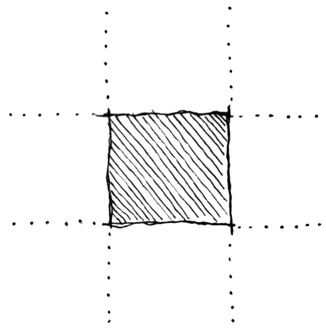
Towards an Enduring Architecture: Endurance in a contemporary context



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Contents

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Class of 2023; Thank you for the memories. This is the beginning and not the end. I look forward to all your success in the future.

Family; Thank you for all your support along this journey. You have been the ear that listens, the compass that guides and the light to follow.

Introduction

"Endurance is a building's most basic task and chief ambition" (Leatherbarrow D. , 2021, p. 3). This quote from Leatherbarrow is a major point of reference for my thesis and one which many of the sub-topics of this publication will be looked through. Endurance is understood to mean "the ability to endure an unpleasant or difficult process or situation without giving way" (Stevenson, 2010, p. 580). The word endurance is derived from the Latin word *indurare* which means harden. Hardness is important in architecture which wishes to endure however, in contemporary architecture, it may not be enough for a building to be solely hard for it to endure. A study completed in 2004 by the Athena Institute for Forintek Canada Corp discovered that building longevity had more correlation with functionality rather than durability (Rabin, 2005). Contemporary design must also consider external factors such as climate agendas, regulations and society. For example, Vitruvius Pollio's three attributes for a good building are *venustas* (beauty), *utilitas* (utility/ functionality) and *firmitas* (firmness/durability). These ideas date back to the first century B.C.E and are still widely accepted in the 21st century as good practice. A balance of these three aspects can inform an enduring architecture. This understanding of longevity will be explored throughout this paper in the hopes of a conclusion which will establish a carefully considered method of designing enduring architecture in a contemporary context.

Within this research paper the terminology 'contemporary context' encompasses current culture, society, trends and the climate crisis in an Irish context. Applying these ideas to the area of study this year, the Tolka Valley, will add a focus to this overarching topic of enduring architecture. This research paper will aim to examine the relevancy of this architectural type in the 21st century Irish context. It will delve into the history of enduring architecture and how this knowledge is currently being applied today.

The theme of this year is 'Urgency: Radical Thinking and Transformative Action'. This theme has been provoked by the need for immediate action concerning the global climate crisis. In a study from 2009 it was discovered that the building construction sector accounted for 38% of total global energy-related CO2 emissions (Neill, 2020). The theme asks for a call to action with the hopes of exploring bold ideas which aim to tackle the urgent climate crisis. Peter Yost is quoted in an article stating "if you double the life of a building, you halve the environmental impacts of its constructions" (Rabin, 2005). This is a radical thought and an unorthodox avenue down the route of the lowering our carbon footprint as the immediate approach would appear counterintuitive to the goals of sustainability. However, the synthesis can be environmentally friendly. This research paper aims to present the relevancy of such an approach, why it is a valuable method of design for the future and how it might be realised.

Part One
Contemporary Relevance of Enduring Architecture

Part one will focus on the relevancy of a durable architecture in a contemporary context. This will be examined through climate, critical regionalism, context and culture.

Theme and Climate

As previously mentioned in the introduction, the theme of the year is 'Urgency: Radical Thinking and Transformative Action'. This theme hopes to produce new, considered and thought-provoking ideas to tackle the current climate crisis. Enduring, long-lasting architecture can be thought of as a radical idea when proposed as a solution to combat the climate crisis. This is part due to the European Commission's current Climate Action Plans which are aimed at meeting targets by 2030 and 2050. These dates look ahead to eight- and 28-years' time respectively. Contrast this timeframe to the accepted lifespan of a house in the U.S. which in 2015 which was 75 years (U.S. Department of Housing and Urban Development, 2015). In the United Kingdom in 2009 the accepted lifespan of a house was 100 years (Hashimoto, 2010) and in Norway in 2005 it was 125 years (Igor Sartori, 2008). Through this comparison we discover that the European Commission's current targets fall short of the lifespan of a building constructed in recent years. Therefor a building's construction costs, both financially and to the climate, cannot be effectively measured over the Climate Action Plan's timeframe. When we add a third layer to this comparison whereby Peter Yost states that doubling the lifespan of a building will reduce its environmental impact of construction by half, the lifespan number now of an enduring building becomes somewhere between 150 to 250 years. Due to this forward-looking timeline, an enduring architecture can be thought of as radical thinking since its impact may not be felt or seen for over a century. However, an enduring architecture can be implemented urgently and immediately, as the theme of the year describes. It would not require any new knowledge or discoveries and hence why it can be thought of as a valuable and beneficial tool for tackling the climate crisis.

Critical Regionalism

In 1980, Kenneth Frampton was on the judging panel for the Venice Biennale. He was bothered by the direction taken in which 'Paulo Portoghesi's 'The Presence of the Past' exhibition. Portoghesi was proposing a regression to the past in order to inform the future of architecture in a post-modern era. Frampton however, thought that there was an alternative approach (Tom Avermaete, 2019, p. 2). His reaction to the postmodernism period of architecture produced his essay 'Towards a Critical Regionalism: Six Points for an Architecture of Resistance' in 1983. Frampton realised that 'in a climate where culture becomes a global concept (…) a certain form of resistance seems to develop that finds added value in the locality of a given' (Frampton, 1983). He was forming the opinion that architecture was beginning to become universal with a lack of attention to its specific geographical place both at the macro and micro scales. Critical Regionalism architecture therefore would act as a mediator between universality and place or 'rationality and arationality'. Within his essay, Frampton describes this mediation as a sensitivity towards topography, context, climate, light and tectonic form. These topics reflect an effective method of analysing an enduring architecture in the 21st century. They encompass good practice for locally successful buildings which consider physical, social and cultural aspects of place which is important in a useful building which necessitates longevity.

