run around the concave windows of 'The Mackintosh room', originally designed as the board room before the expansion (fig 3.7).⁴²

⁴² James Macaulay, *Architecture in detail, Glasgow School of Art – Charles Rennie Mackintosh* (London; Phiadon Press Ltd, 1993) pp.44

These consequential imperfections tell a story and although a utilitarian space, even climbing the stairs becomes a place of discovery and reward.

Conclusion

Today, Charles Rennie Mackintosh and the Glasgow School of Art are celebrated more than ever. Every year, the school attracts more students and tourists from around the world to be inspired by the Scottish pioneer of modern design⁴³. It functions now, as it always has, despite the 'respectfully tough' treatment from its generations of students and staff. The School of Art is the only work of Mackintosh that continues to function as it was originally designed.⁴⁴

"Paint continues to fly, turpentine to spill and mess as well as art is created. The building works superbly."⁴⁵

Co-ordinating these sections has shone an informative light on Mackintosh's School of Art, documenting many features of the building that have never been presented in this way. The sections have demonstrated how thin the interior steel structure is in comparison to its thick masonry skin. This is most apparent in the vast studios, where the differentiation in structural members tells the tale of the long-winded evolution of the building. Mackintosh's changing architectural expression as seen on Section B also demonstrates this. This compulsive interest in detail, ornamentation and character is what attracts people to Mackintosh. The building encapsulates a changing time in architecture and has preserved Mackintosh's work as a relic of a bygone era of originality in design, form and function. Section C depicts Mackintosh's instinct to make an "architectural event" at every opportunity, "through some feat of innovation."⁴⁶ The constant metamorphosis of spaces from the

⁴³ Nikolaus Pevsner, *Pioneers of Modern Design* (London: Penguin, 1949) pp.158

⁴⁴ Raheela Fitzgerald, Glasgow School of Art Tour Guide, Personal Interview

⁴⁵ William Buchanan, *Mackintosh's Masterwork*, pp.37

⁴⁶ *Ibid* pp.33

large scale to the small is intricately considered by the exceptionally talented architect. Thus creating universally enjoyable spaces designed to function.

An incredibly enlightening path of discovery has been followed to understand Mackintosh's masterwork. Through surveying, photography, collating information from various academic sources, interacting with the users of the building and drawing the three sections, I feel I have engaged with the building in a very unique way. Although Mackintosh's personal and communicative architectural language often exposes elements of his personality, I feel that the many mysteries composed throughout the building will remain forever more.

Bibliography

Books

- Banham, Reyner, *Age of Masters* (Toonbridge: Architectural Press, 1975)
- Bliss, D.P., *Charles Rennie Mackintosh and the Glasgow School of Art* (Glasgow; Glasgow School of art, 1961)
- Brett, David, *C.R. Mackintosh, The Poetics of Workmanship* (London: Reaktion books, 1992)
- Buchanan, William, *Mackintosh's Masterwork ; The Glasgow School of Art*, Richard Drew, (Edinburgh: Chambers, 1989)
- Cairns, George M, "The Glasgow School of Art: The Leading Edge of Technology", in *Architecture 1900*, ed. Peter Burman (Shaftesbury; Donhead, 1998)
- Crawford, Alan, *Charles Rennie Mackintosh* (London; Thames and Hudson, 1995)
- Eadie, William, *Movements of Modernity, The Case of Glasgow and Art Nouveau*, (Routledge, London, 1990)

Grogan, Elaine, *Beginning: Charles Rennie Mackintosh's Early Sketches* (Oxford: Architectural Press, 2002)

Hollein, Hans, "The Architects' Architect, Charles Rennie Mackintosh" ed. by Murray Grigor and Richard Murphy (London: Bellew Publishing Company, 1993)

Heyer, Paul, *Charles Rennie Mackintosh: Links to the Founders of the Modern Tradition*, taken from "Four studies on Charles Rennie Mackintosh" (New York: New York School of Interior Design, 1996)

Krier, Leon, *The Architects' Architect, Charles Rennie Mackintosh* ed. by Murray Grigor and Richard Murphy (London: Bellew Publishing Company, 1993)

Mackintosh, Charles Rennie, 'Seemliness', in *Charles Rennie Mackintosh: the architectural papers*, ed. Pamela Robertson (Glasgow: White Cockade, 1990)

Mackintosh, Charles Rennie, 'Seemliness', in *Mackintosh's Masterwork; The Glasgow School of Art* ed. William Buchanan (Glasgow; Richard Drew, 1989)

Macaulay, James, *Architecture in detail, Glasgow School of Art – Charles Rennie Mackintosh*, (London; Phiadon Press Ltd, 1993)

- Mantho, Robert, "Challenges for an Architectural Language", in *Speculations on an Architectural Language*, ed. Robert Mantho, Drew Plunkett (Glasgow, Charles Rennie Mackintosh Society, 2007)

- MacMillan, Andrew, "A Modern Enigma: A Paradox of Reduction and Enrichment", in *Mackintosh's Masterwork: The Glasgow School of Art*, ed. William Buchanan (Glasgow: Richard Drew, 1989)

- Pevsner, Nikolaus, *Pioneers of Modern Design* (London: Penguin, 1949)

- Platt, Christopher and Roderick Kemsley, *Dwelling with Architecture* (London: Routledge, 2012)

- Platt, Christopher and Brian Carter, *Uneasy Balance*, (Glasgow: MSA Publications, 2013)

- Plunkett, Drew, "Challenges for an Architectural Language", in *Speculations on an architectural Language* ed. Robert Mantho, Drew Plunkett (Glasgow, Charles Rennie Mackintosh Society, 2007)

- Plunkett, Drew, "The interiors of Charles Rennie Mackintosh", taken from *Four studies on Charles Rennie Mackintosh*, (New York: New York School of Interior Design, 1996)

- Robertson, Pamela, *Charles Rennie Mackintosh: the architectural papers*,(Cambridge Mass: MIT Press, 1990)

- Stamp, Gavin, "Mackintosh, Burnet and Modernity", in *The Age of Mackintosh* (Edinburgh, University Press, 1992)
- Trowles, Peter, *Charles Rennie Mackintosh: The European Connection*, taken from "Four studies on Charles Rennie Mackintosh" (New York: New York School of Interior Design, 1996)
- Van Eyck, Aldo, *The Architects' Architect, Charles Rennie Mackintosh*, ed. Murray Grigor and Richard Murphy (London: Bellew Publishing Company, 1993)

Dissertation

- Challands, Sorrel, "The Glasgow School of Art: a history in section" (Arch diss., Glasgow School of Art, 2003).

Film

- *MACKINTOSH*, DVD, Murray Grigor, (1963, Scotland, IFA)

Website

- MacDonald, Stuart, *Mackintosh is Britain's Favourite Building*, The Sunday Times, accessed 24th March 2014, http://www.thesundaytimes.co.uk/sto/news/uk_news/article170540.ece, Mackintosh building is Britain's favourite, The Sunday Times, www.thesundaytimes.co.uk

Journal

- Rodger, Johnny, "Putting Holl and Mackintosh in multi-perspective: the new building at the Glasgow School of Art", *arq*, vol. 17, no. 1 (2013)

Interview

- Fitzgerald, Raheela , Glasgow School of Art Tour Guide, Interview with Maeve Magennis, Personal Interview, Glasgow, 18th March 2014

Image/Illustration Credits

All images and drawings by author, except for:

Fig 1.1 – Charles Rennie Mackintosh’s Sketch of Holy Church of Rude, Stirling -, Elaine Grogan, *Beginning: Charles Rennie Mackintosh’s Early Sketches* (Oxford: Architectural Press, 2002)

Fig 1.2 – Entrance to Mackintosh School of Art – accessed 28th March 2014,
<http://www.gsa.ac.uk/visit-gsa/mackintosh-building-venue-hire/>

Fig 2.4 – Sections of Macintosh School of Art, Original 1910 drawings, Section A.A. and D.D, courtesy of GSA Archives Collection

Fig 3.3 – South Elevation of Glasgow School of Art, 1907 edition, Accessed 30th March 2014,
http://www.huntsearch.gla.ac.uk/cgi-bin/foxweb/huntsearch_Mackintosh/DetailedResults.fwx?SearchTerm=41320&reqMethod=Link

Appendix Images

All images and drawings by author, except for:

- pp. 38, 39, Plans of Mackintosh School of Art, 1907 -1909, taken from:
D.P. Bliss, *Charles Rennie Mackintosh and the Glasgow School of Art* (Glasgow; Glasgow School of Art, 1961)

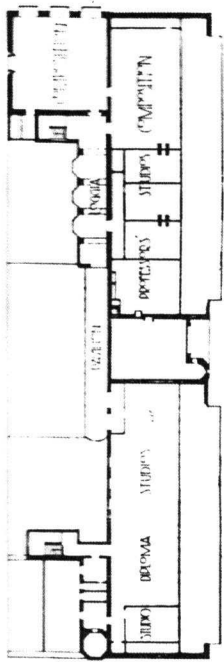
- pp. 40, 41, Sections of Macintosh School of Art, Original 1910 drawings, Section C.C. and D.D,
Courtesy of GSA Archives Collection pp. 40, 41

- pp. 42 – 44, South Facing Longitudinal Sections taken from:
Sorrel Challands, “The Glasgow School of Art: a history in section” (Arch diss., Glasgow School of Art, 2003).

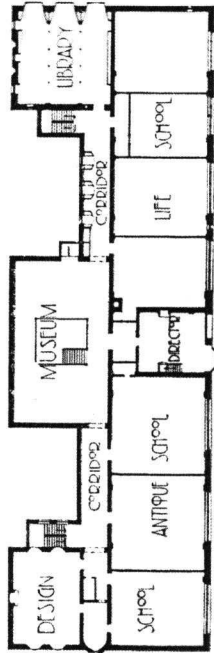
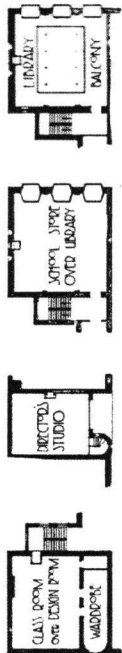
Appendix

Contents

- 1) Selection of Mackintosh Drawings –Original Plans and Sections
- 2) Longitudinal, South Facing Sections Drawn by Sorrell Challands, 2003
- 3) Photographic Study of The Glasgow School of Art
- 4) Initial Sectional Study Sketches
- 5) Survey Sketches and Rough Work



PLAN 9 SECOND FLOOR

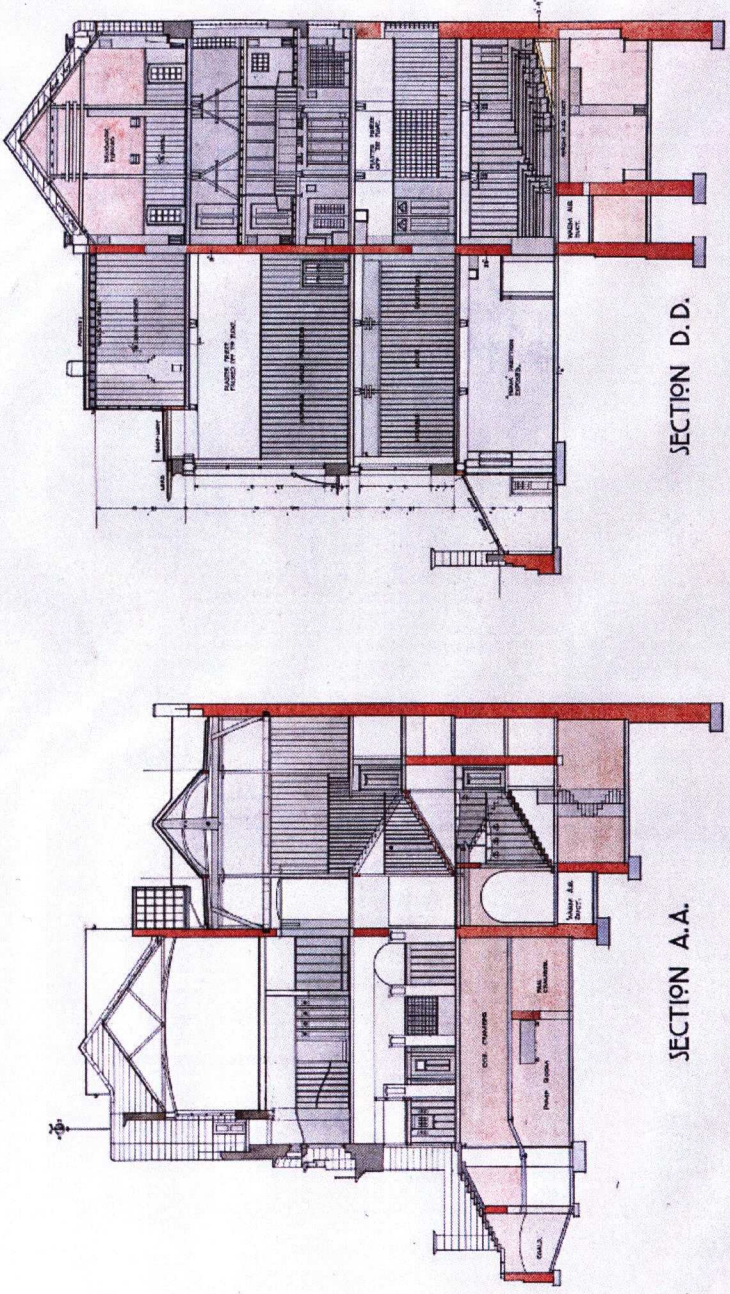


PLAN 8 FIRST FLOOR

Sections of The Glasgow School of Art

THE GLASGOW SCHOOL OF ART.

The sections were drawn by Mackintosh after the second phase was completed. (1909)



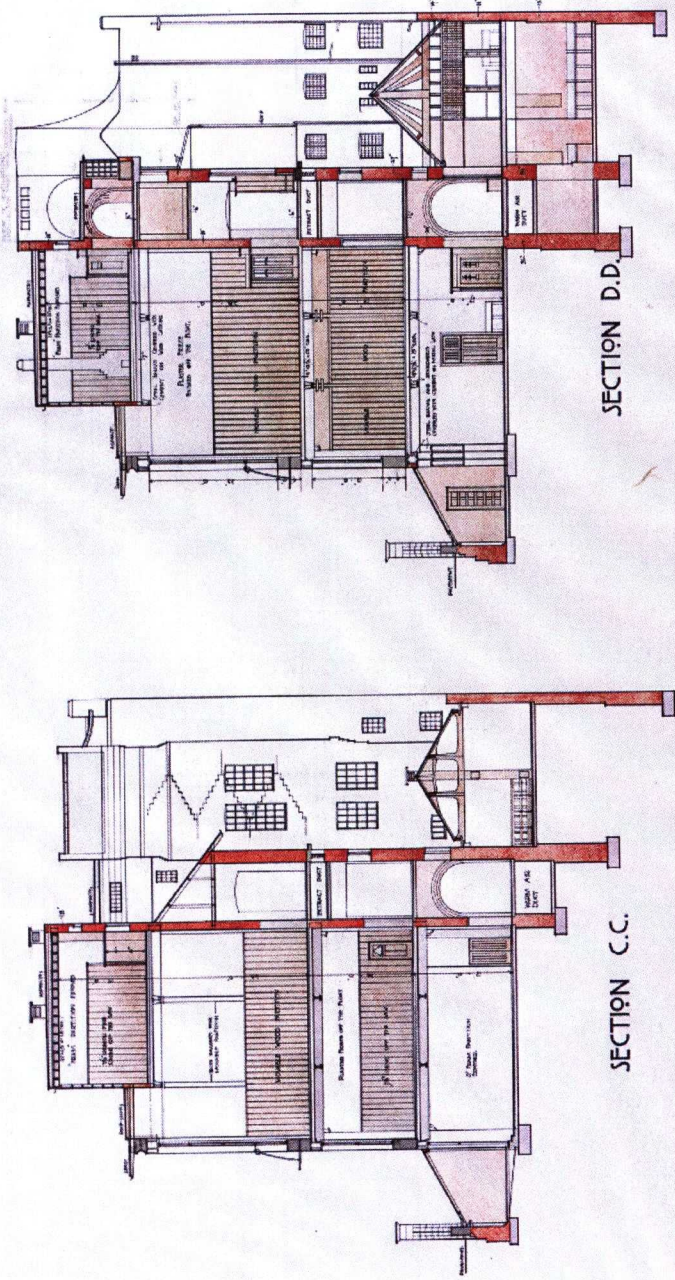
SECTION D. D.

SECTION A. A.



4 BATHWOOD SQUARE,
GLASGOW, NOVEMBER 1910.

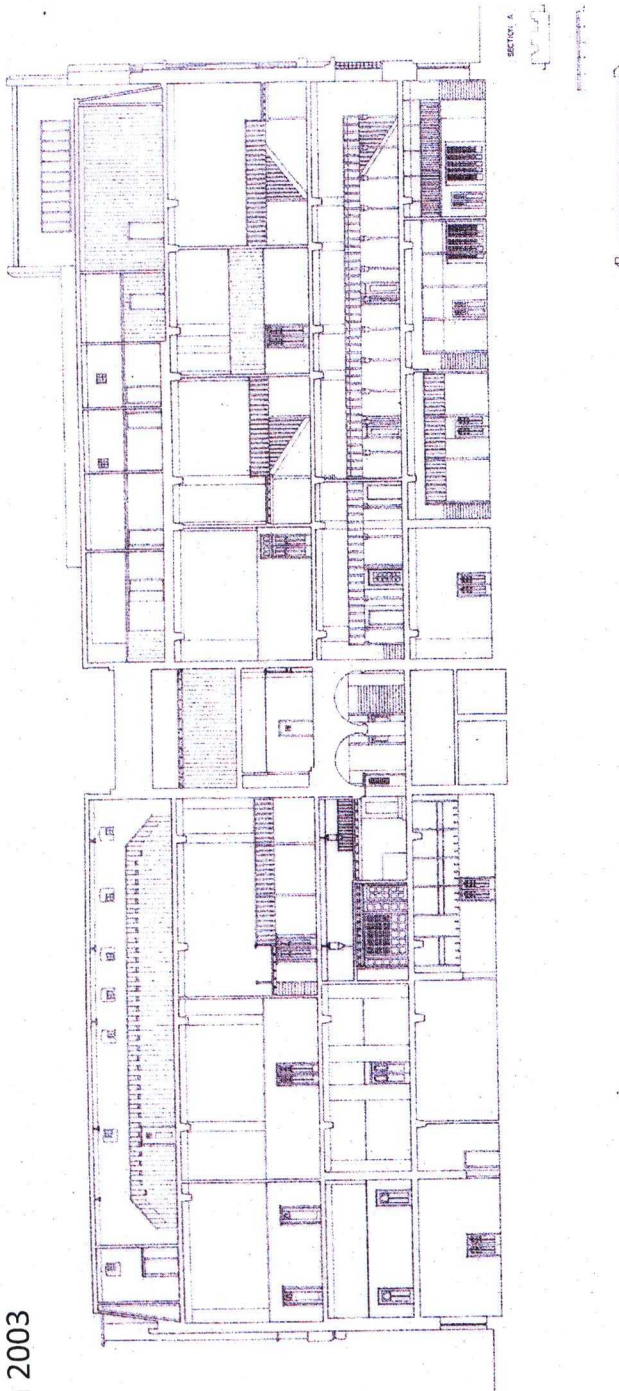
THE GLASGOW SCHOOL OF ART.