Culture of Enduring Buildings

Durable buildings are not a new concept for humanity. Evidence of these types of structures exists across the globe and in many different civilisations. One of the most famous of these examples can be seen in Egypt. The Pyramids of Giza on the Giza Plateau have stood for 4550 years due to their construction, materiality and monumentality. The remaining stone surfaces erode at a rate of 0.01% of their total volume per year (Emery, 1960) which gives them a lifespan of another 100,000 years demonstrating their endurance.

Similarly, the Mayan people constructed pyramids and palaces across what we now know as Guatemala, Honduras, Belize and Mexico. Their structures date back to the 3rd century AD. These pyramid structures have stood to this day due to implementing a solid roof, using corbelled or stepped vaults and most notably by using a mortar mixed with rubble forming a quasi-monolithic concrete (Stirlin, 1997, p. 21). By using materials in new ways, the Mayans advanced their construction techniques which have allowed their structures to remain durable today.

In Ireland specifically, Brú na Bóinne is a prominent example an enduring architectural site. This is a United Nations Educational, Scientific and Cultural Organisation (UNESCO) world heritage site located along the river Boyne in county Meath. Brú na Bóinne is home to three main structures, Newgrange, Knowth and Dowth. These have survived for 5200 years and are the most important concentration of prehistoric megalithic art in Europe (Stout, 2002). The age of the site as well as its importance both socially and spiritually is what secured its World Heritage Site status from UNESCO. While these structures have lasted many millenniums on their own, it mut be acknowledged that maintenance through these conservation programs have rejuvenated structures such as Newgrange.
More recently, an example of successful enduring buildings and building type is Irish Georgian architecture. There are many variations of Georgian architecture such as the farmhouse, manor, townhouse, villa, cottage, and temple. The adaptability and flexibility of this kind of architecture was an important factor in its popularity as it made is accessible to the working class and the wealthy alike. Due to this, many Irish Georgian buildings were constructed during the 18th century and this is a factor for why many remain today.

Part Two
Learning from the Past

The analysis of structures from the past that remain today gives us an insight into what has made them endure. Part two of this research paper will concern itself with ideas of endurance found in specific historical building's designs. Using Frampton's critical regionalist ideas from the previous chapter (topography, context, climate, light and tectonic form) as an aid, we will explore what has made these buildings endure.

Historical Precedents

The Georgian Townhouse

Only a fraction of the original number of Irish Georgian buildings from the 18th century remain. The loss of many Georgian buildings in Ireland was not due to any extensive flaws in their design but due to their association with Protestant exploitation which the Irish people did not care for. These buildings were not maintained properly for a large period of the 20th century by the Irish people due to this. Many were demolished for new developments (Ypma, 1998, p. 147). Traditionally designed Georgian spaces can be seen in the buildings which have been properly preserved. An example of an area of this is Henrietta Street in Dublin. This street is lined on either side with four-storey Georgian style townhouses built between 1720 and 1750 for bishops, earls and viscounts (Ypma, 1998, p. 51).

Traditional Georgian townhouses were built with symmetry and classical proportioning. This is important when we study how light is used within these buildings. The windows on the street facing facades were largest at ground and first floor level, the piano nobile of a Georgian house. These floors which would be used for hosting parties and receptions were bathed in light due to their large windows. Above this the window dimensions become smaller but remain proportional to the rest of the fenestrations. While on the exterior this design detail highlights the basement, columns and attic sections of the house (Wyld, 1990, p. 154), while also supplying a measured supply of light to the interior.

Fig. 01 14 Henrietta Street Post Restoration

Dublin, 2022. Photographed by Philip Marron

A typical Georgian townhouse's depth is divided in half, which separates the volume into a two, a front and back. This achieves two shallow rooms which are generously lighted by their windows. These scales create pleasant spaces within. The varying uses of these rooms for gatherings such as parties, dinners, receptions, plays and theatrics highlights the room's flexibility due to its design. "The selective room arrangements of the Georgian period were in fact a lot more like the modern interior in their avoidance of clutter" (Ypma, 1998, p. 34) which aided in this flexibility. These building are still lived in today demonstrating their timeless design. By studying the ways in which these windows were designed, it is observed that they followed a template but altered the tectonic form depending on the requirements of the internals of the building, such as light, and the externals, such as context. The initial approach started with an opening that was twice as high as it was wide (Wyld, 1990, p. 154) Then the height would be divided into sevenths and this one-seventh dimensions could be added to the height in increments until a window was considered well-proportioned for the building (Wyld, 1990, p. 84).

In 2018, No. 14 Henrietta Street was restored back to its 18th century glory by the Dublin City Council. The building had been left in disrepair after its use as a tenement building in the 19th and early 20th century (Murtagh, 2022). During this time, these large Georgian houses were no longer grand houses for the wealthy. Instead, their generously proportioned rooms were subdivided into smaller spaces families to live in. By 1911 there were 100 people living under the roof of 14 Henrietta Street (14 Henrietta Street, n.d., para. 17). This not only explains the need for maintenance and repair in recent years, but it can be viewed as a demonstration of the extents to which these buildings have been adapted.

Figure 03 reveals the lengths to which 14 Henrietta Street was subdivided. While these smaller spaces were uncomfortably sized for the number of families using them, they still display the building's adaptability to its context.

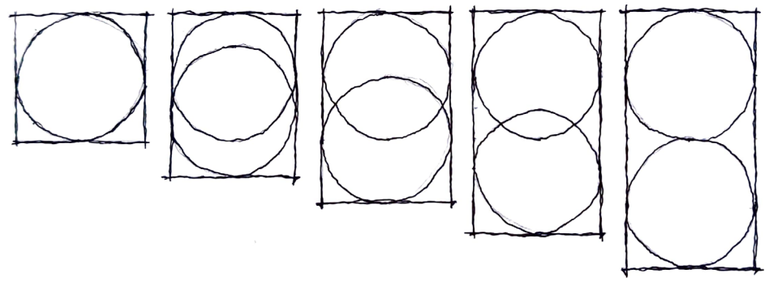

Fig. 02 Georgian Window Proportioning

Sketch by Philip Marron

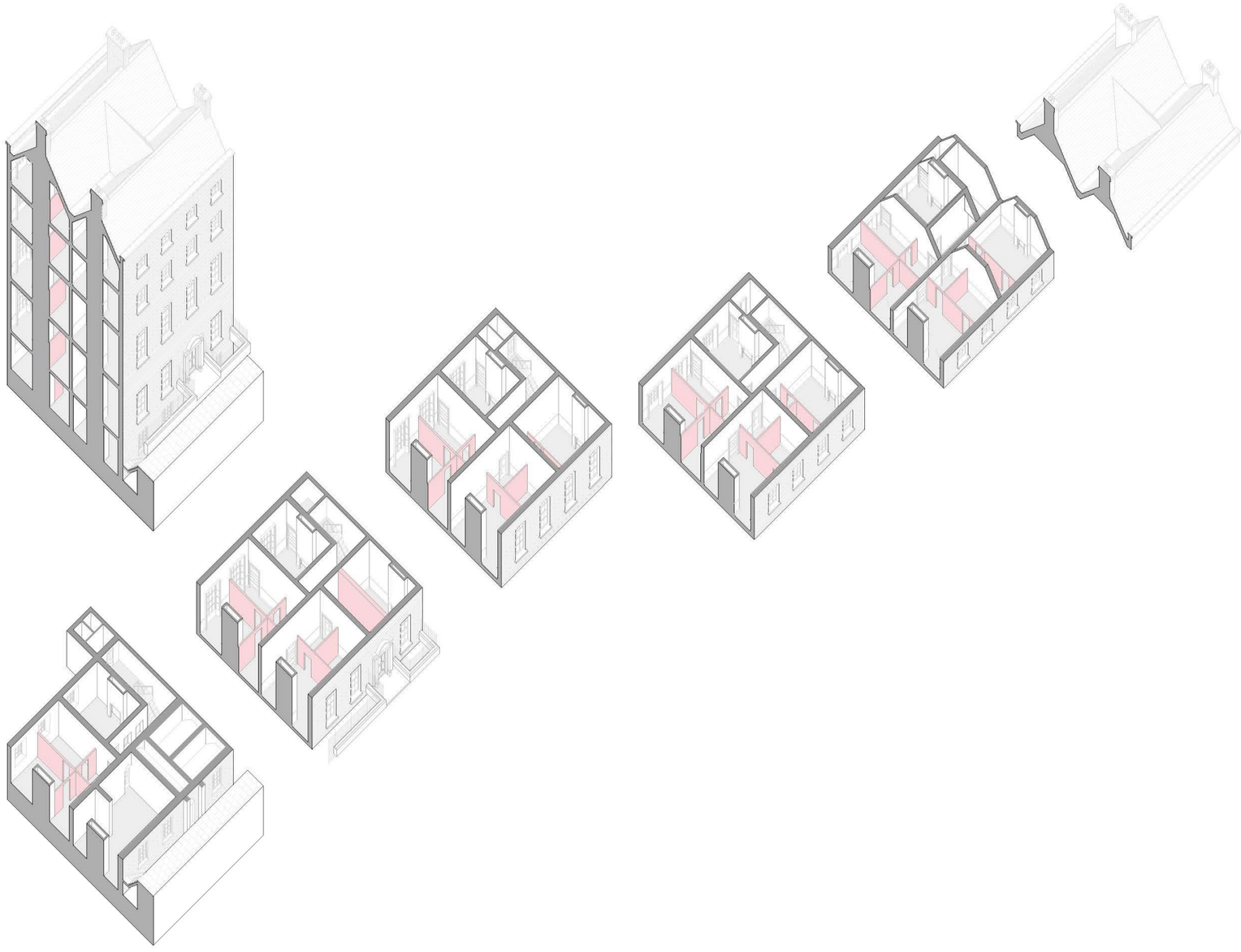

Fig. 03 Diagram of 14 Henrietta Street Room Divisions for Tenement Use

Spectral Mansions, 2023. Drawing by Philip Marron

Traditional Irish Cottage

A more modest typology found most commonly in rural Ireland is the traditional Irish cottage. The owners of these cottages did not have the same wealth as those living in Georgian townhouses in cities and often tended to be famers working the surrounding land. The cottages were ideally built into the landscape where possible and always built of the landscape. This means one side of the cottage would be built into a hill for thermal benefits and the materials for construction would be locally sourced. Climate and context impacted the design of these remote houses as they would experience low temperatures in the winter. Driving rain was prevalent in many rural Irish areas so there was an importance put on keeping the internal spaces warm and dry. The parlour room was home to the Hearth which became the focal point for any cottage design. It accommodated a fire which was never allowed to extinguish. The Hearth was embedded in a thick central wall that extended to the ceiling. The function of this was to absorb heat and release it slowly. This kept the small cottage warm. Due to its thickness, this Hearth wall is often the best-preserved part of abandoned cottages left in ruin today. Flagstones were also used on the floors to help to absorb heat and slowly release it. The rest of the cottage layout was then designed around this and employed techniques to use this functional wall. Bedrooms were located on either side of the parlour room, with one of these bedrooms adjacent to the Hearth wall to maximise the use of the heat it provided. This layout can be seen in figure 04.