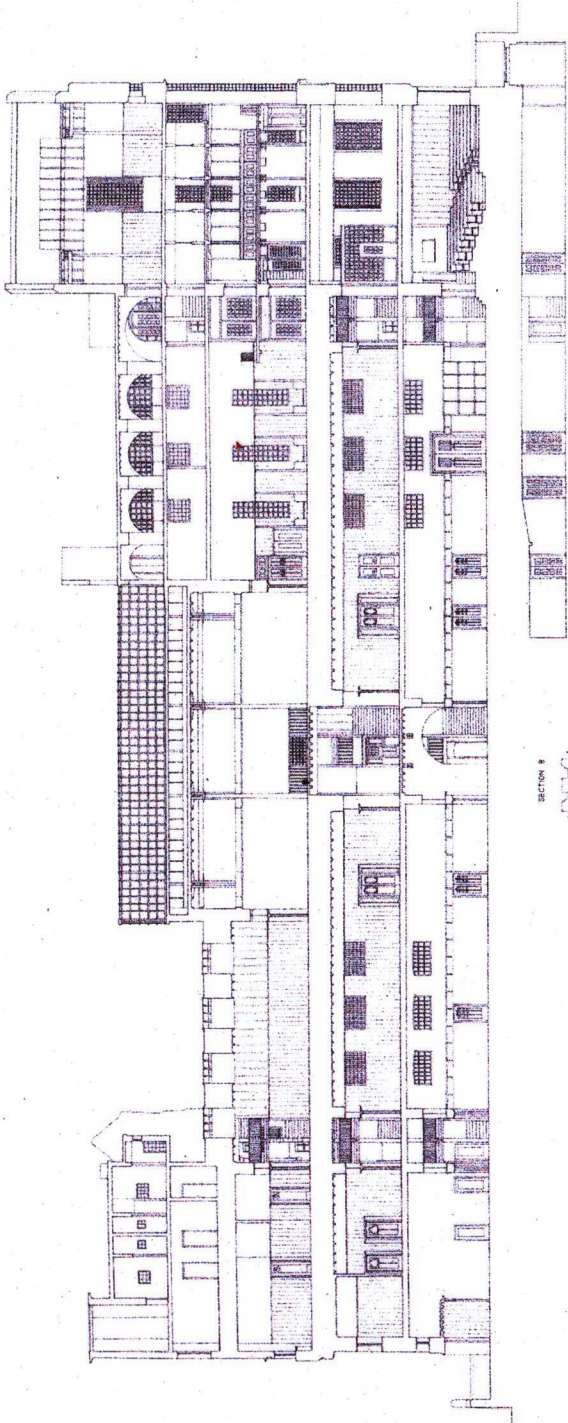


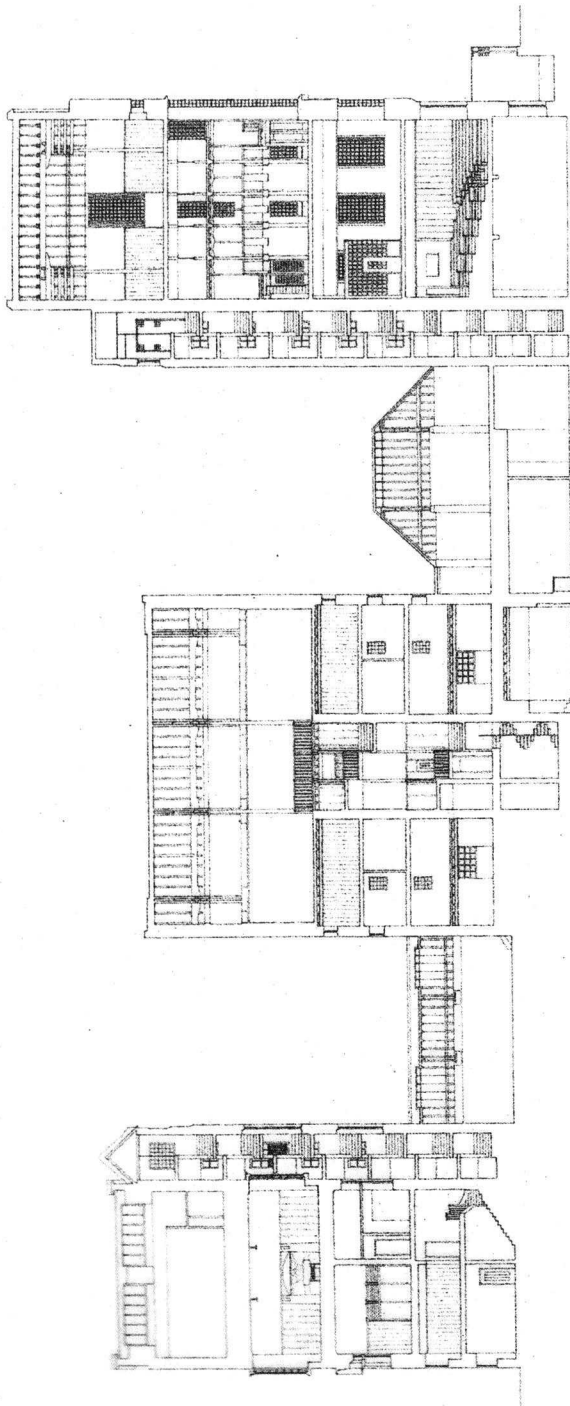
4 BLYTHWOOD SQUARE
GLASGOW, NOVEMBER 1910

**South Facing Longitudinal
Sections of The Glasgow
School of Art**

These sections were drawn by
Sorrell Challands in 2003







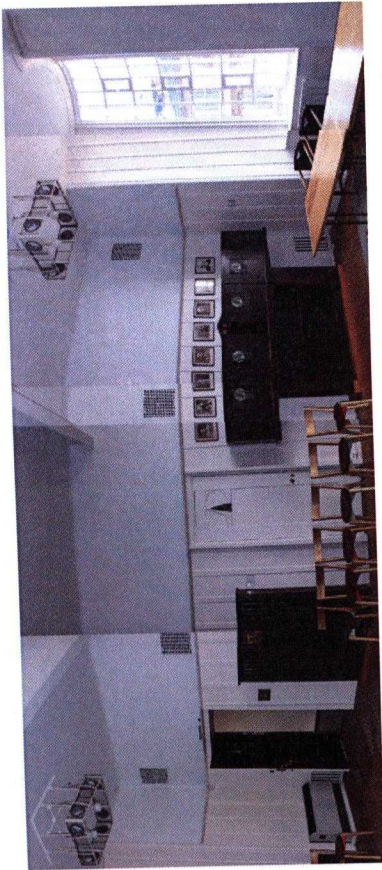
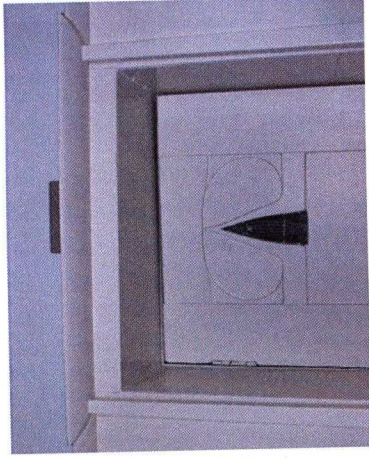
SECTION C



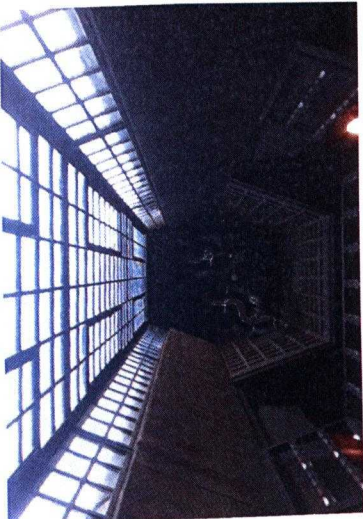
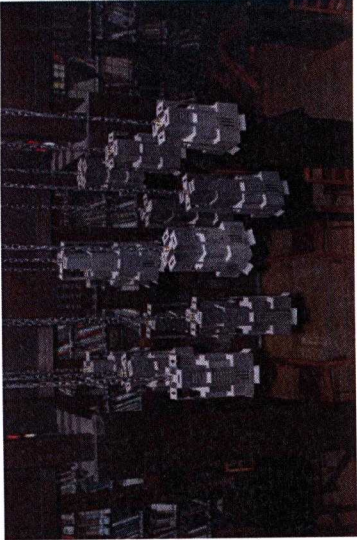
Photographs

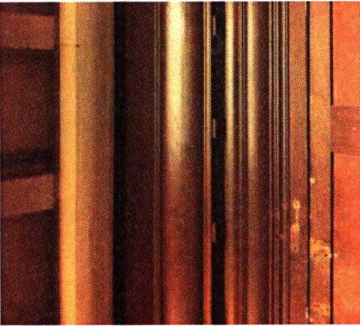
This section contains an extended selection of the many photographs taken throughout my exploration of the building. Photographing the building was a really enjoyable process for me, especially photographs capturing the changing light of various times of day and year.

Photography has proved invaluable as a point of reference when drawing the sections.

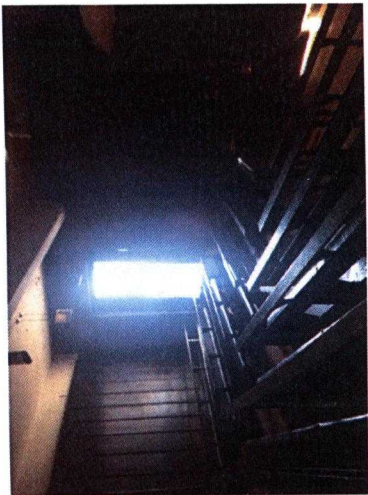
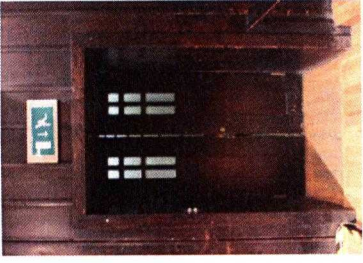


Mackintosh Room - Originally the Board Room - First Floor - East Wing

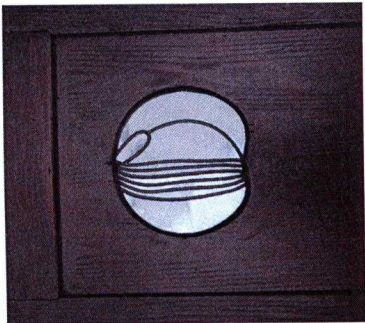




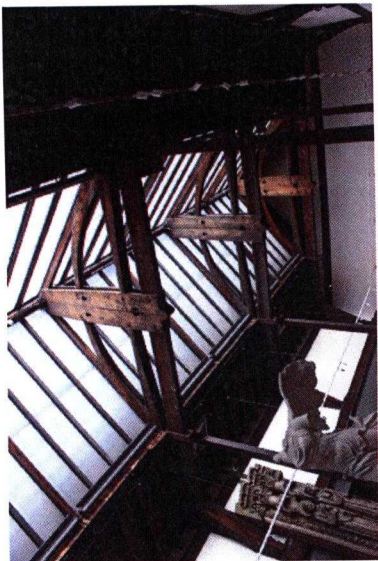
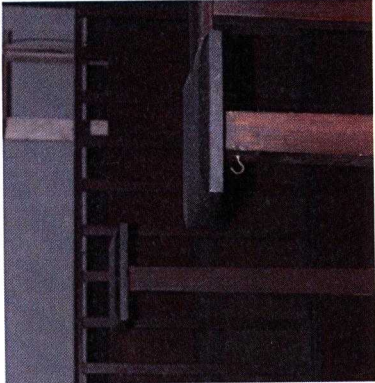
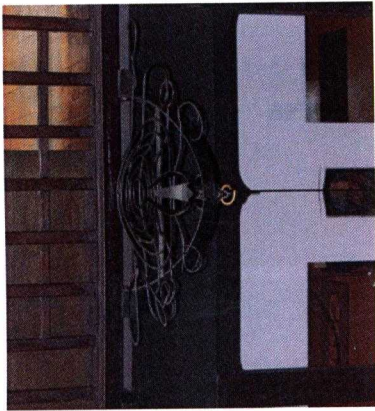
Boardroom - Ground Floor - East



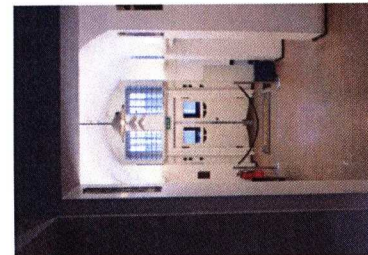
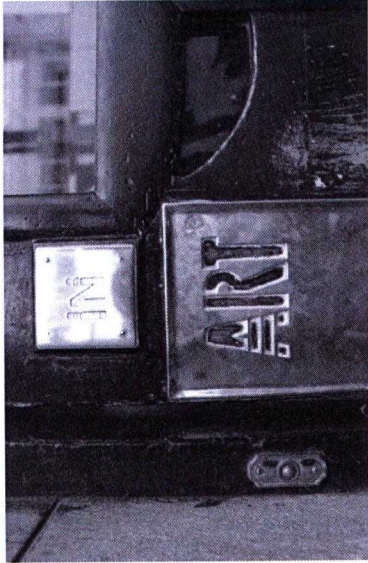
Lecture Theatre - Basement - West



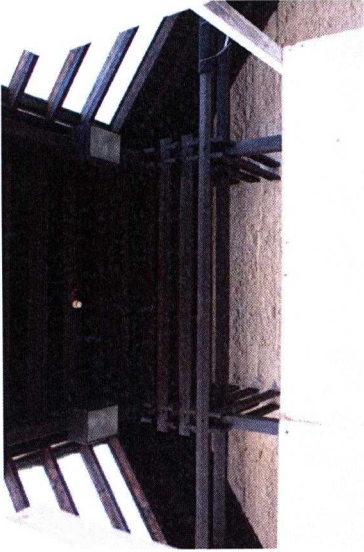
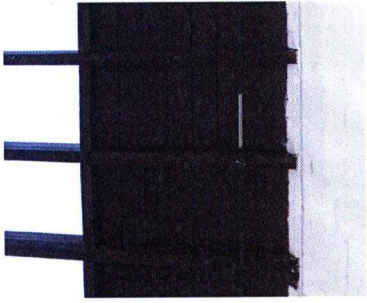
Directors Office and Studio - First Floor



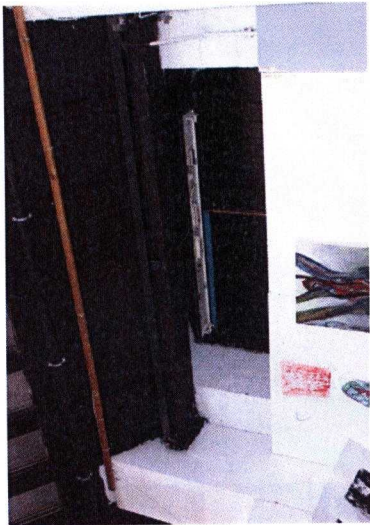
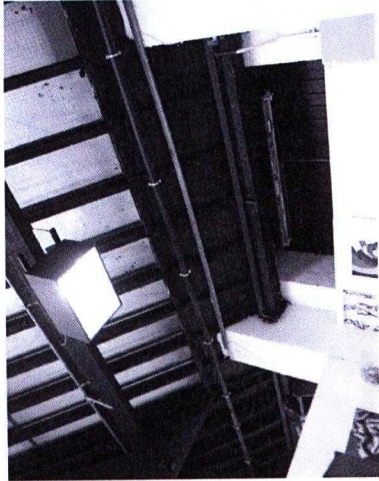
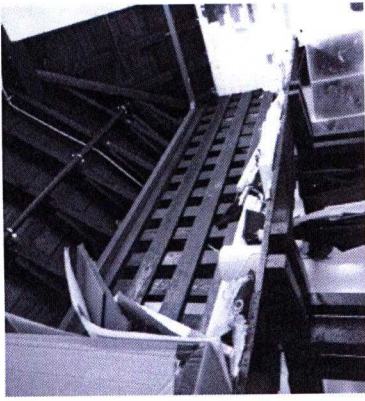
Museum - First Floor



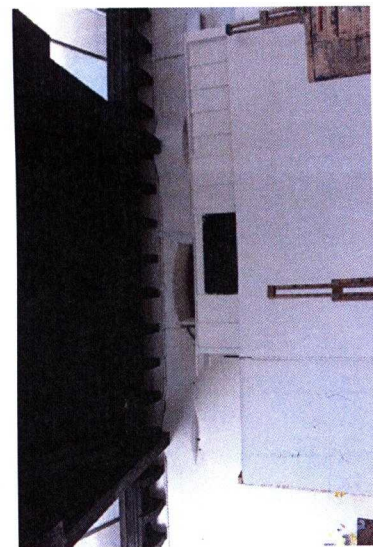
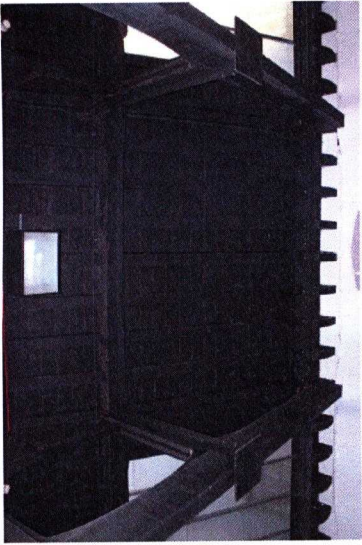
Entrance



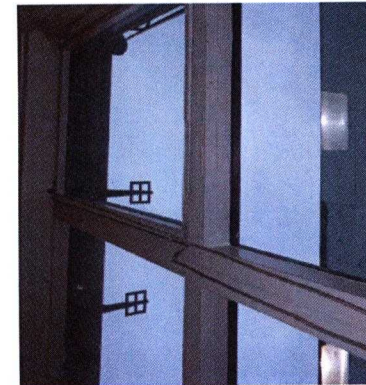
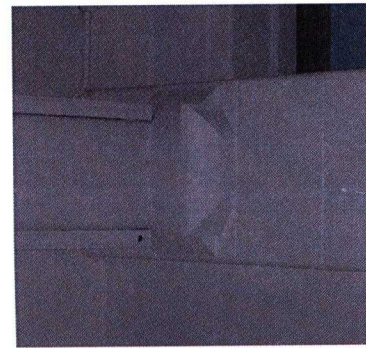
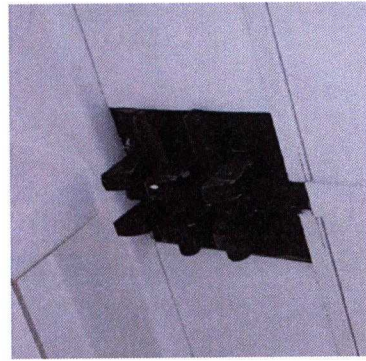
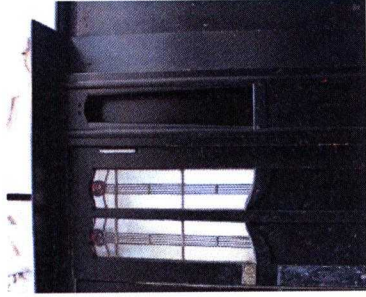
Top Lit Studio - Second Floor - West



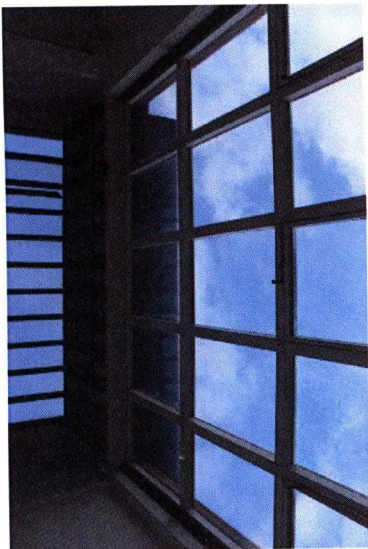
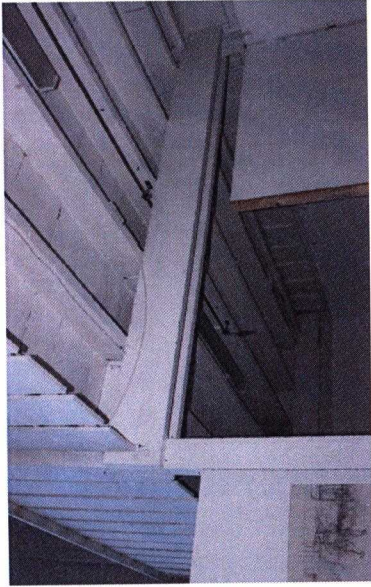
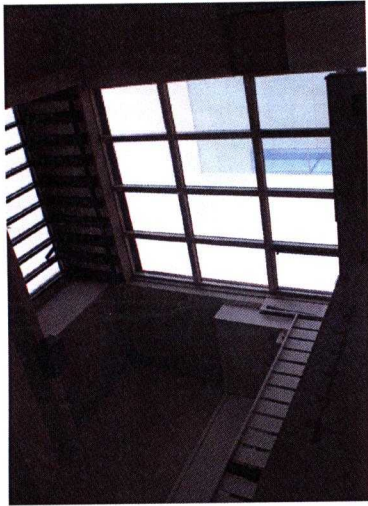
Life Modelling Studio - Basement - West