The tectonic form of the building was limited to the length and size of the roof elements. The locally sourced timber used for the rafters could typically only span the length of a single room and so this in turn made these cottages one room deep. Therefore, the form was developed due to material limitations, but as a consequence it also made the small house efficient to heat and ventilate. The context of these houses determined their tectonic form and so these houses are truly of the land they reside in. Their endurance stems from their simplicity and efficiency. While aspects of these cottages endure due to their materiality such as the thick 600mm walls, many parts of these buildings have needed maintenance or replacement throughout the building's lifetime. Components of the building which needed consistent replacing such as the thatched roof were typically replaced with help from members of the local community and a thatcher who specialised in the trade. The materials were once again locally sourced using oaten or wheaten straw as well as heather, rushes, marram grass and flax depending on the location in Ireland. This made the maintenance process a viable way of a \chieving endurance. The building itself would endure for a long lifespan but that materials did not need to match it.

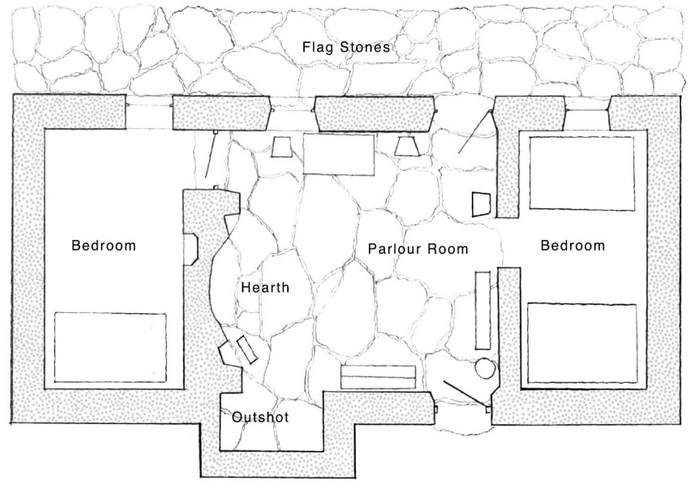

Fig. 04 Example of a Traditional Irish Cottage

Sketch by Philip Marron

Weatherings

The modern definition for weathering is the process of wearing or being worn by long exposure to the atmosphere (Stevenson, 2010, p. 4217). This has not always been the definition of weathering in an architectural sense. As Mostofavi & Leatherbarrow (1993) note:

> The term 'weathering' was, in fact, originally defined as the part of a building that projected beyond the surface of any external wall and served as a "drip", in order to throw off rainwater. Weathering also referred to a sloped "setoff" of a wall or buttress, or the inclination of any surface, designed to prevent the lodgement of water. This sense of the term survives in present usage in the terms "weatherboard," "weatherstrip," and "weatherproofing." Generally speaking, whatever controls the action of the weather is referred to as the "weathering" – one word naming both the process and the object through which this process is controlled. (Leatherbarrow M. M., 1993, p. 36)

Overtime, weatherproofing replaced weatherings (Leatherbarrow M. M., 1993, p. 36). Leatherbarrow goes on to discuss how modernism has a role to play in this replacement. The newness of modernism and its ambition to achieve unique surfaces and shapes required new methods of assembly in unprecedented proportions (Leatherbarrow M. M., 1993, pp. 16-17). In addition to this, the increase in the number of joints or points of connection between elements required an increase in sealants to be make these joints weather tight. An argument is made on how these joints would have been homogonous within buildings before this time. This increase in connection points resulted in an increased number of places in the building exposed to the influence of the elements (Leatherbarrow M. M., 1993, pp. 17-21).

Villa Savoye is arguably the epitome of modernism. Le Corbusier achieved a floor plan without any load bearing walls which allowed horizontal windows to frame the landscape around it. The house provided a flat top roof which allowed the roof terrace to be used as a functional space. However not all of its features were received with high praise. Madame Savoye, the user of this house wrote many letters to Corbusier during her time living in the house, all of which detail her unhappiness and dissatisfaction with the living conditions provide by the design. In one letter she wrote "it is raining in the hall, it's raining on the ramp and the wall of the garage is absolutely soaked [….] it's still raining in my bathroom, which floods in bad weather, as the water comes in through the skylight" (Sully, 2009, p. 144). It is apparent from this that weatherproofing, and durability was not a key consideration in the design of the building. This led to the disrepair of the building in the late 20th century as seen in figure 05.

Fig. 05 Villa Savoye Before Restoration

Poissy, 1928-1931

Moving away from ‘weatherproofings’ and back to weatherings, which is the focus of this section, we can see examples on older buildings in the Tolka Valley area. Figure 06 observes a small drip under a concrete sill to allow water droplets gather and fall to the ground away from the external wall, thus protecting the wall from water and damp. This small but effective detail found on sills is an elegant solution which shows an understanding of the environment and how a building interacts with it. It is a solution imbedded in the material rather than a new element added onto the skin of the building to deal with weathering in a disjointed manner.

Figure 07 depicts a projecting wall with an angled sky-facing surface. The angled surface once again carries water which may have otherwise gathered on top of the wall away from the building and onto a grass surface below. There is even a clever addition of a plant hanger on the wall below where it is understood that water will be carried to. This adds an ornamental element to this weathering. The projection of the wall itself provides protection to the true external wall of this house. It acts as a sacrificial wall which can withstand driving rain, wind and sun staining while the important wall remains protected. Leatherbarrow has written that “weathering might be called functional deterioration” (Leatherbarrow M. M., 1993, p. 31). Understanding this idea and accepting it is important in discovering which elements of a building need more durability, and which need less. This of course depends on different factors such as climate, orientation, site slope, elevation and other geographical conditions.

Fig. 06 Sill Drip

Tolka Valley, 2022. Photograph by Philip Marron

Fig. 07 Projecting Wall

Tolka Valley, 2022. Photograph by Philip Marron

Figure 08 highlights another drip detail. The outcrop of brick at a low level provides the same function as the previous drip detail; to gather water in one area and control its future destination. In this detail's case it directs it away from the building's junction with the ground. The drip itself is blended into the fabric of the wall and continues the language of the architecture. This detail is a functional ornament balancing the functional necessities required by a weathering while providing a beauty to the external surface. This balance is what can inform and enduring architecture's vernacular.

Another major factor of weatherings is material. Materiality takes on an increased importance in a resistant architecture. Certain structures in the Tolka Valley still stand due to the robust nature of their materials rather than the buildings intricate weatherings and details. An example of this is the Cross Guns Grain Silos in figure 09. The structure was erected with cast in-situ concrete. Although it is a building which has remained, it is not what resistant architecture should strive to be. This method of construction cannot be relied upon in a climate crisis. While its result achieves the desired outcome of an enduring structure its method is solely reliant on an unsustainable material. The building is also out of use and so the need for such a persistent structure is not required. The use should inform the durability of the building or else it should be a flexible enough design to be tenanted by different users throughout its lifespan.

Fig. 08 Drip Detailing

Tolka Valley, 2022. Photograph by Philip Marron

Fig. 09 Robust Material

Tolka Valley, 2022. Photograph by Philip Marron

Part Three
Analysis of Existing Durable Architectural Features

Materials

Mostofavi and Leatherbarrow discuss a romantic argument for buildings which have weathered characterfully. A prime example of this is when they write “in the process of subtracting the “finish” of the construction, weathering adds the “finish” of the environment” (Leatherbarrow M. M., 1993, p. 16). This observation is a fact and cannot be disputed, however, the angle taken on this observation can be argued. While all buildings will weather, some will do so better than others. When we apply this thinking to the Tolka Valley, we see that it does not hold up in all circumstances. Figure 10 draws attention to a wall in disrepair. The atmospheric elements of wind and rain have slowly eroded the ‘finish of the construction’. This erosion has opened parts of the buildings which were designed to be revealed to the elements. This particular ‘finish of the environment’ will only decrease the life of this building.

When we compare this Tolka Valley house to another structure of the area, we can understand the effect that layers and an increase in components can have to the durability of a building. Figure 11 exhibits a stone defence tower along the wall of the Glasnevin Cemetery. Its squared and pitched random rubble stone wall acts as structure and finish.

Its walls erode due to the wind, rain, ice and sun like any other material however its thickness allows it to shed its most outer layer in order to reveal more of the same material allowing it to endure. The use of less layers of materials on a finish such as seen in this stone tower should be encouraged in a resistant architecture so long as this material is resistant itself. If this stone façade erodes it will only reveal more if this material and so the appearance of weathering will not be as evident.

Fig. 10 Weathered Surface

Tolka Valley, 2022. Photograph by Philip Marron

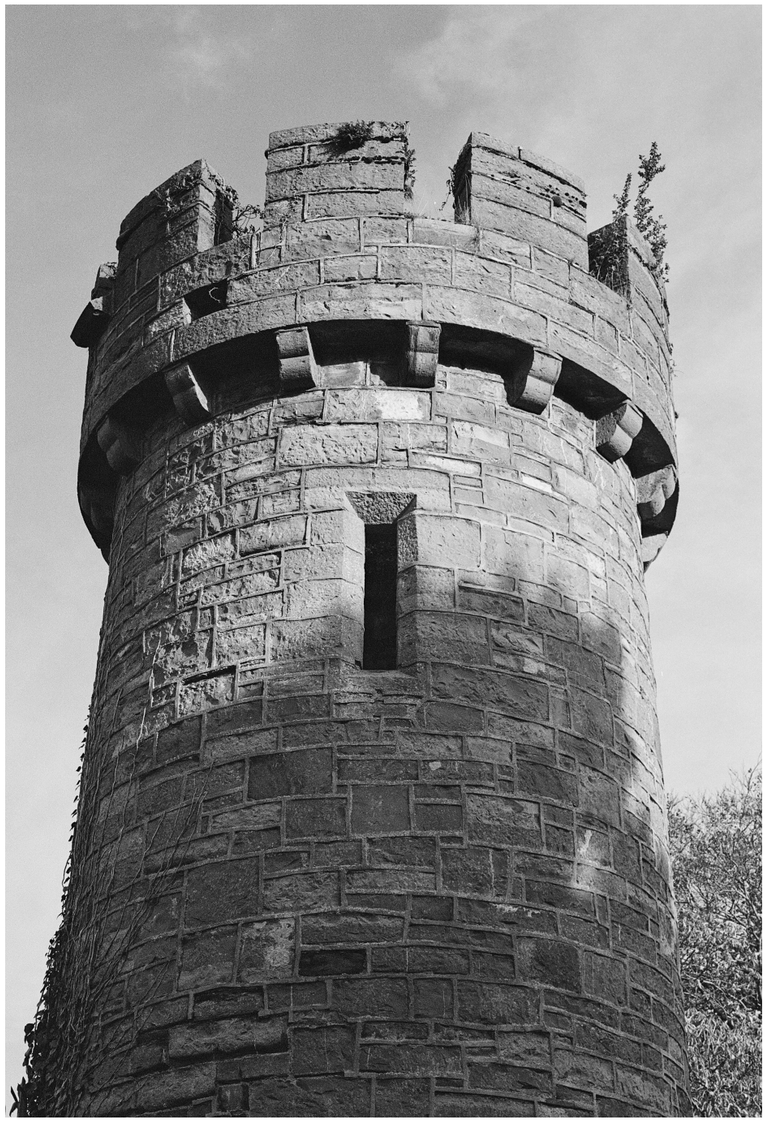

Fig. 11 Stone Defence Tower

Glasnevin Cemetery, 2022. Photograph by Philip Marron

It is inevitable for buildings to show signs of wear. They are, of course, meant to be inhabited and used. What good are buildings designed for humans and the human scale if they are not useful to the user. In this case, weathering must be accepted. However, this can be delayed through the use of durable materials in a thoughtful way that does not harm the environment beyond the point where the building's longevity will not balance out said impact.