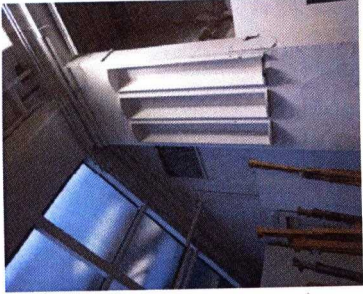
Anatomy Studios - Basement - East

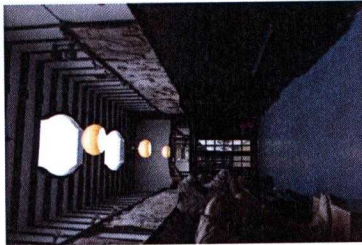
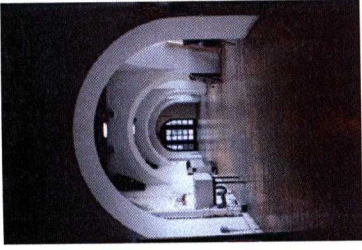


Northern Studios - Ground Floor



Northern Studios - First Floor

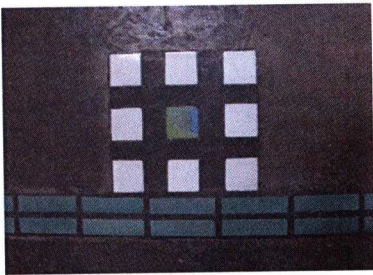




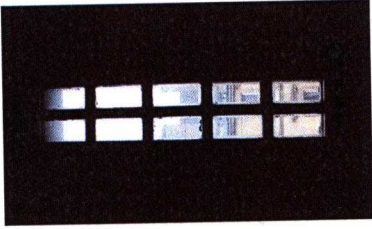
Circulation



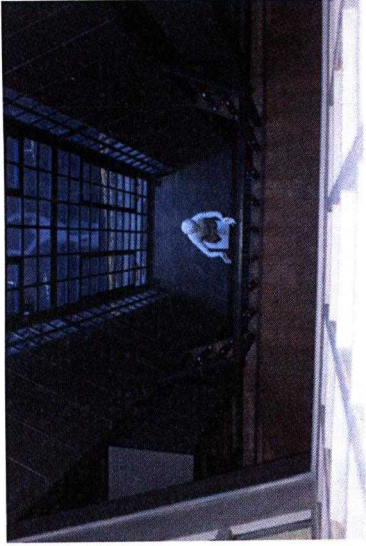
East Stair Details



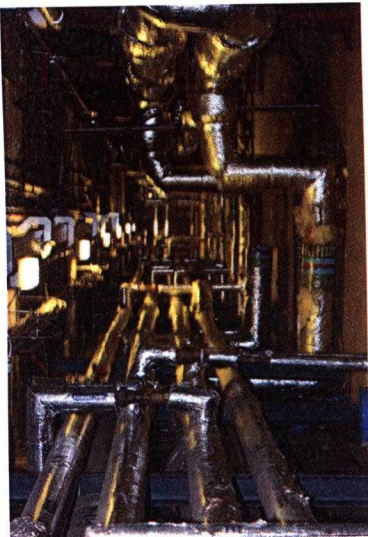
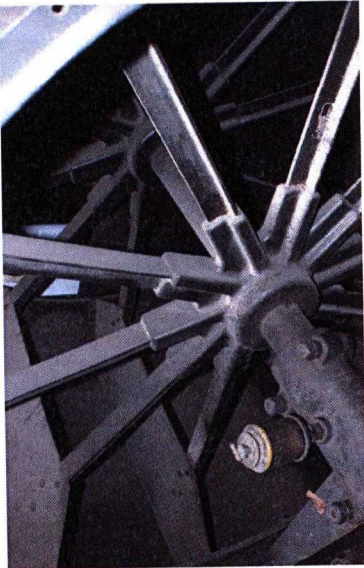
West Stair Details



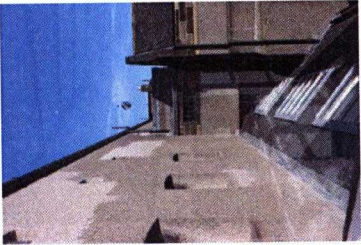
'The Wardrobe' - First Floor Mezzanine - Western Turret



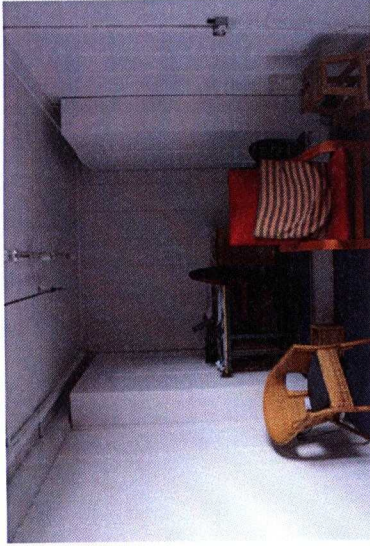
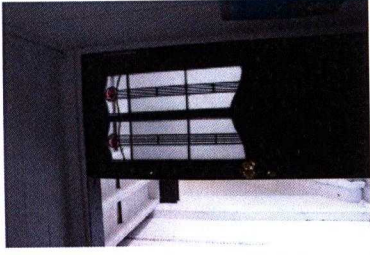
Library Store - featuring Steel Suspension of Library Ceiling - First Floor Mezzanine - West



Plant Rooms - Sub Basement



Exterior Features

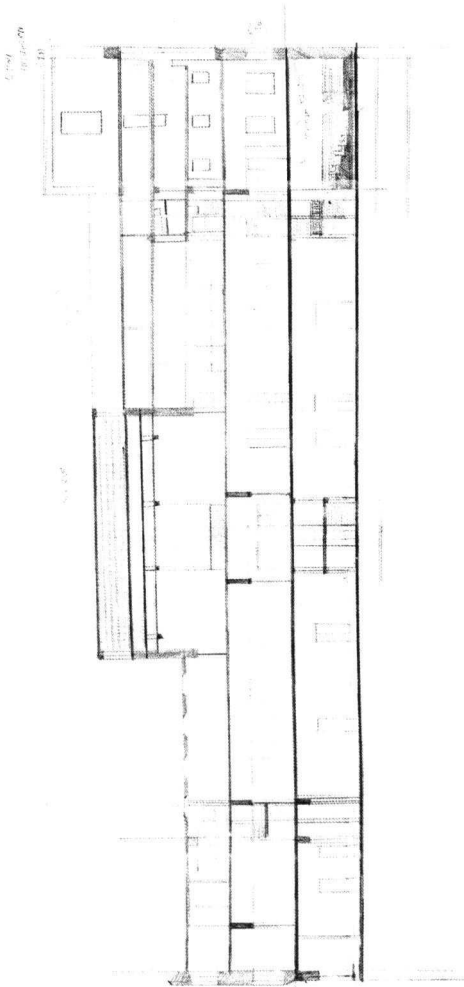


Miscellaneous

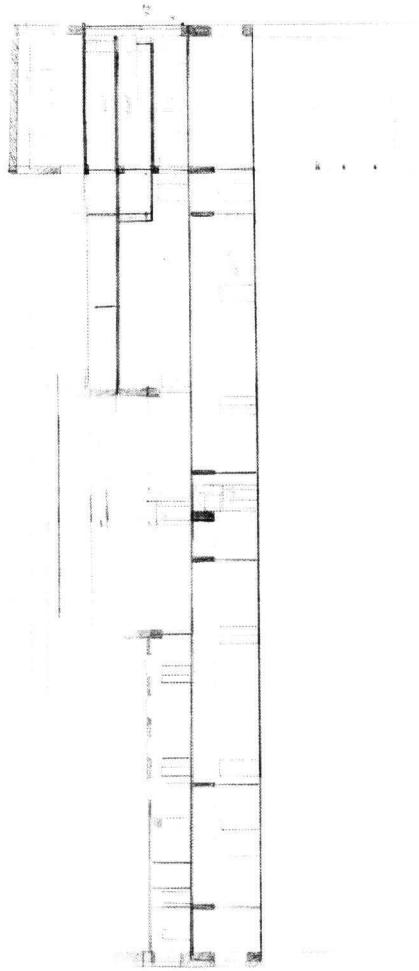
Initial Sketch Sections -

Both north and south sections briefly studied to gain a well rounded understanding of the building.

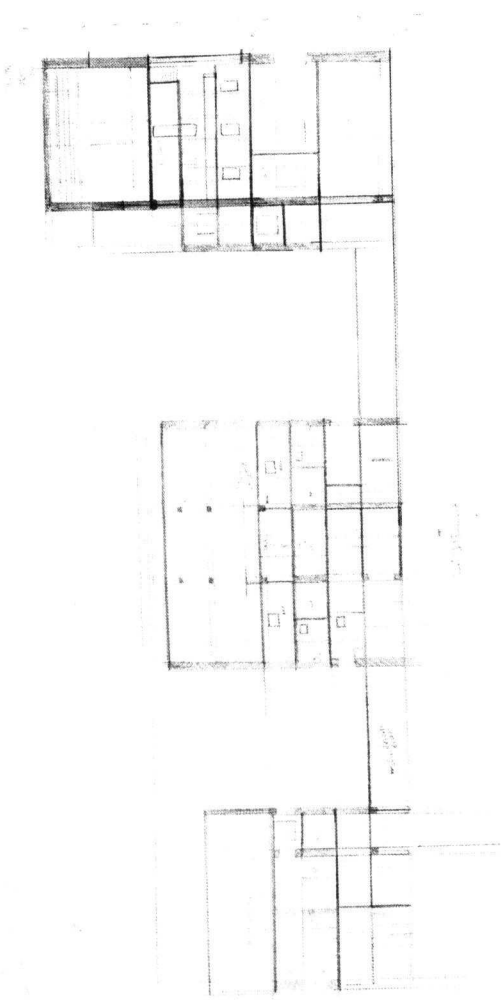
Section B
Circulation
South facing



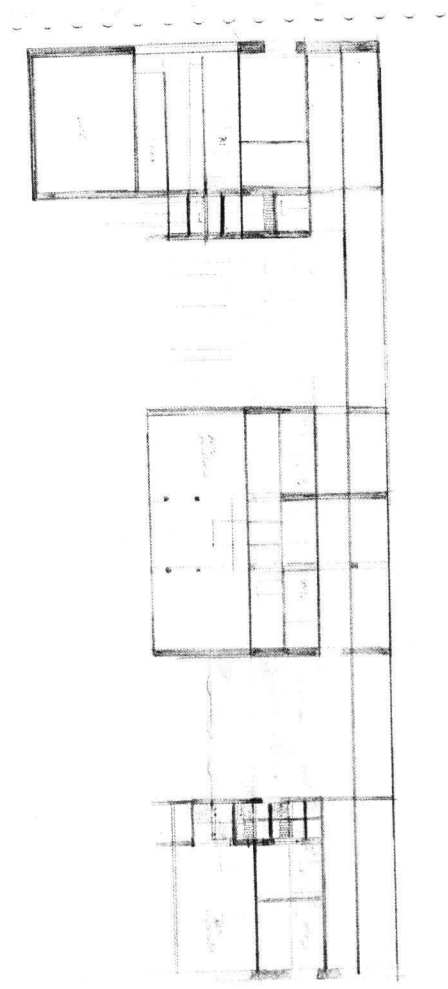
Section B
Circulation
North facing



Section C
Southern Spaces
South facing



Section C
Southern Spaces
North facing



Survey Sketches and Rough Work

This section contains an extended selection of survey drawings produced by myself throughout the process of co-ordinating the three longitudinal sections. There is a huge number of spaces within the building, many of which I was not aware existed before this study.

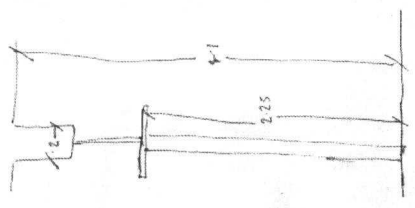
I had hoped to gain entry into all the spaces in the building, and very nearly achieved this. Many of the spaces are off limits to the public. Due to this, various arrangements had to be made to grant access and therefore some of the visits were brief. Peter Trowles was key in my success, allowing me into various strange spaces around the building, including the suspended room above the library, the turret that features on the east facade and the plant room below the basement corridor. Very few students have been able to experience the building in this way.

Surveying the directors office was also a challenge but various correspondence with the ladies in the executive administration enabled me access.

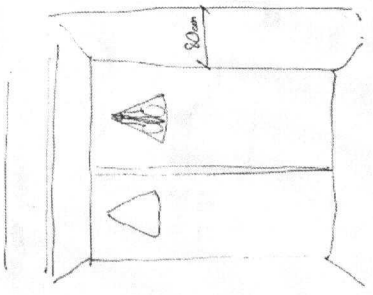
Surveying the studios was often a struggle, the temporary partitions made measuring the spaces accurately difficult.

The measurements were made using measuring tapes, meter sticks, laser measure

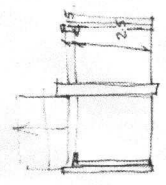
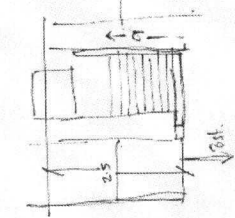
Garage doors



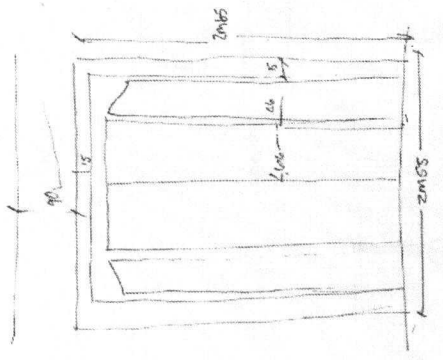
Suppl.
Down into hallways
New first year stables



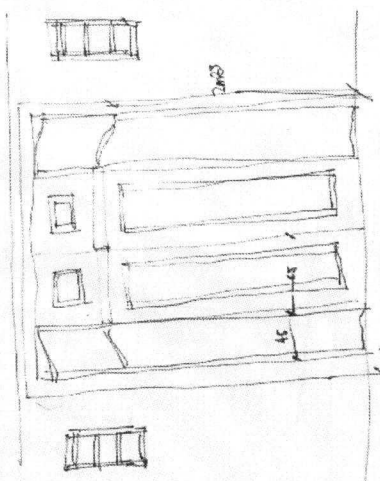
same from office



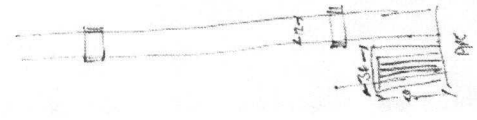
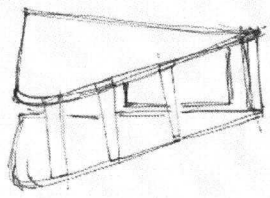
if possible

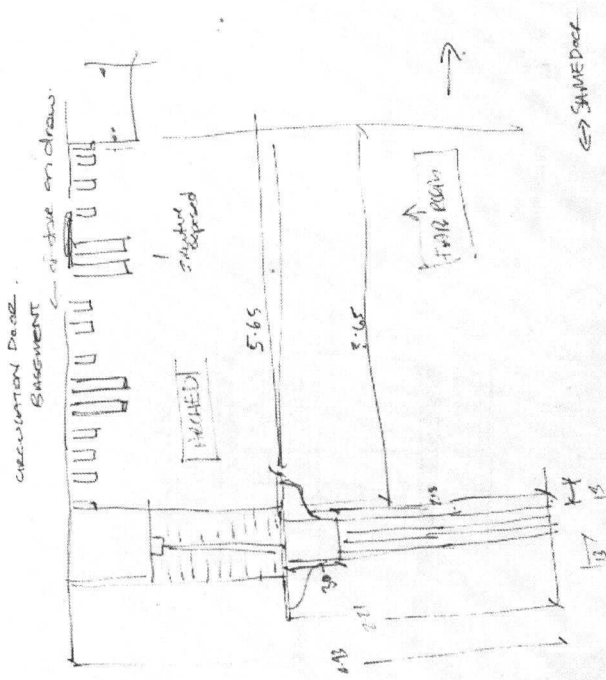


if possible

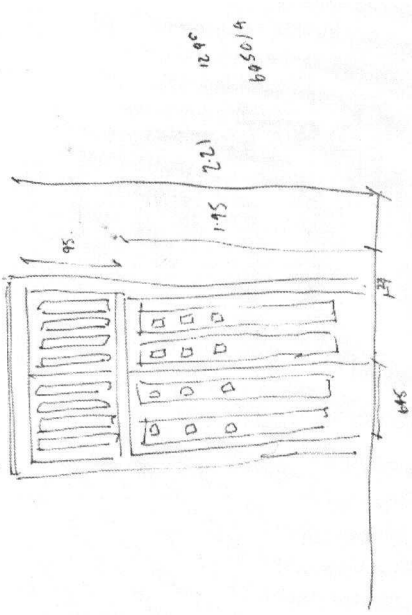
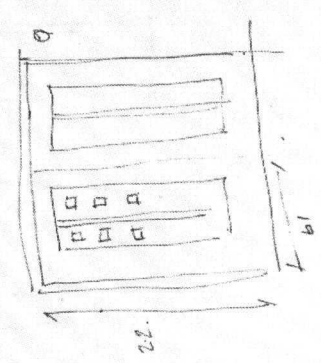


same with next one

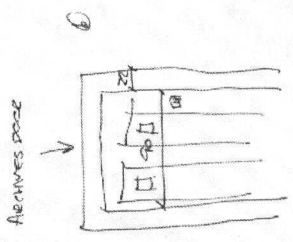
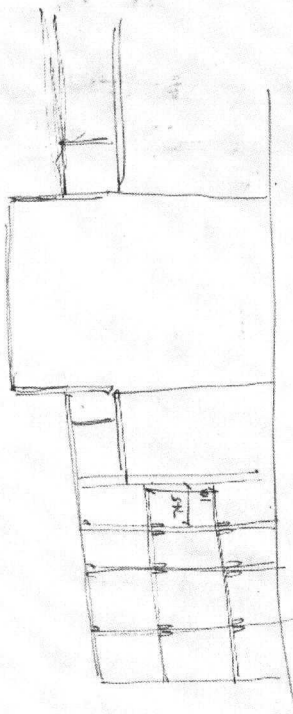




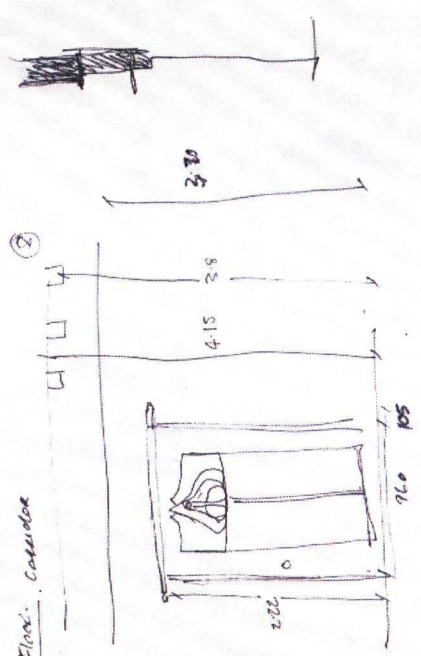
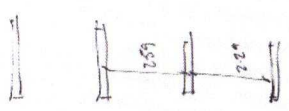
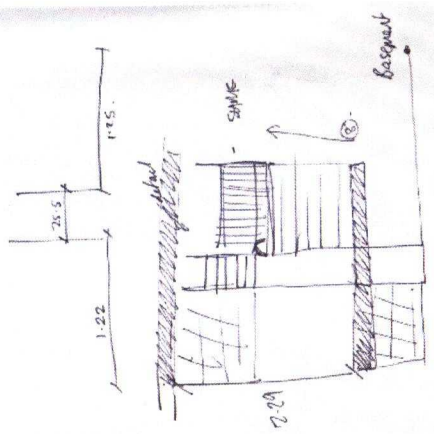
STAIR
 HIERARCHY + CLERICAL STUDIES, BAGGEMENT
 TOWNSHIP PLATO



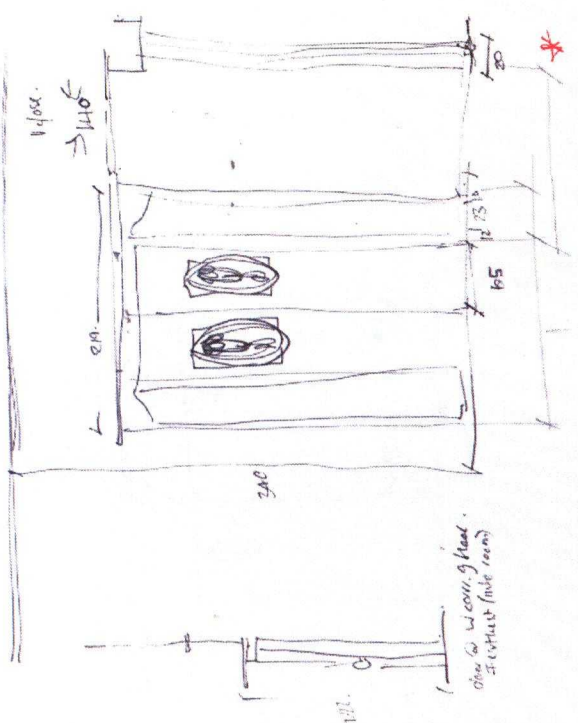
STAIR 2



OTHER SIDE EMERGENCY EXIT



1. Floor. Corridor
Stairs 24.



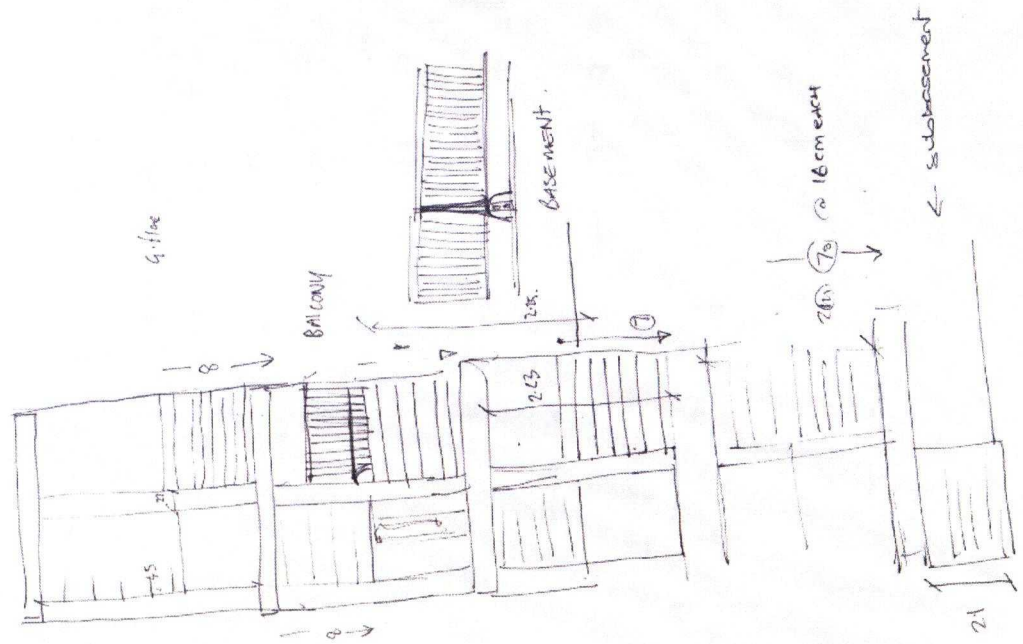
same door
2.30m.
with extra panels 25cm
rather than

same door width.

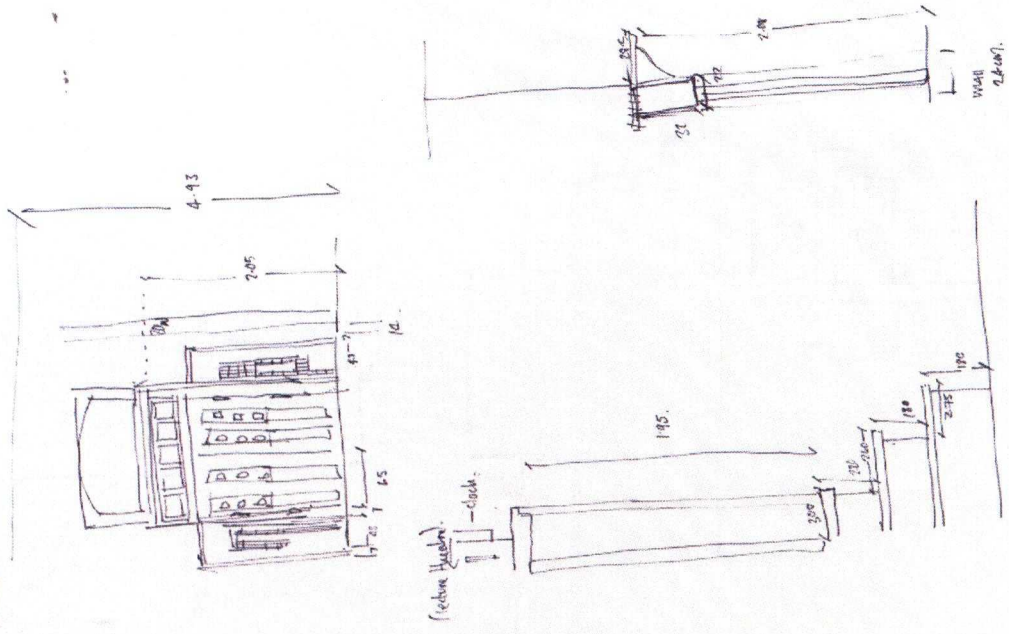
LIBRARY. THE FALL + USE OF MIMICRETSCH (ARCH LIB) FILM
GUMBING GREAT BUILDINGS - 45 MIN SCREEN SPACE OF MEET
DVD 1959.

Ready Sliss!

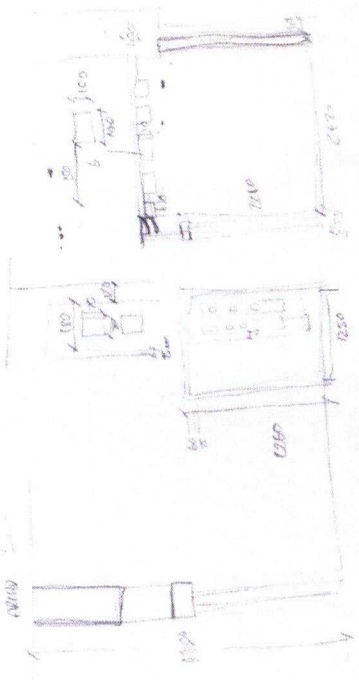
16.1.2018



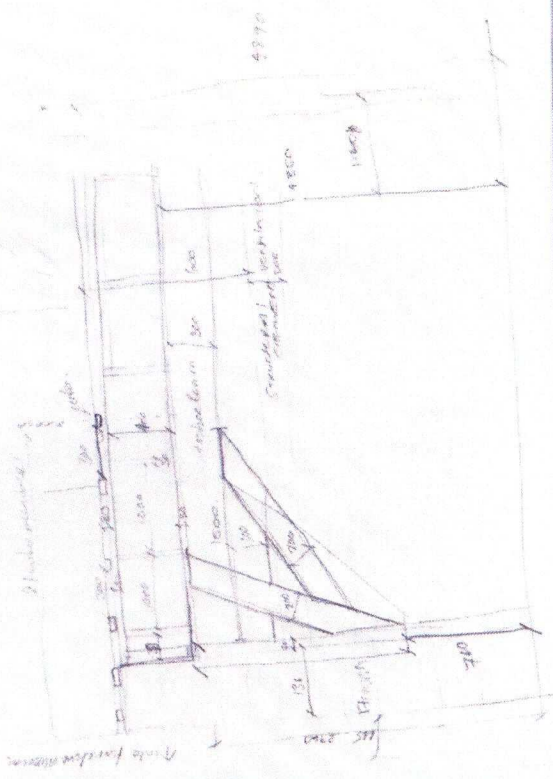
circulation basement - ⑤



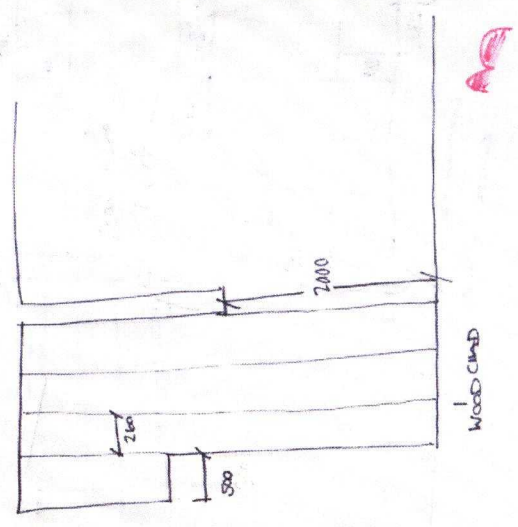
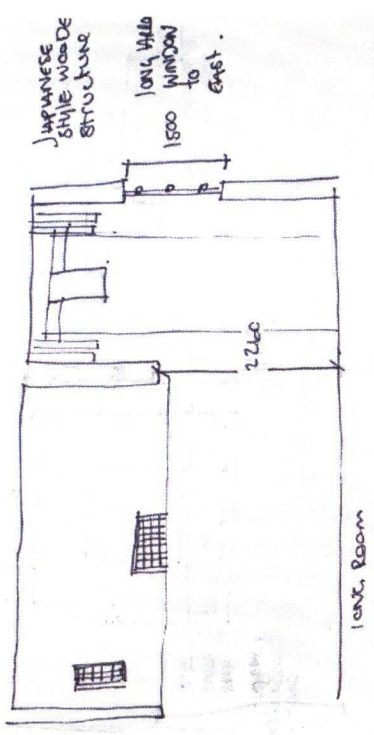
EXISTING - INFORMATION



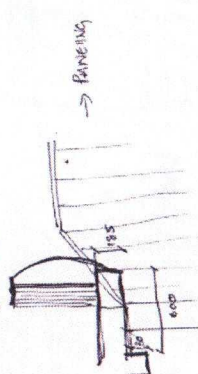
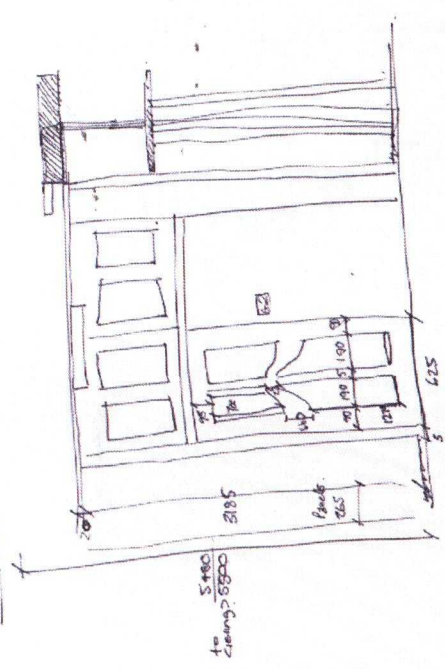
THE SHOP



'THE WARDROBE to the 'TURBET'

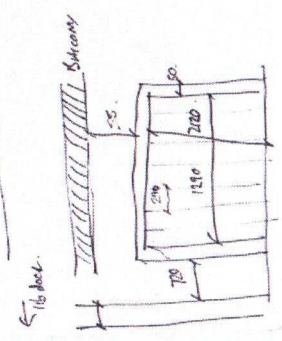
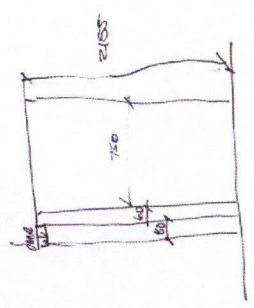


LIFE SCHOOL. 1st FLOOR. WEST CORRIDOR.

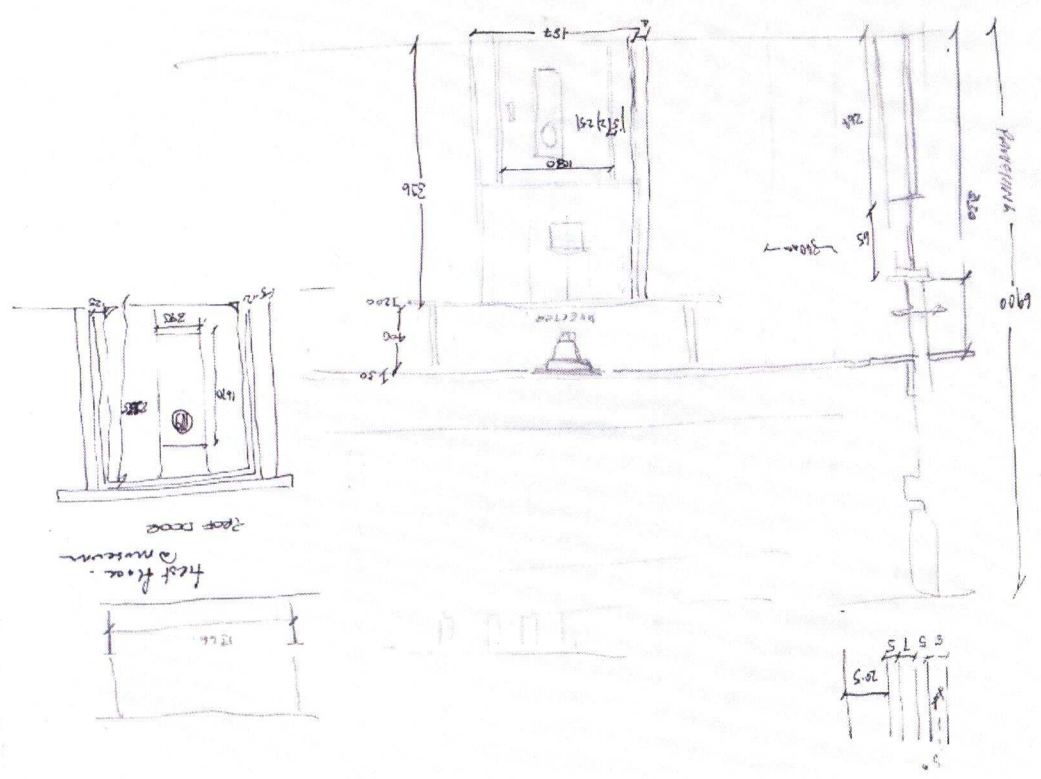


→ FURNITURE

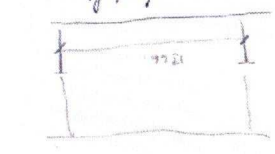
1/15 FLOOR - SECTION



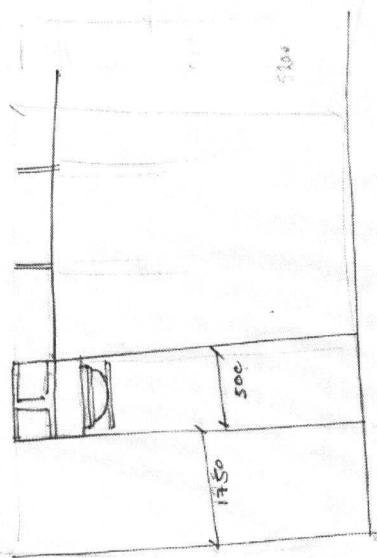
← 1/15 FLOOR



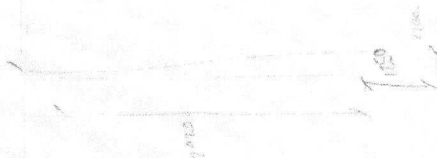
1st FLOOR
WEST CORRIDOR



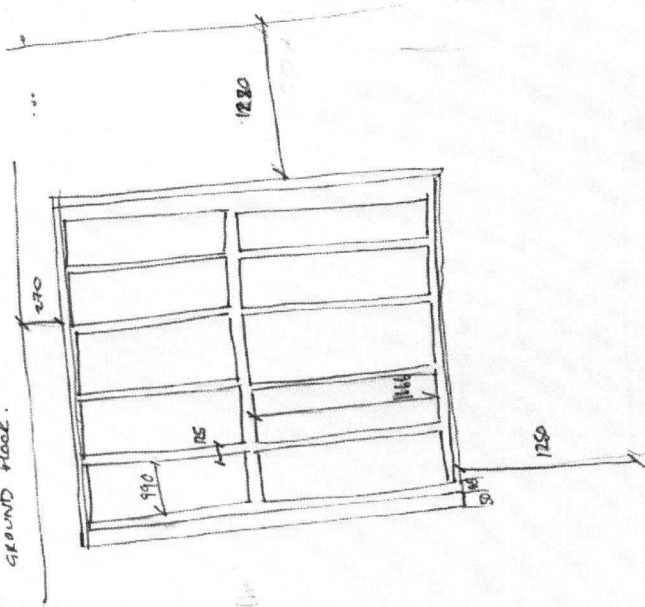
1/10
1/10
1/10



1st studio / office / work space

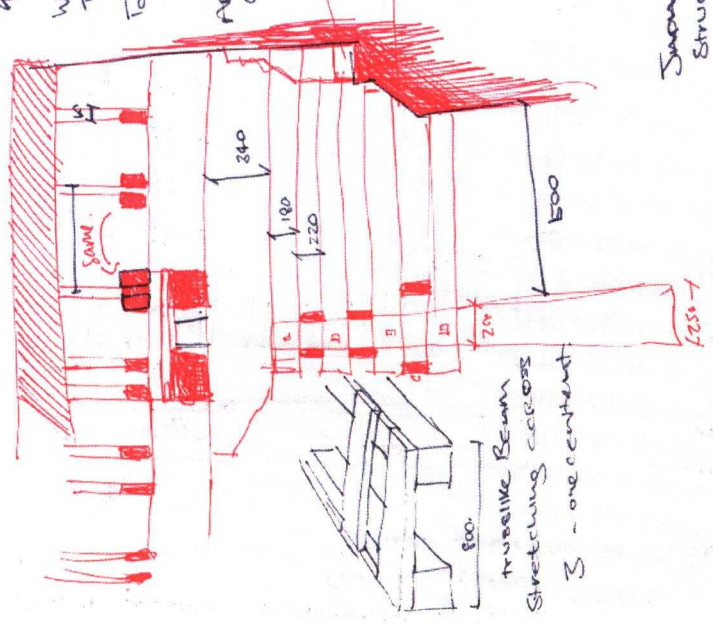


GROUND floor.