Details

'To a significant extent, durability is an issue of water management.' Lstiburek estimates that 80% of durability problems in buildings have to do with moisture (Rabin, 2005). Thereupon this portion of this research paper will deal with architectural details encompassing the topic of water.

Casino Marino, Dublin, Sir William Chambers, 1769

This neoclassical Georgian temple incorporates weatherings in the form of downpipes concealed within two of the twelve Doric columns (Ypma, 1998, p. 78). This intricate detail is an example of how neoclassical architecture drew upon the knowledge gained form studying ancient Rome and Greece and further applying it to its context and climate. Sir William Chambers understood the need for an Irish architecture to carry rainwater effectively down and away from the building. This understanding along with the distinctive Georgian use of symmetry and proportion informed this detail.

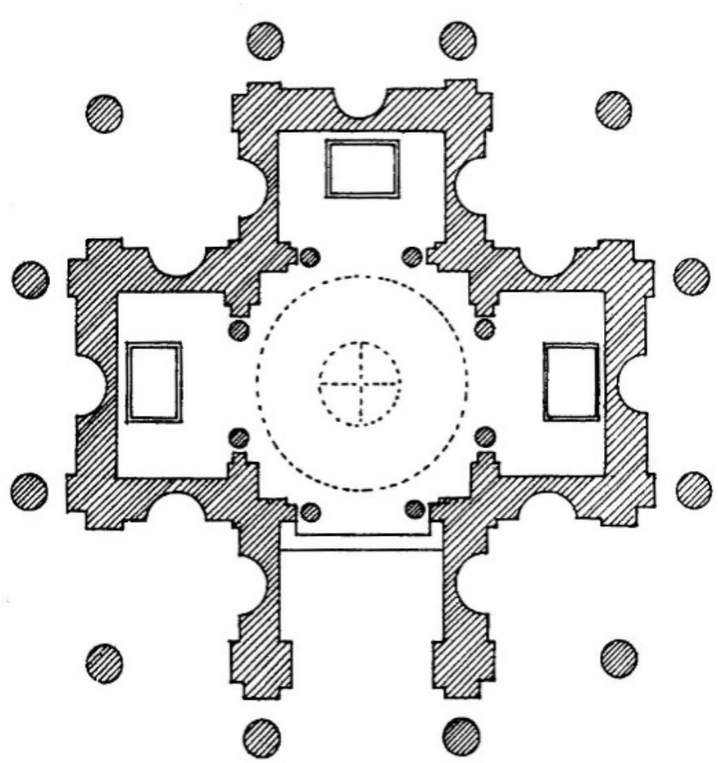

Fig. 12 Plan of Casino Marino

James Howley, 1993, The Follies and Garden Buildings of Ireland

St. Michael's Church, Donegal, Liam McCormick, 1971

Liam McCormick's method of water movement from roof to ground in the St. Michaels Church is evocative of religion and respectful to context. The use of a large, spiked chain hung from the eaves to channel rainwater from the roof to a concrete trough on the ground (O'Toole, 2008, p. 51) is a simple and functional detail. McCormick salvaged the chain from a quayside in county Derry and had the iron 'thorns' welded to acknowledge Jesus' crown of thorns. The chain acts as an ornament and a weathering fulfilling both functions equally while all the while humbly celebrating the context it is surrounded by.

Fig. 13 St. Michael's Church, Chain Detail

Photograph by Philip Marron

St. Conal's Church, Donegal, Liam McCormick, 1974

McCormick's celebration of the Irish context through weatherings continues in St. Conal's Church in Glenties, county Donegal. He had Imogen Stuart create a series of gargoyles in the form of heads of animals native to the area. Mediating between the old and new, the medievalist gargoyles were executed in a modern metal alloy rather than stone (O'Toole, 2008, pp. 160-161). The animal's mouths would project water from them when rain would run off the roof and into their collection points. The detail gives the building an identity that is respectful to its surroundings and functions effectively in the climate it is located within.

Fig. 14 St. Conal's Church, Gargoyle Detail

Photograph by Robert Anderson

Beach Road House, Galway, Ryan W. Kennihan, 2021

This recent house's gutter details echo ideas found in Chambers and McCormick's work. The concrete buttresses used to 'resist both the thrust of the roof and the rush of the wind' (Kennihan, 2022) evoke those seen on traditional Irish cottages of the past. The buttresses have a second function of housing a gutter within their solid volume, much like the columns in Casino Marino, and carrying the water to the ground where it is collected in a pool, similar to that seen in St. Michaels Church. The gutter material matches that of the roof wherein it is a red metal reprising the traditional shed material in a modern fashion once again balancing old and new. The detail considers its context and history in both a gracious and flamboyant manner while remaining functional to the building.

Fig. 15 Beach Road House, Gutter Detail

Photograph by Shantanu Starick, 2021

Part Four
Resolution of Research

Enduring architecture can be a valuable way forward in our effort to combat the climate crisis if executed with consideration and care. Knowledge of enduring architecture is all around us as seen through the exploration of ancient buildings such as the Pyramids of Giza and Newgrange as well as more recent typologies such as Irish Georgian buildings. Enduring architecture is in our past and should be in our future by virtue of its benefits to said future.