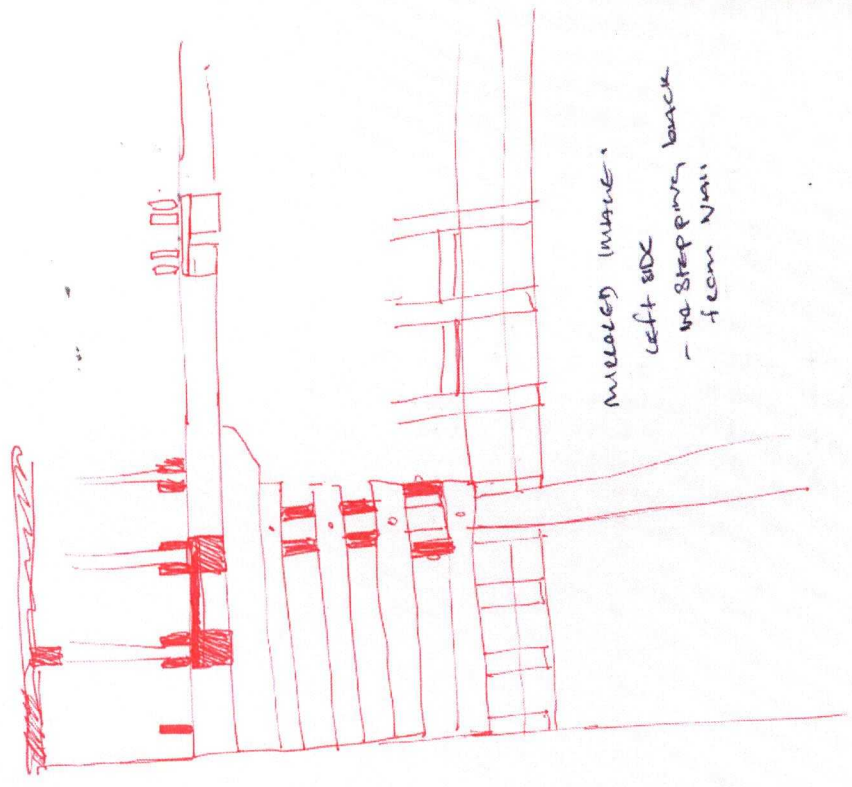
1/10
1/10
1/10

GALLERY
 WEST WING
 Top floor.
 Top irregularity.
 members
 apex. (Dun thick).
 CENTRE - LOUVER



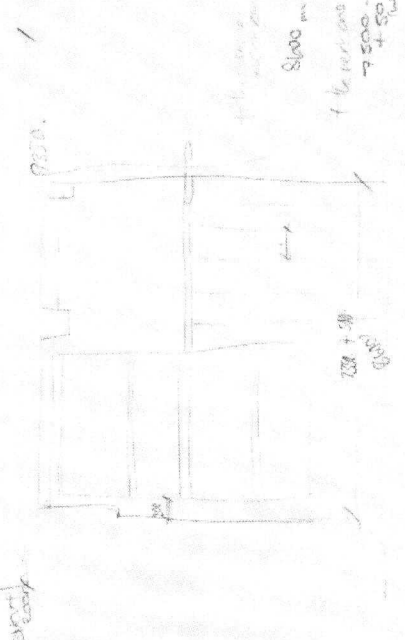
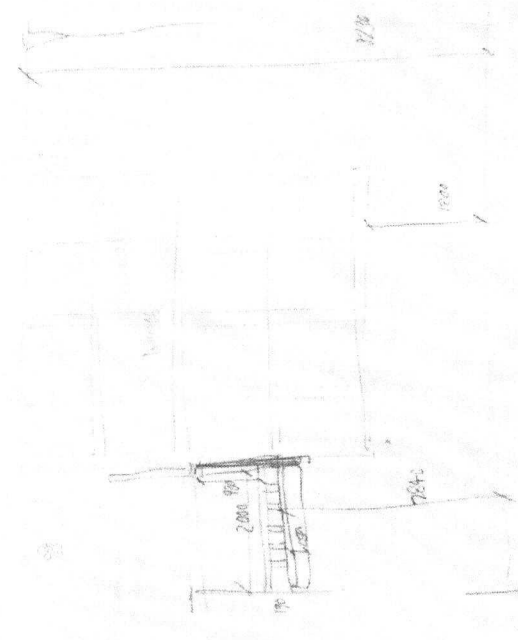
right side.

JAPANESE STYLE
 STRUCTURAL SYSTEM.
 EXCESSIVE
 + DECORATIVE.



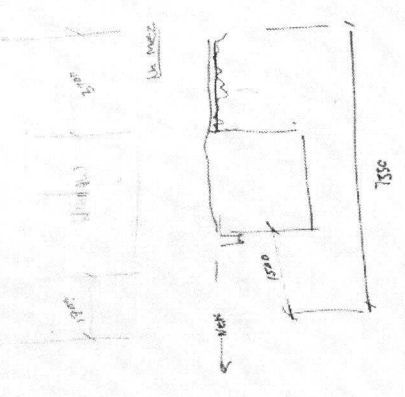
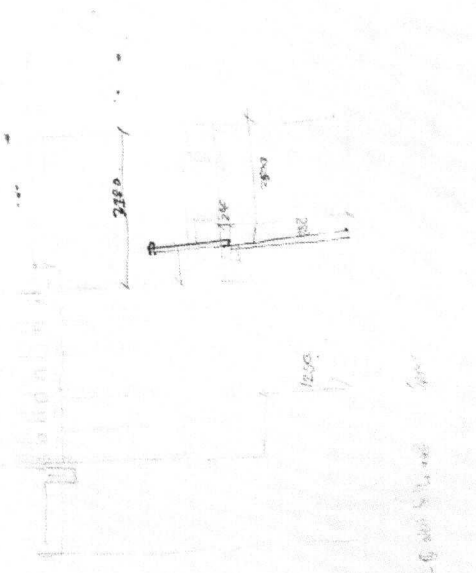
MIXED INTERIOR.
 LEFT SIDE
 - NO STEPPING BACK
 FROM WALL

1974/1975 19 11/04 4-8230 2000 2100



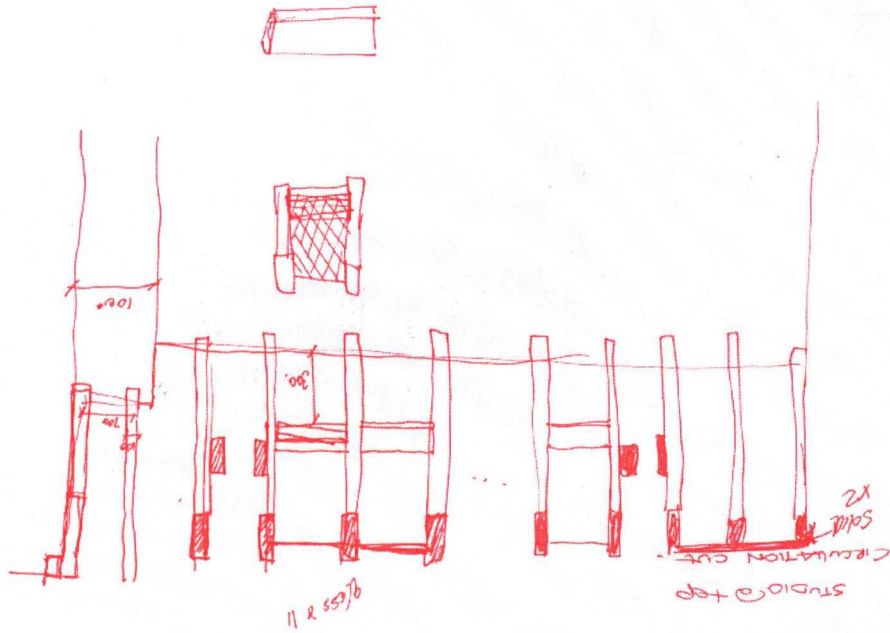
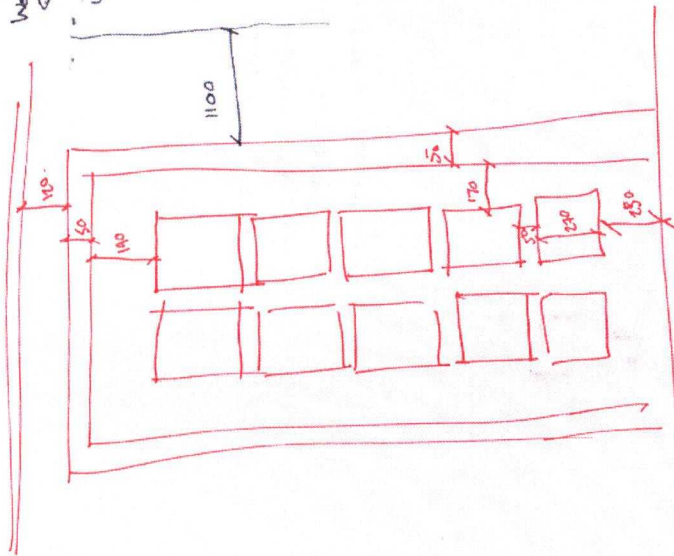
8100 m
 7500 + 50
 (meters)

2R floor
 Double-height

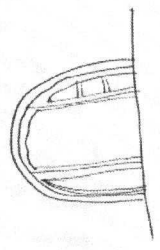
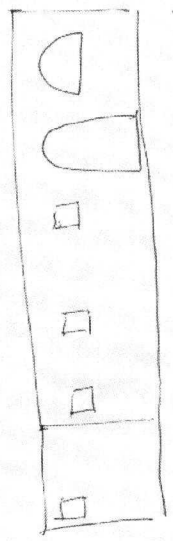
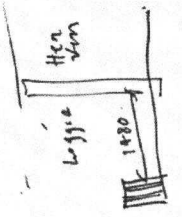
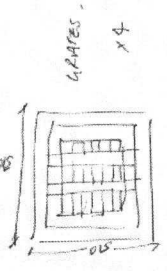
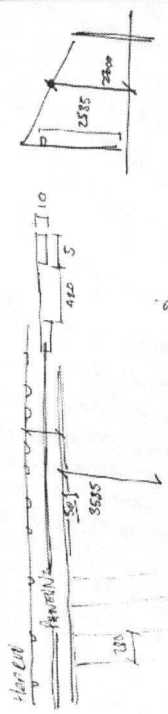
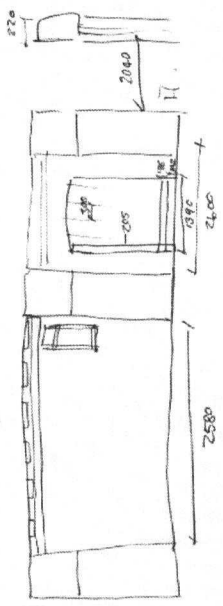


top studio door
to right of entrance

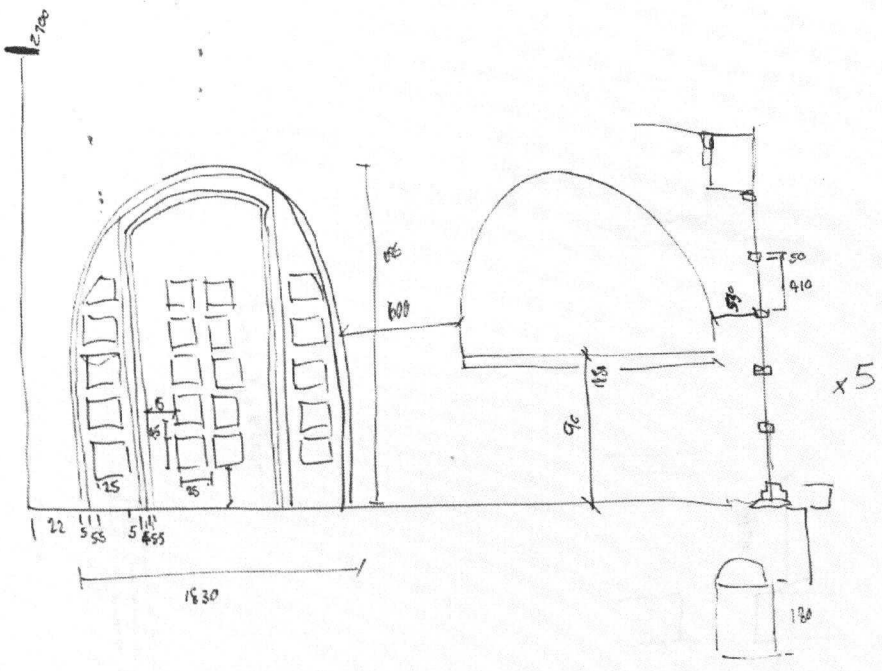
We steel top
studio door
to right
of entrance



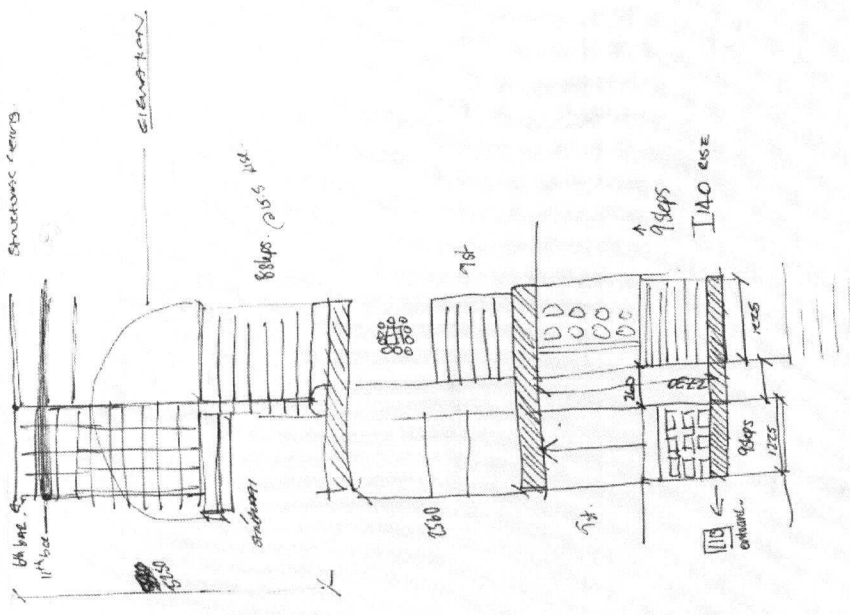
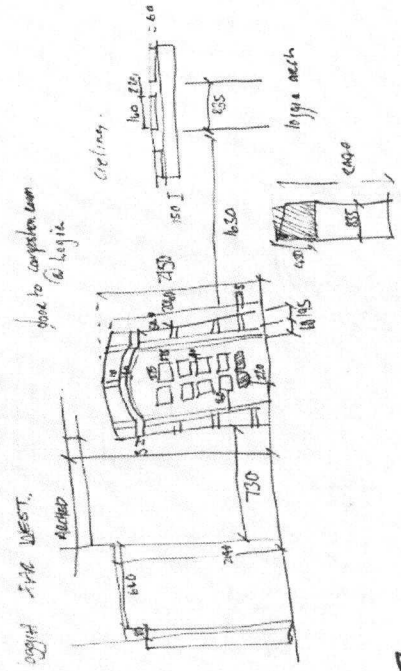
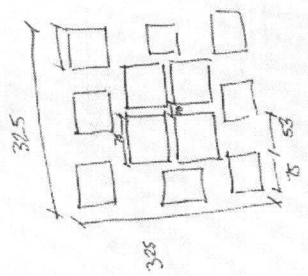
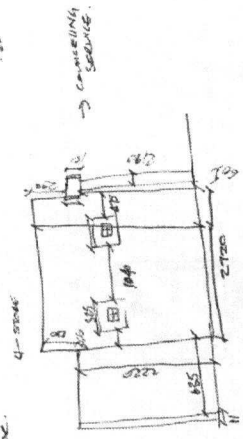
Roof studn.



HEN LUN

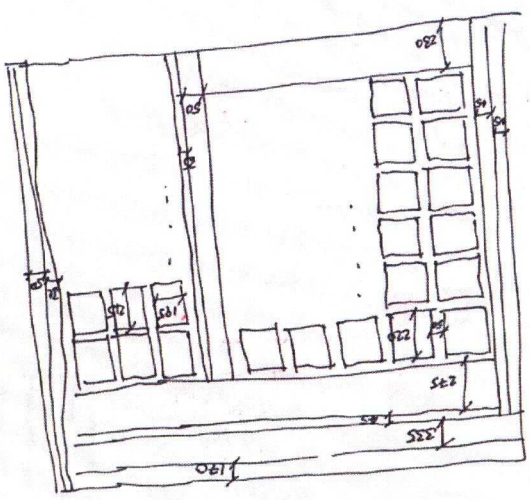


West
2nd Floor to 3rd Floor (main entrance)

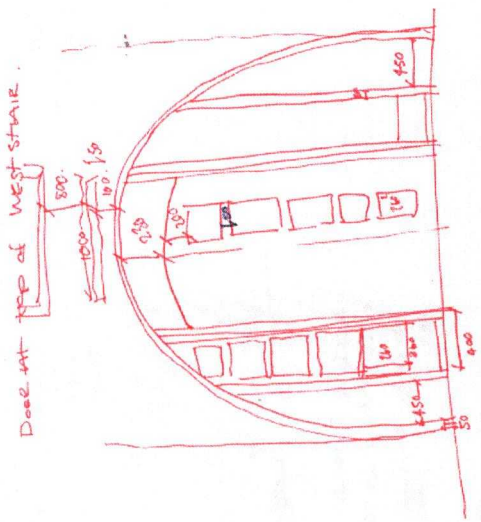


F44

account for extra heights
 - These Doors - to library
 + lib balcony are
 unaligned due to fire loggations
 soon to be removed as new
 sprinkler system has been
 implemented.



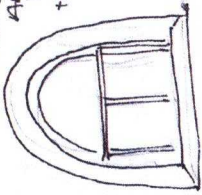
Door to library. - Elevation on 'Plan' section
 from circulation
 Western Zvezdarnyaya Street



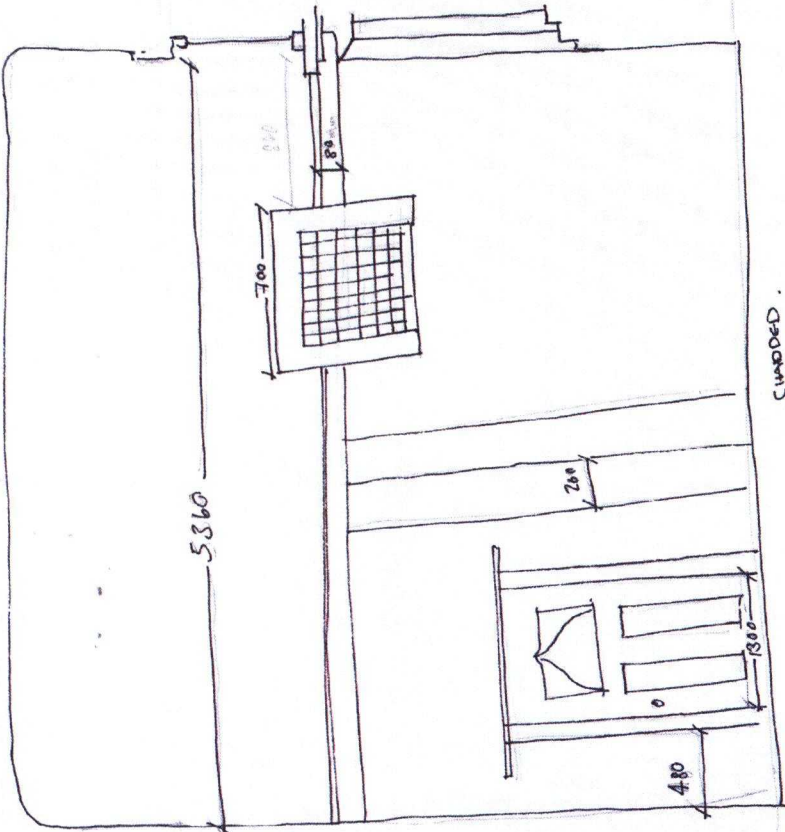
- Tamura:
- Beams in top piece
 - Stairs core
 - Windows on east + west wall
 → Be sure (cuts)
 - Roofs of circulation.

DIRECTORS
EXECUTIVES SUITE.

ROUND EXTERIOR
ARCHED
WINDOW
TO ENGL.



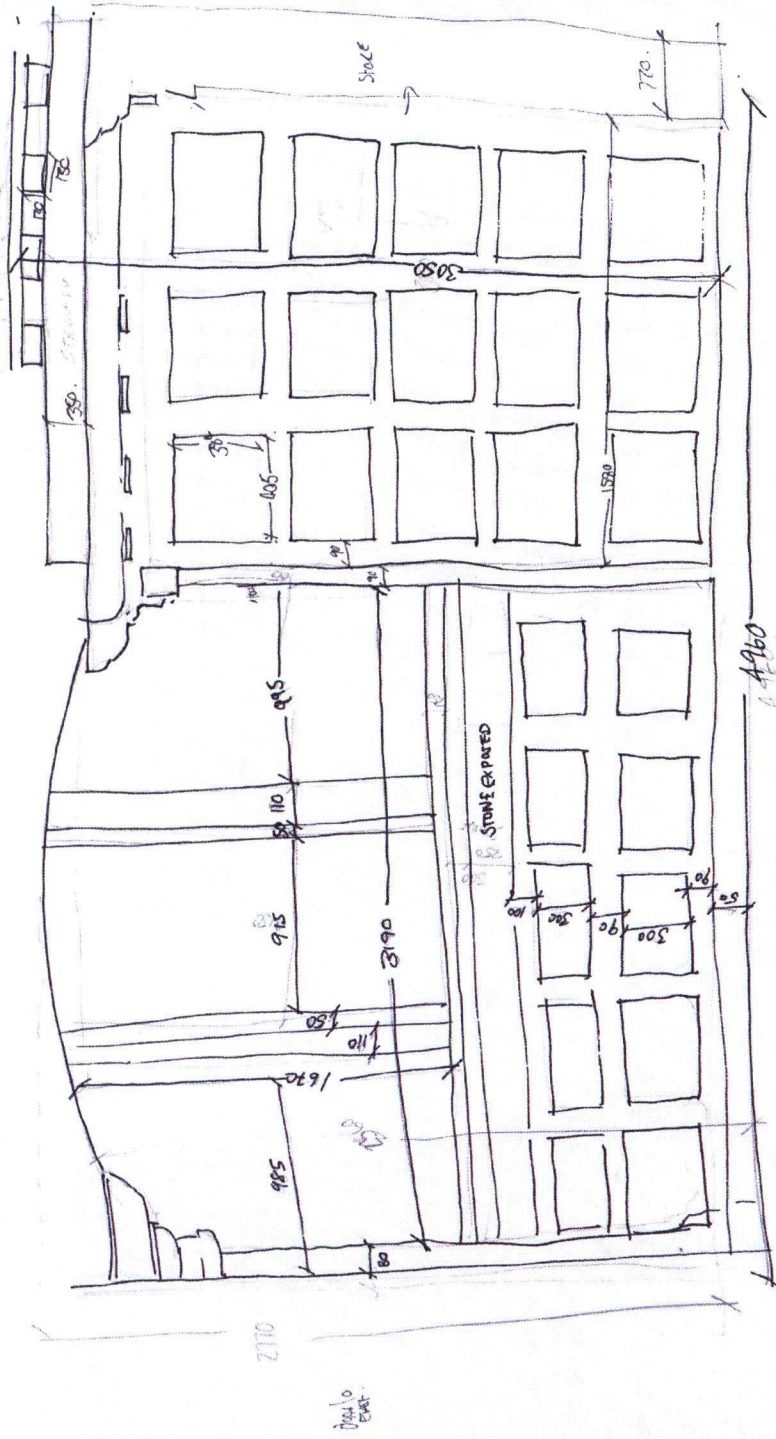
FINAL I.
ABOVE MAIN
ENTRANCE.



CHAPPEL.

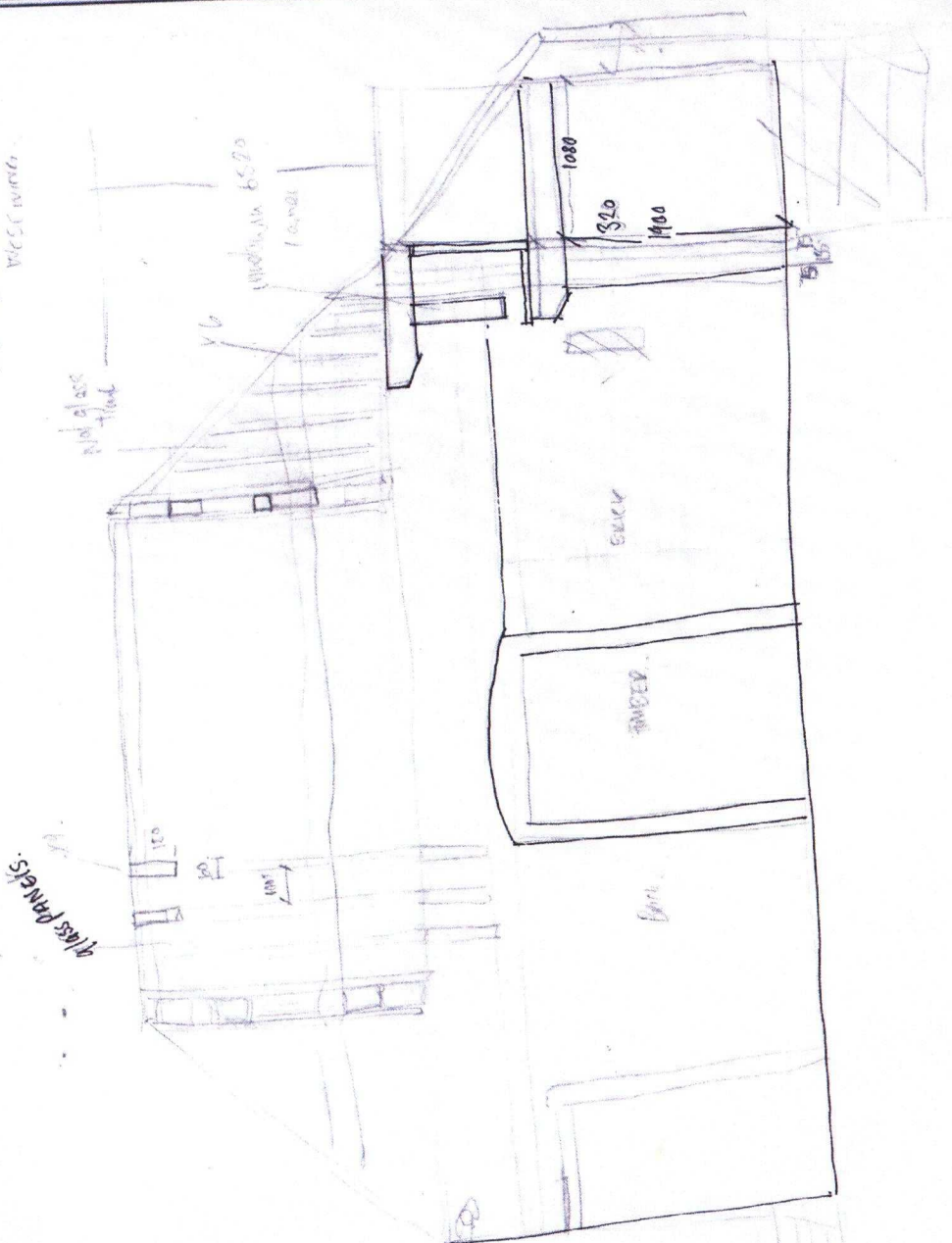
ROUND
CORNICES

Director's office - Board Room.
 @ Ground floor - East.
 Slightly Decorated -



Windows - Continuous pattern
 from studio windows

2.00 by lecturer floor for
WCC units



Glass panels

No glass floor

WCC units

KITCHEN

BATH

LIVING

BED

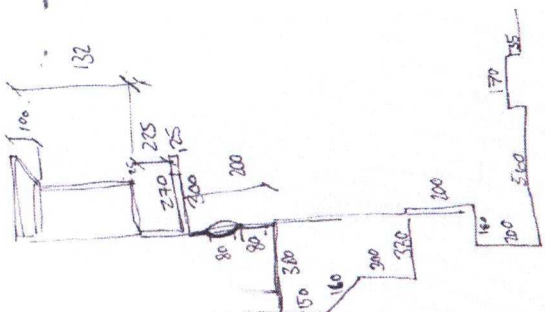
280
 - 125

 155
 205

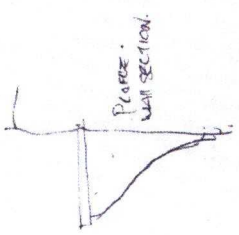
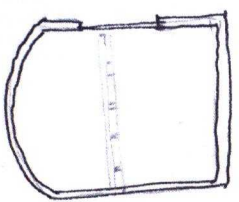
 40

STUDIO - ABOVE OFFICE.

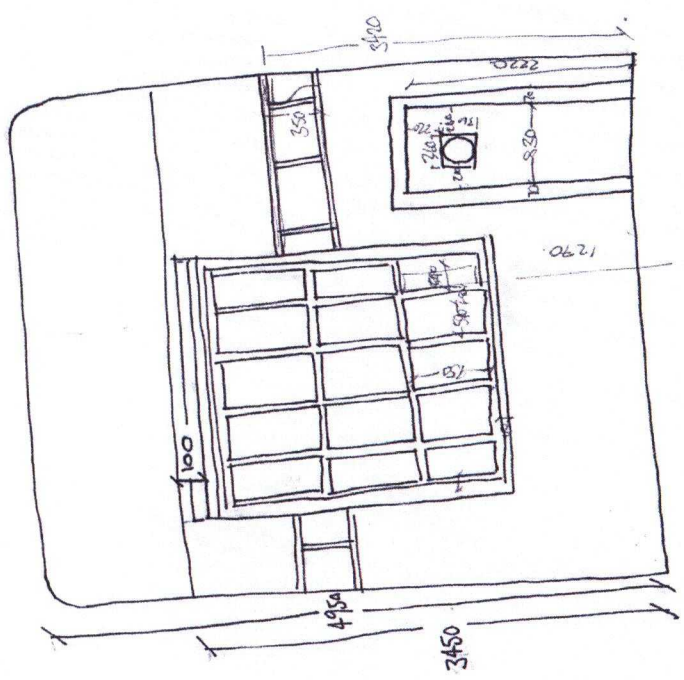
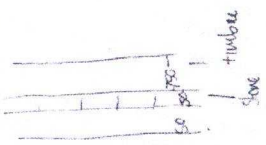
FIREPLACE - SECTION THROUGH.



ARCHED CEILING.

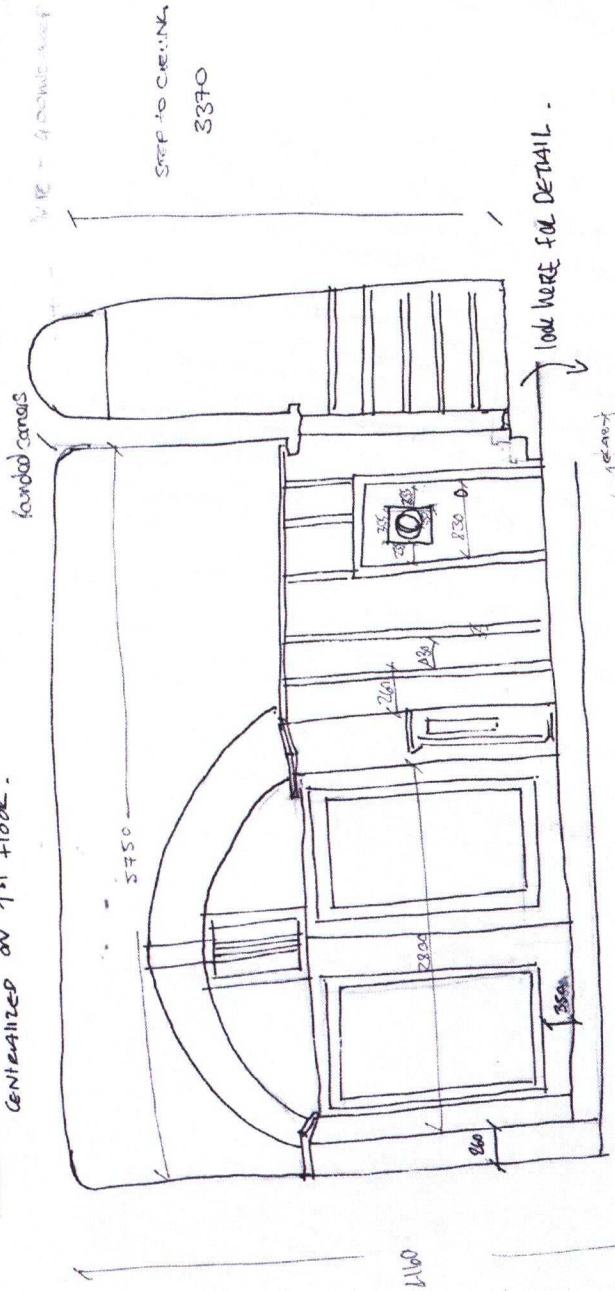


WINDOW CASE

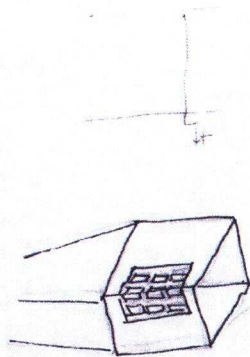
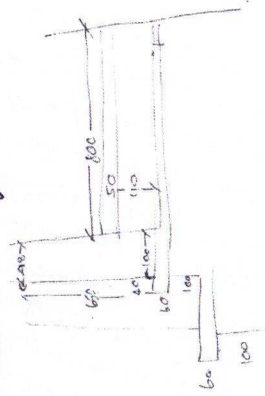


OPERABLE WINDOW 258 - ABOVE

DIRECTOR'S OFFICE -
CENTRALIZED ON 1st FLOOR.

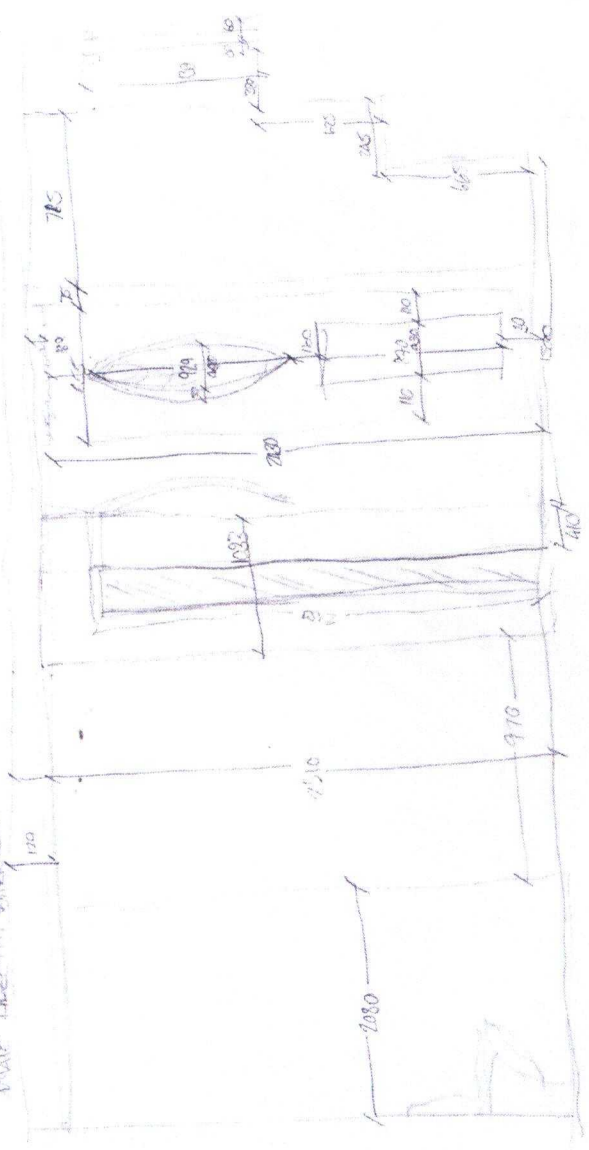


↑
8 STAIRS THCA FLAT
THCA 4 STAIRS
STAIRS +
TURNING CORNER
TO TOWER.
S IN VIEW IN
ELEVATION.

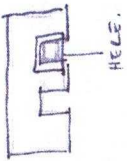


light fitting.

Activity
 Large Population - Non-random Directed Structure
 Many Connected Individuals