The intricacies of executing a successful enduring architecture are less prevalent. This will rely upon a site-by-site analysis. Using Frampton's Critical Regionalism ideas of analysing topography, context, climate, light and tectonic form as a setting off point. This will produce a carefully measured approach to any site and lay the groundwork for an enduring architecture. From there, an enduring architecture is about matching the lifespan of a building to its use. If the building will outlive the use, then it must be flexible enough to adapt to other needs. As we discovered, learning from Georgian architecture can help us establish beautiful conditions within buildings. They have created generous spaces that warrant use today. This outcome is necessary for a successful enduring architecture. Following this, an analysis of the durability of elements or sections of the building should be considered. As seen with Irish cottages, some parts of the building can endure without replacement or maintenance while others are meant to be revisited later in the house's life. This same approach can be taken today with an examination of today's material arsenal, buildings technologies and cultural sensitivities. Climate and context are crucial to the longevity and success of a building. Useful and beautiful outcomes can come from understanding these factors specific to individual sites as highlighted in the examples in the 'Details' section of this book.

An Enduring Architecture using this process can be applied to the Tolka Valley. As previously exhibited, examples of enduring buildings have existed in this territory for centuries. A building which survives generations will impact these generations. Such a building should have a positive impact on the community and perform a function required by society for centuries to come.

Part Five
Enduring Architecture Implimented in a Modern Context

Site

Reflecting upon my research of existing examples of enduring architecture it seemed obvious to work with the existing arsenal of these buildings which is already prevalent in our geographical area of study, the Tolka Valley. If these buildings are going to exist for an incredibly long time then we have a duty to use them to their full potential.

I was interested in the juxtaposition of adapting an existing enduring architecture with the construction of a new building encompassing the same characteristics. The site I settled on was the Phibsborough Flour Mill, specifically the concrete grain silos and warehouse shed on the site which appeared in my earlier research. The silos are an example of existing enduring architecture due to their rigid and robust materiality. One the other hand, the warehouse is enduring because of its flexibility and adaptability.

The site is currently disused and lies just off the cross section between Phibsborough and the Royal Canal. Surrounding the site is the existing stone Mill building, low rise housing, the Royal Canal and a warehouse which is planned to be converted into a market. The surrounding context varies in scale.

Fig. 16 Site Location Map

Phibsborough Flour Mill Grain Silos

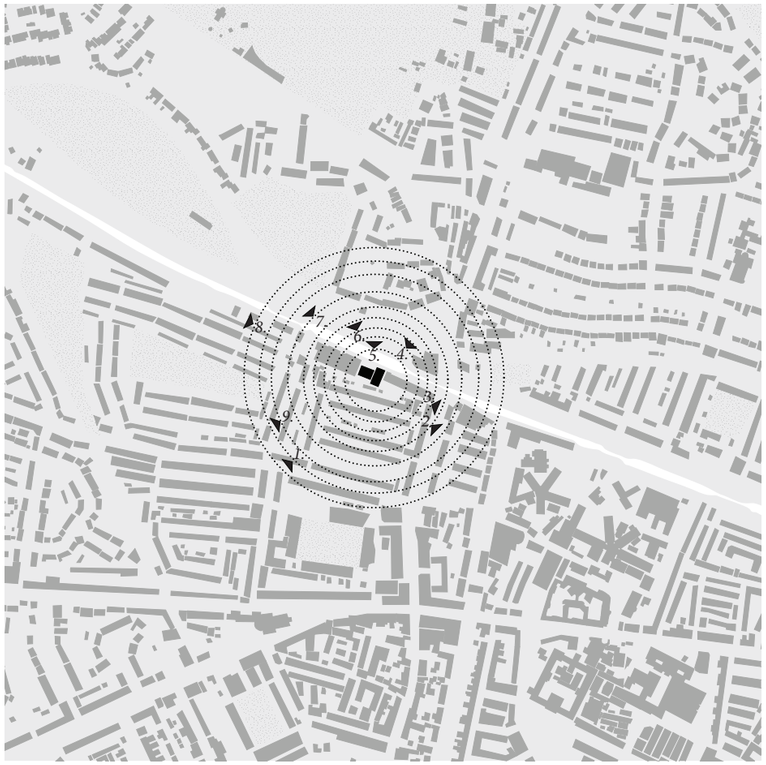

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Fig. 17 Existing Site Drawings