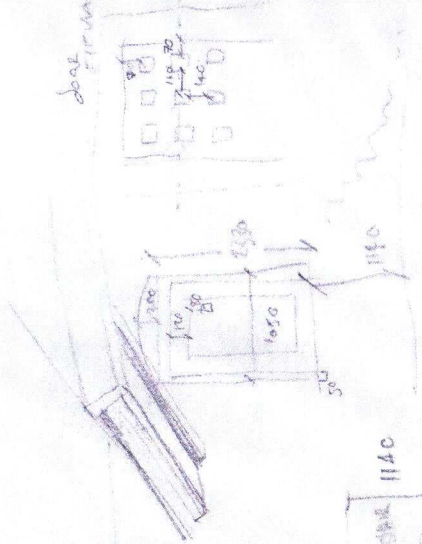


STUDIO
Basement
SUNKEN REINFORCED
VIRGING



→ EAST

DOOR
ELEVATION

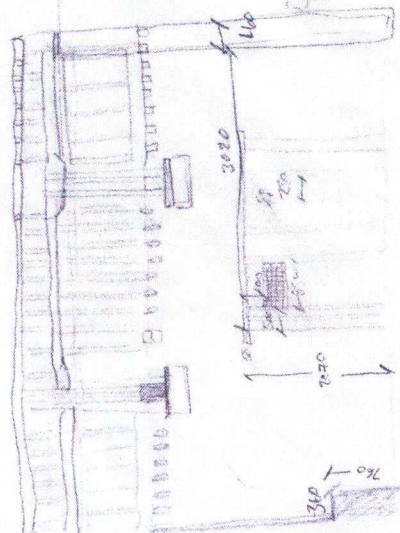


1140

250

1050

300



3080

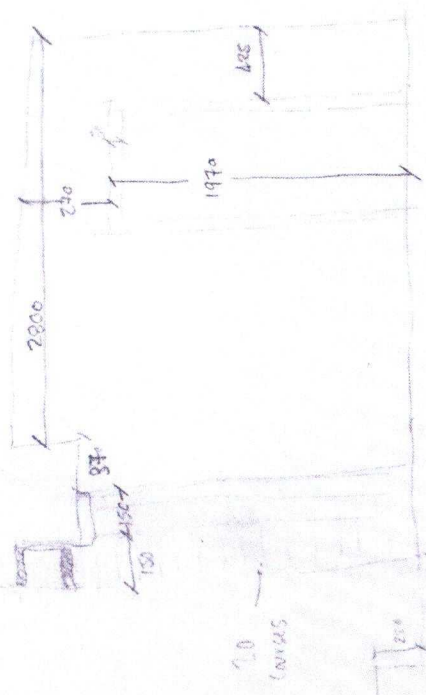
1140

700

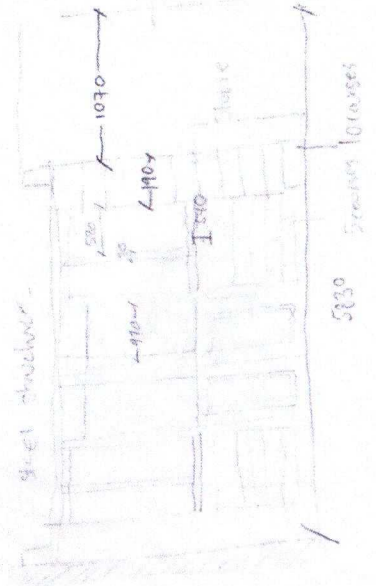
DOOR

300

VIEW OF ROOM BETWEEN



ARCHIVES ROOM



STAIR

10000 ARCHIVES ROOM

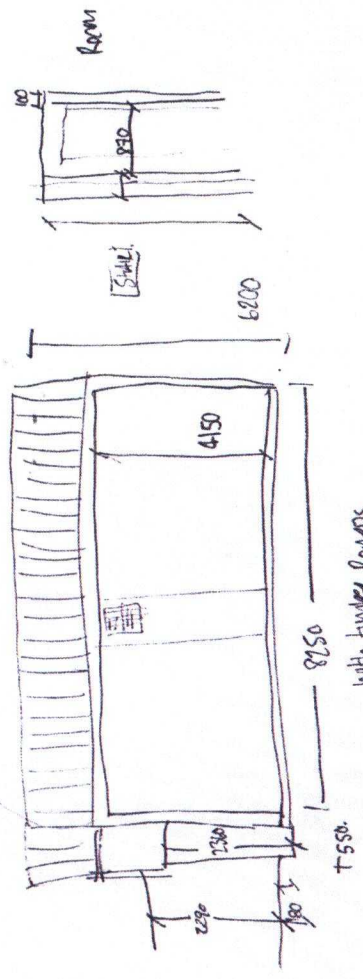


10000 UNITS

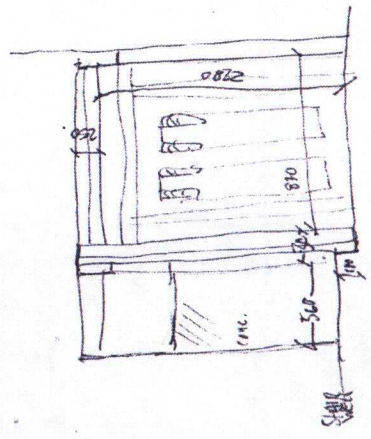
Upper studio

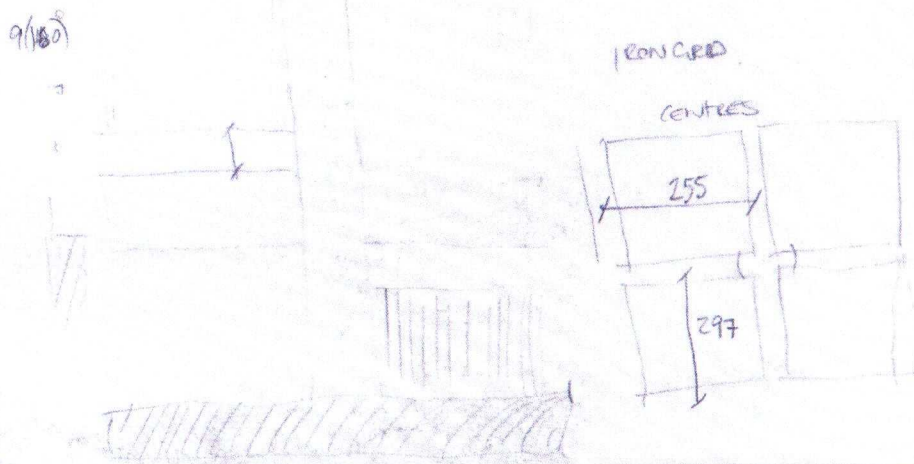
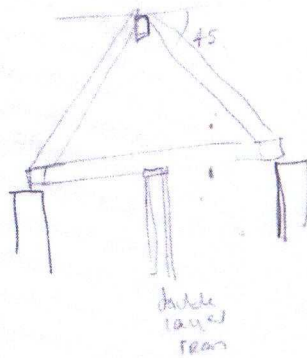
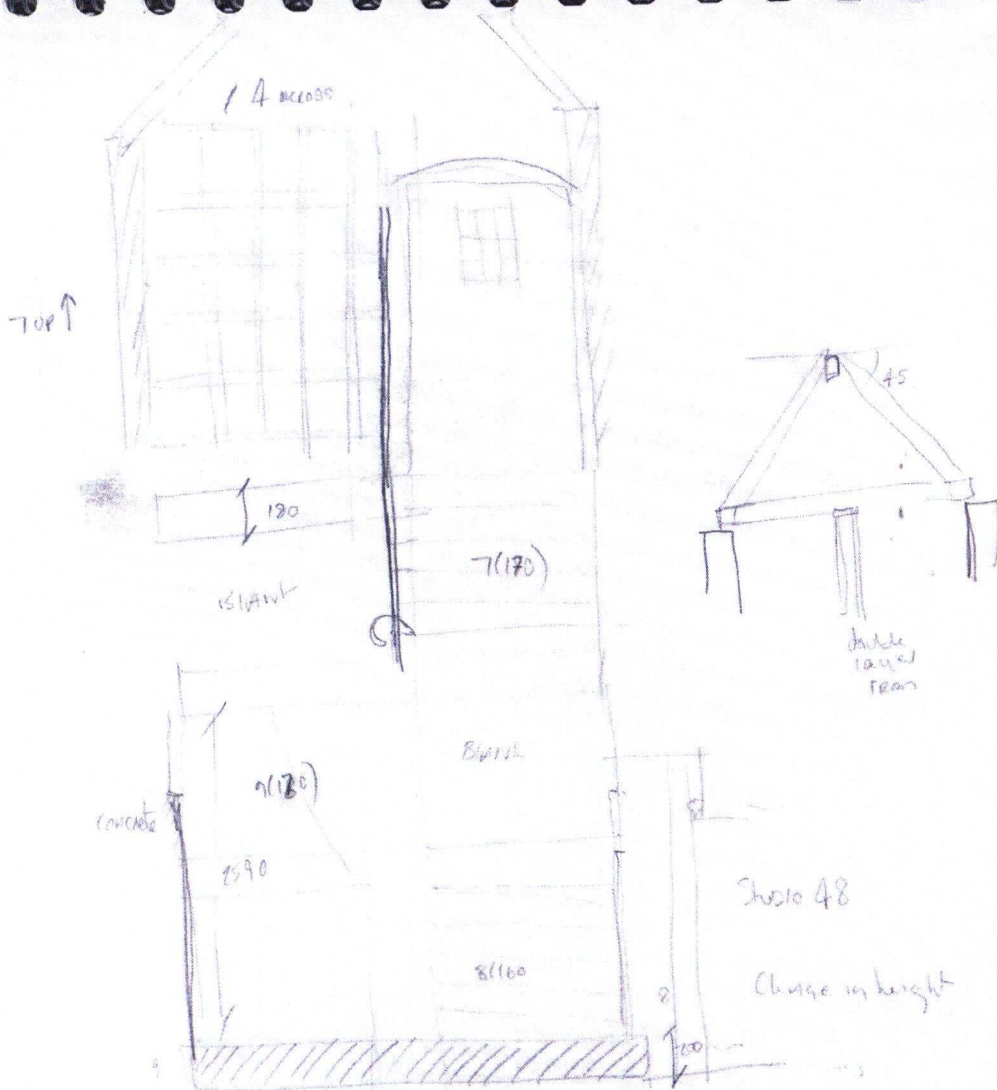
48 - ARMS

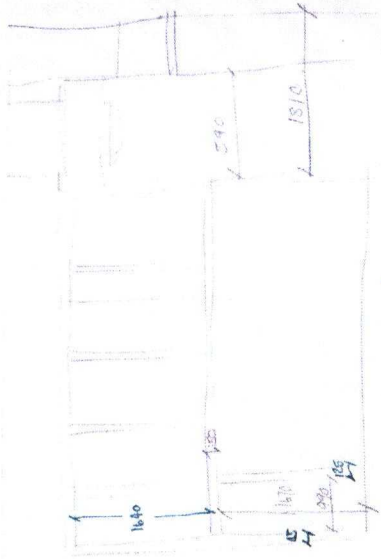
W. SHAWNEE 2nd FLOOR



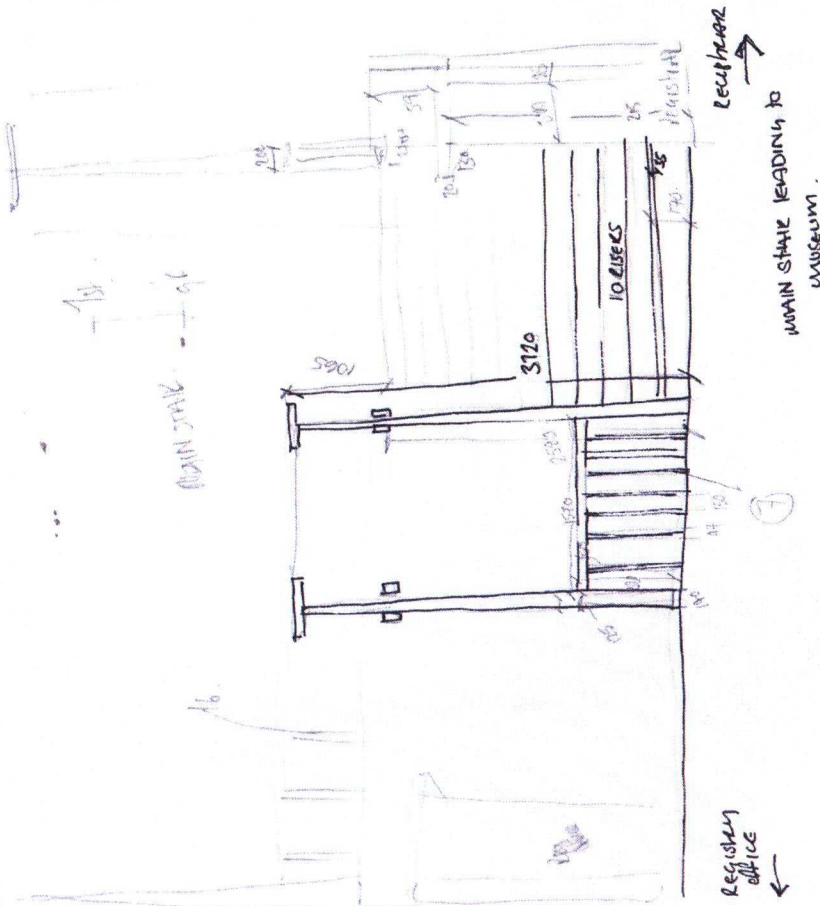
with timber boards
- ESTIMATION

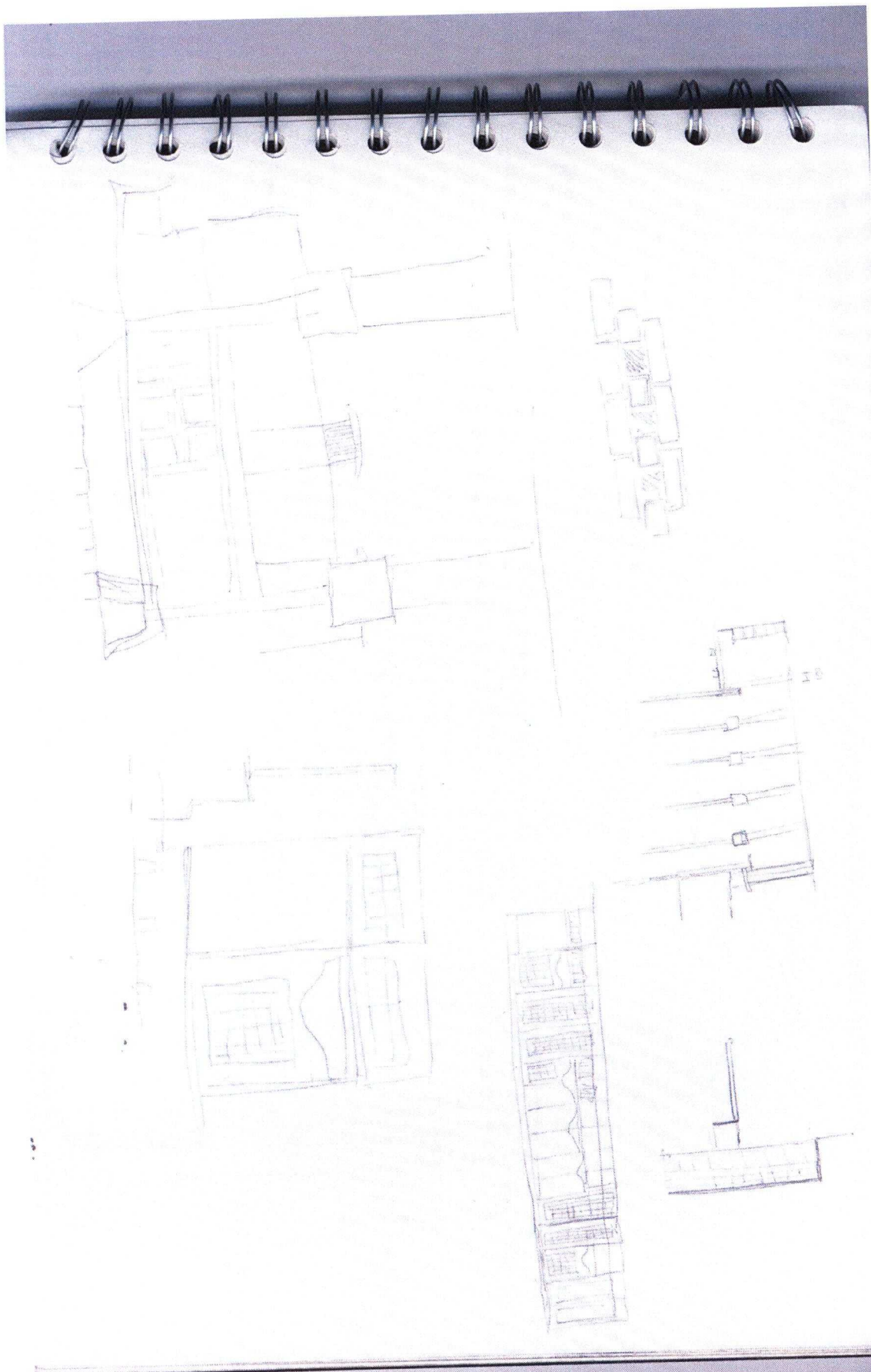






Studio Window - G. floor.
 ← Second floor right.





THE WEST CORNER - QUARTER SECTION

SHOW THE RECEPTION AND CLOSET

DOWN



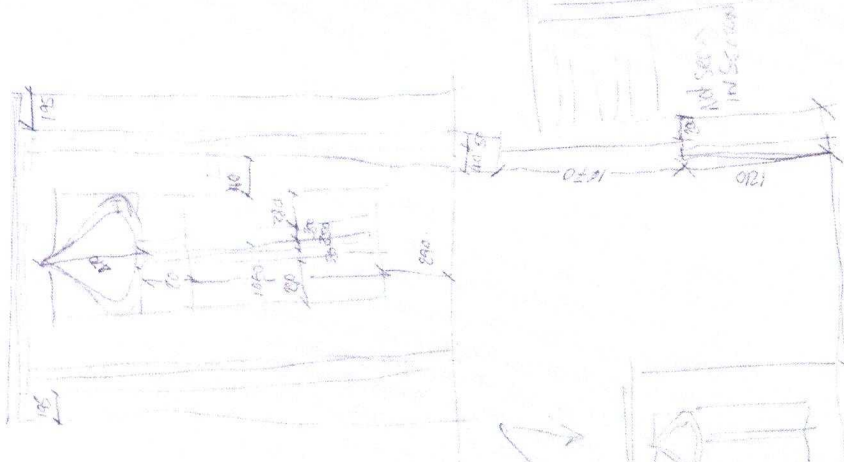
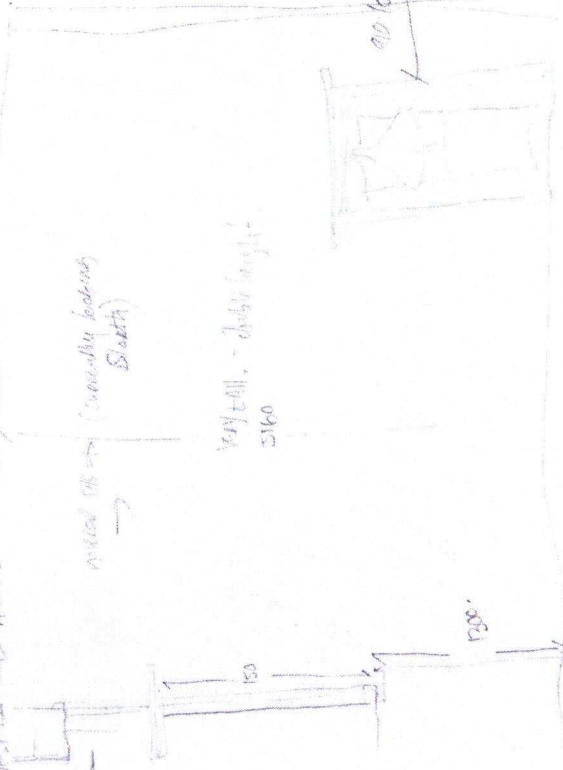
1. RECEPTION

2. CLOSET

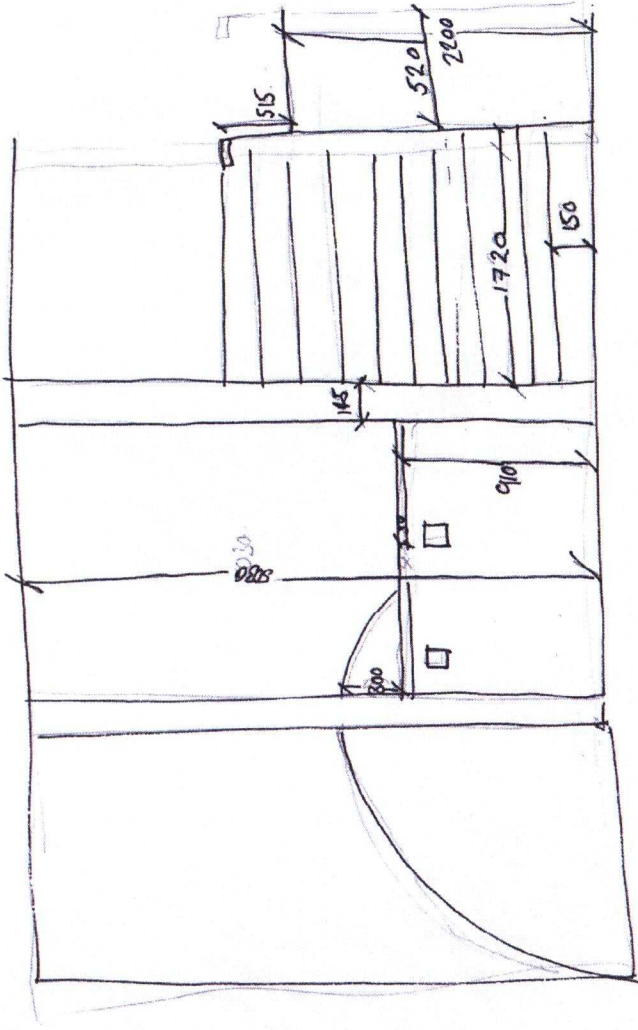
3. RECEPTION (reception looking South)

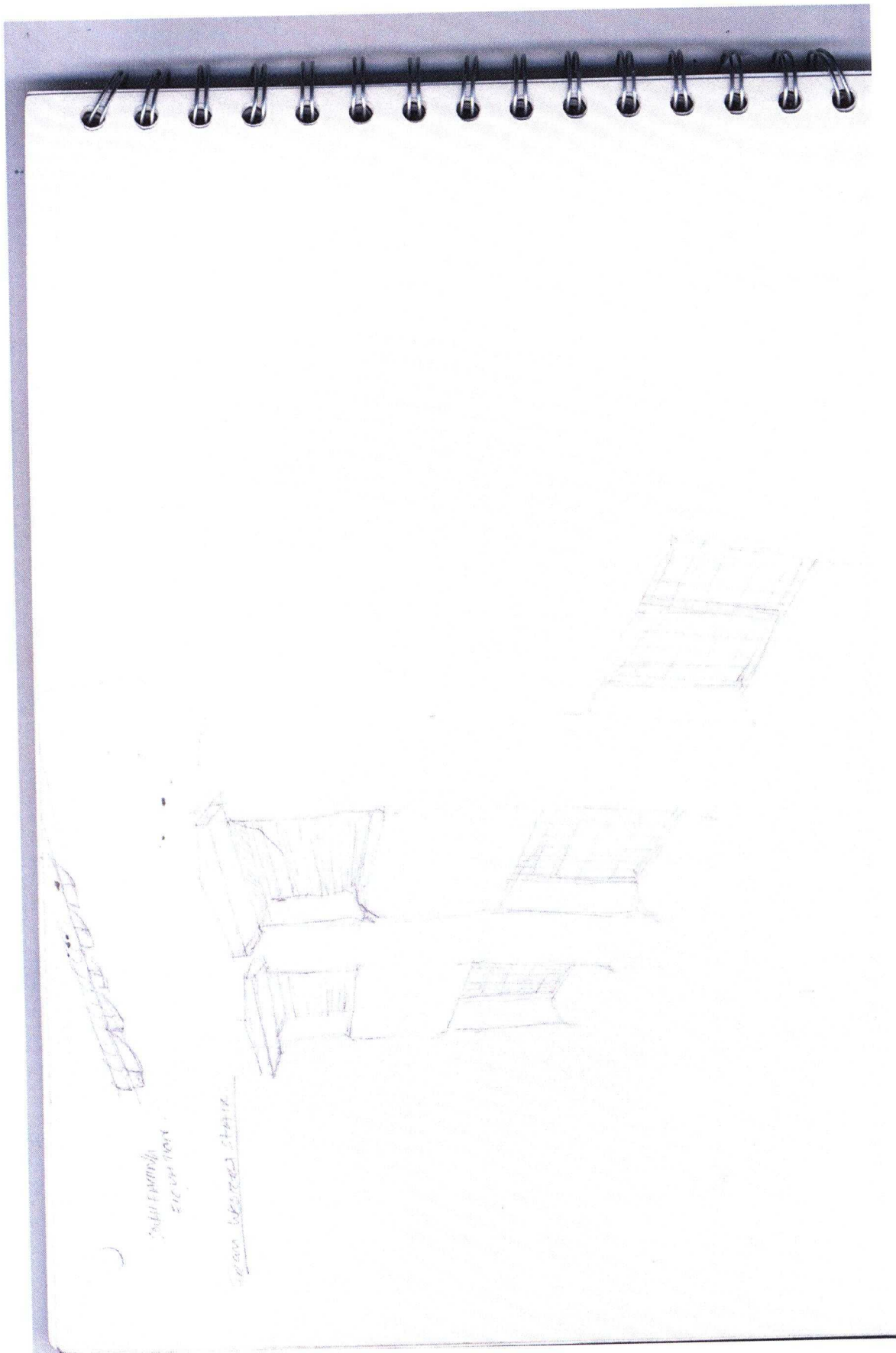
4. WALL - double height - 2160

APPROXIMATELY



CONTINUING EDUCATION

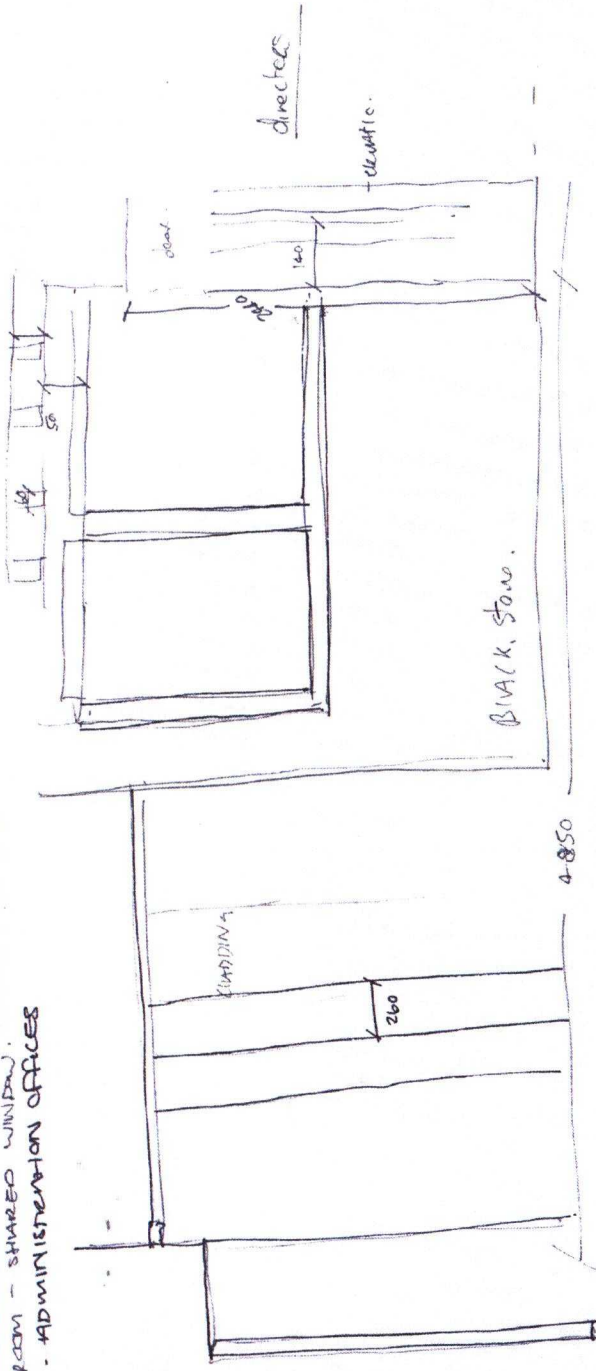




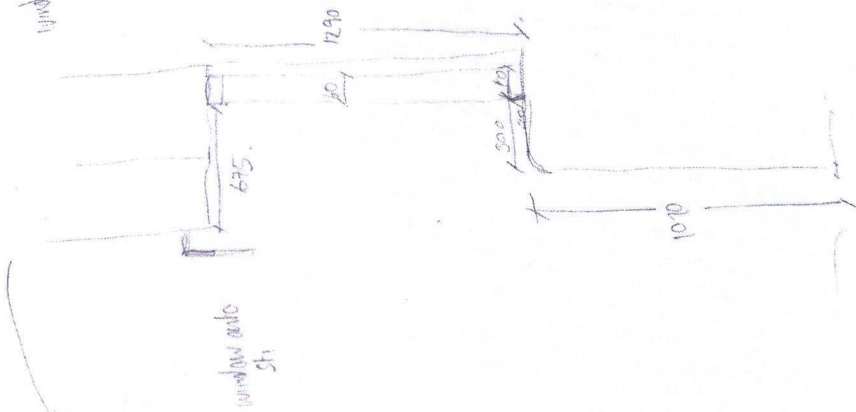
Hand-drawn architectural sketches of a building's exterior and interior, including a staircase and a room layout.

Hand-drawn architectural sketches of a building's exterior and interior, including a staircase and a room layout.

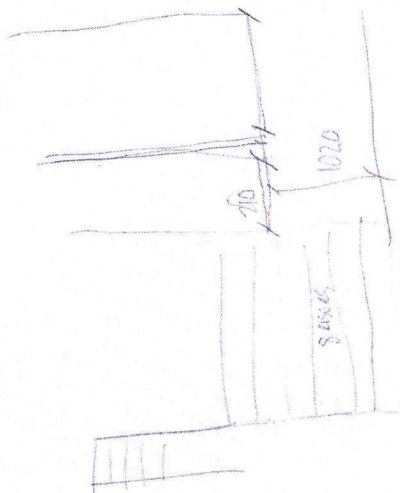
Next to DIRECTORS ROOM - SHARED WINDOW.
WEST - ADMINISTRATION OFFICES

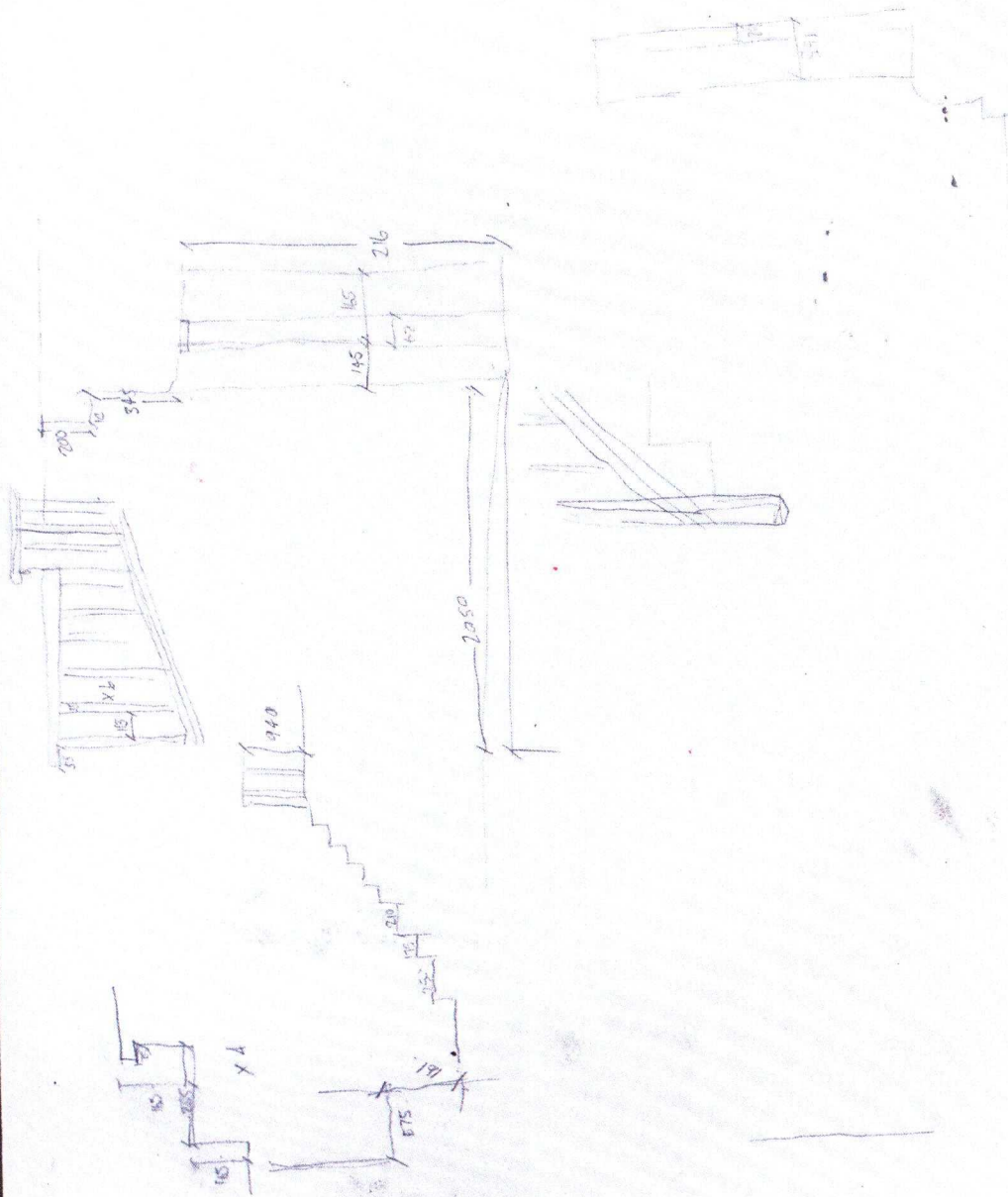


Window - paper & cables old house
V. Reservoir

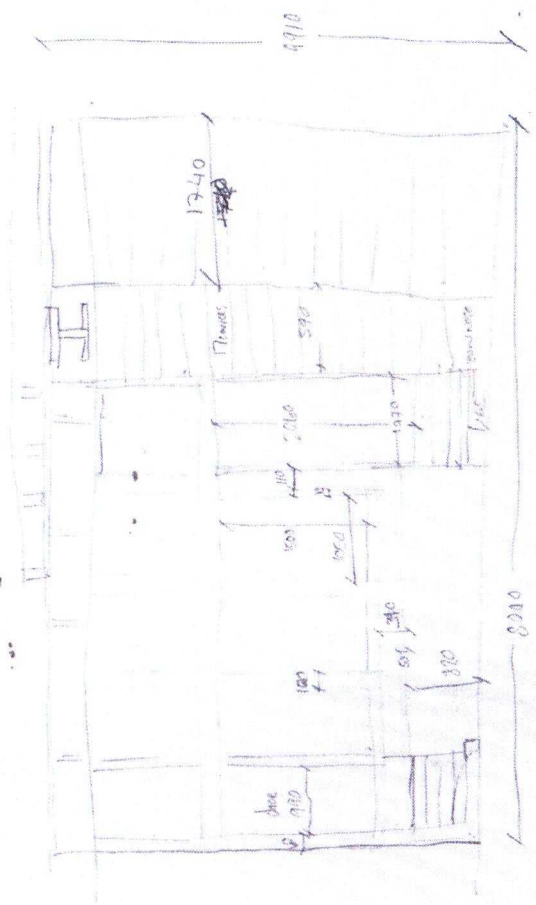


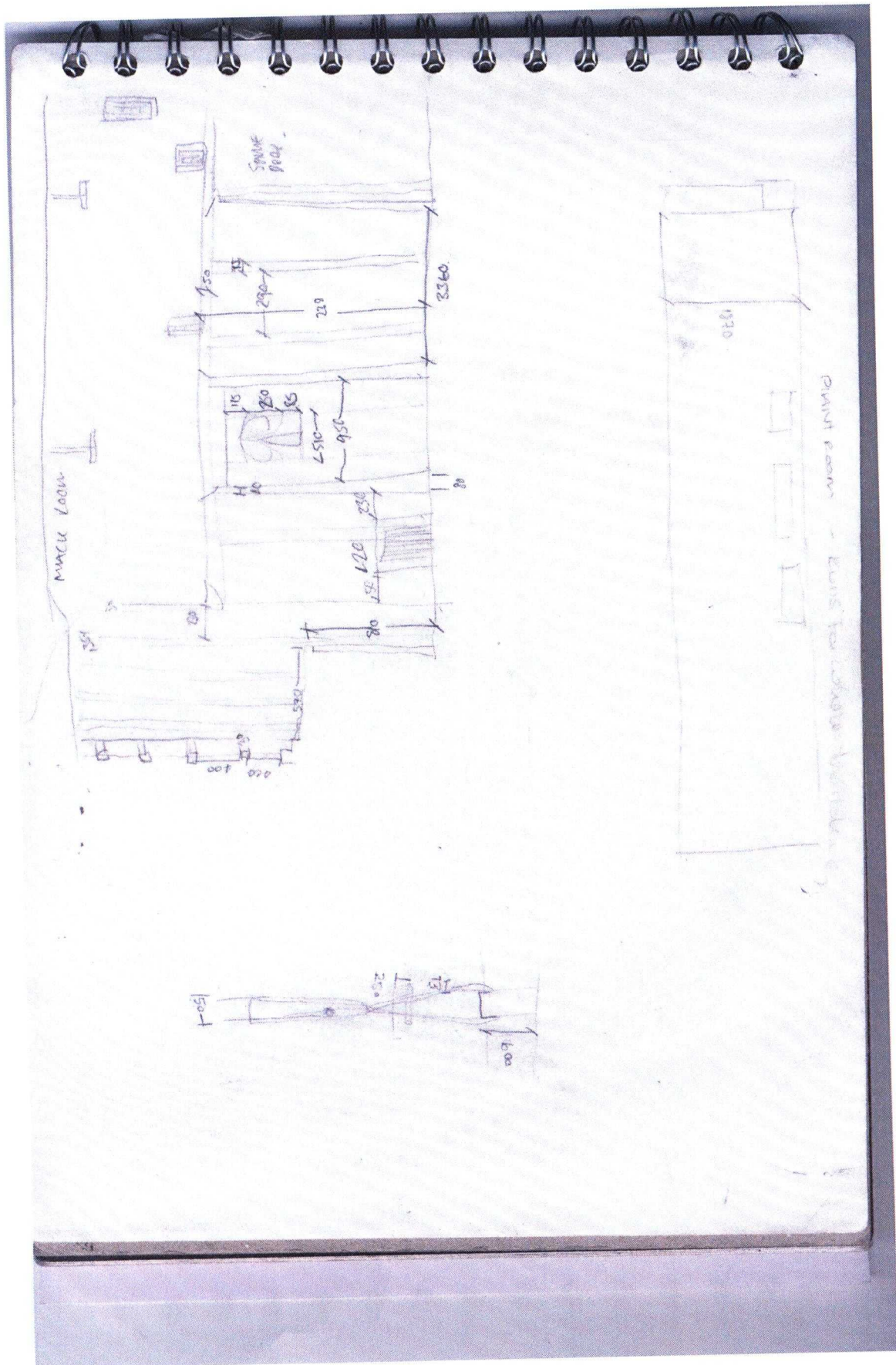
Window into kitchen
Floor slabs

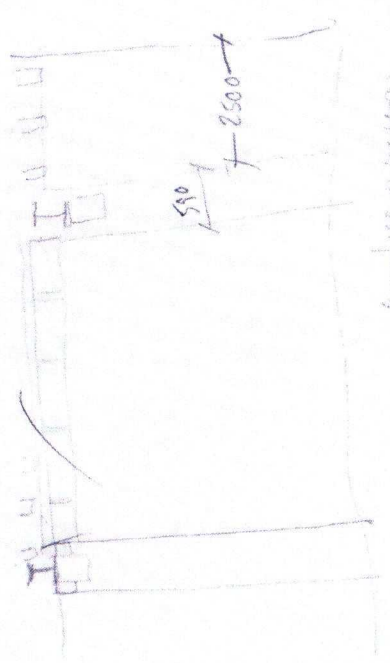
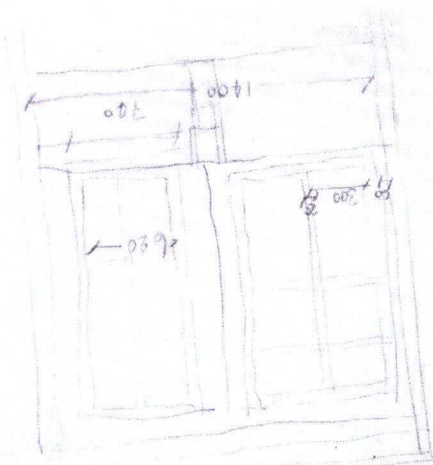




Historical + Cabinet Studies



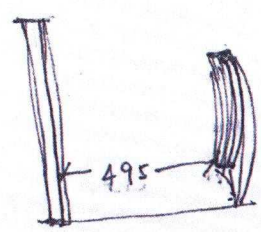




Handwritten note: 495mm x 2500mm

Handwritten note: 1.6m x 2.5m

Balcony Door



Contact:
Jill Hammond - Sto. Services.

2 THINGS IN ELEVATION ARE SUBJECTS SUB-BASEMENT
→ SUB-BASEMENT UP IN BASEMENT



Basement



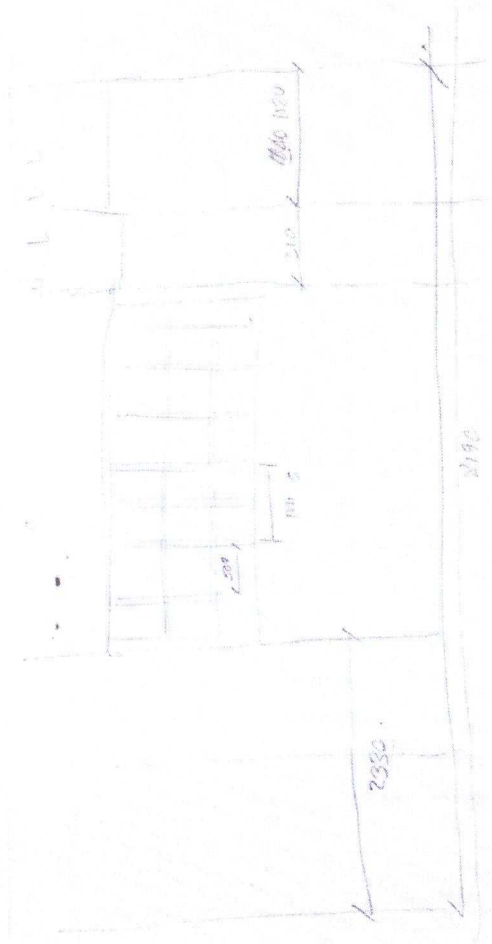
up floor

of floor

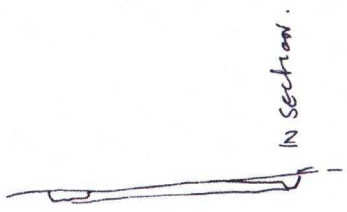
of in sub. base

Basement floor
UP IN BASEMENT

UP IN
BASEMENT



Studios - basement.
 WESTERN CEMENT.
 STAINED GLASS - BALUNUS
 decorated
 with flowers



IN SECTION.