Top: South Elevation
Bottom: North Elevation

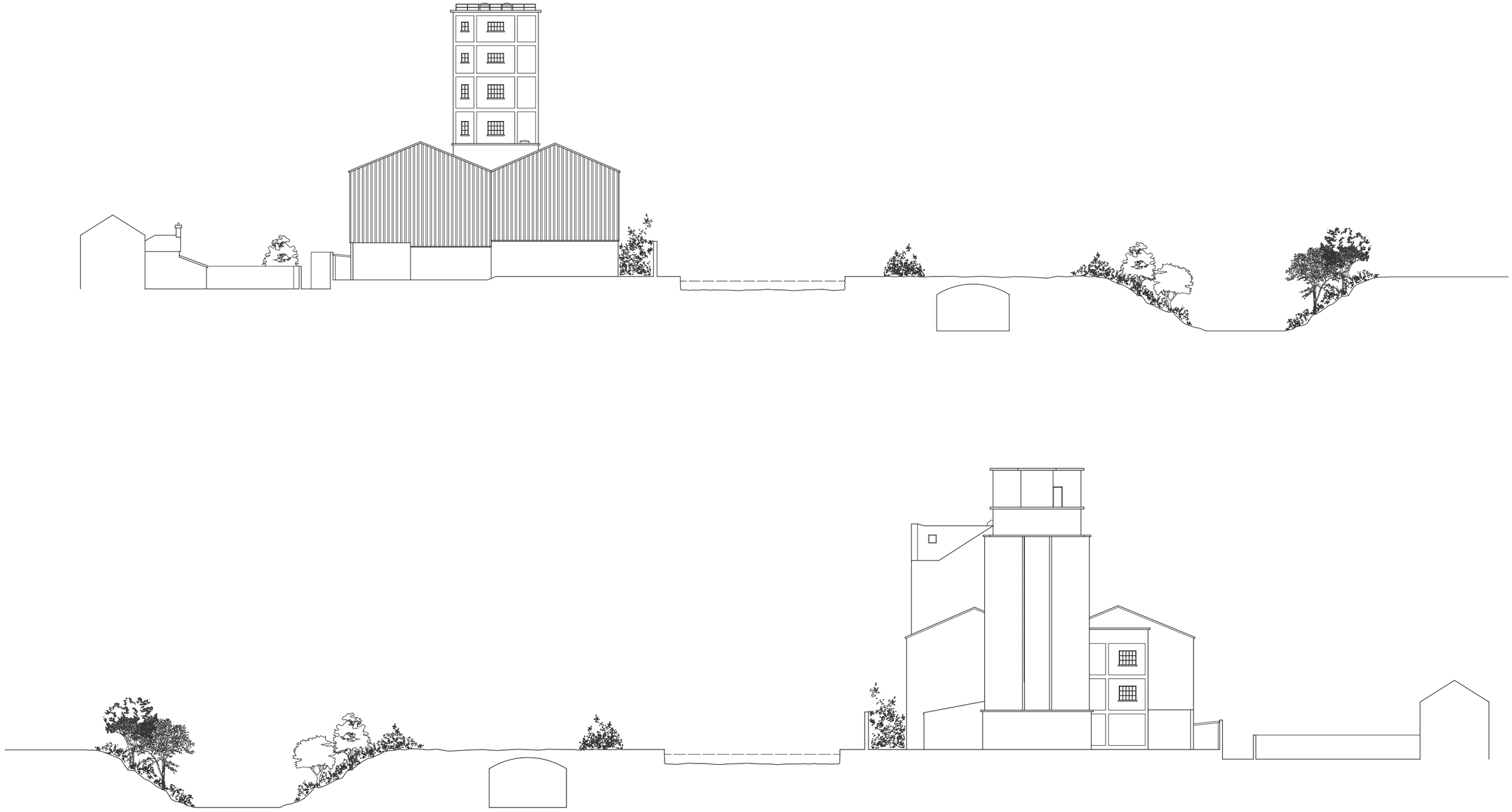


Fig. 18 Existing Site Drawings

Top: East Elevation
Bottom: West Elevation

Typology

When considering the use, I thought it important that it should fit the lifespan of the building. The need for specific building uses is changeable throughout time and so this was a difficult task. I began to think about how architecture could tackle societal issues which are inherently complicated to solve and therefor could be present for a long time. Reflecting on this I settled with tackling the issue of homelessness. Therefor the typology of the project is what I call 'transitory habitation'. This is a place where a person who has become homeless can receive safety, comfort, accommodation, food, water, healthcare and education during this turbulent time. The purpose of the building is to facilitate the transition between homelessness and a healthier and permanent situation. The aim will be to reintegrate these people back into society and help them to get back on their feet.

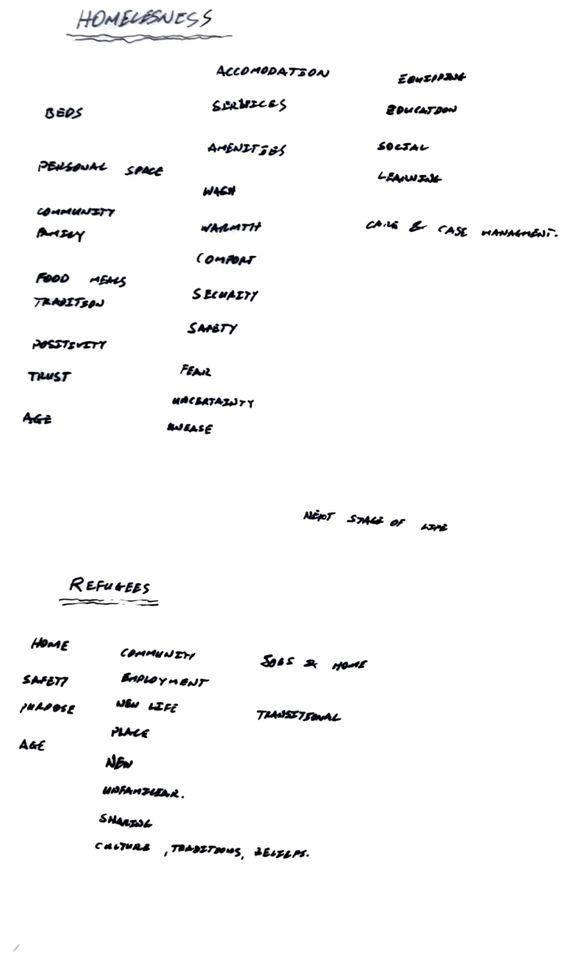


Fig. 19

Sketch: Initial thoughts when designing for the homeless.

Programme

The programme of the building should revolve around sensitively caring for and rehabilitating the vulnerable users of the building. This process should aid in the transition back into functioning society and reintegration into the working world. The programme should allow a careful balance between allowing public access and creating private space for the users to seek sanctuary when wanted. This will be achieved by layering spaces to passively create the feeling of safety as the building progresses.

Therefore the programme will be broken down into:

- Transitional Accommodation
- Education
- Medical
- Therapy
- Kitchen
- Canteen
- Donation centre
- Public engagement space
- Formable space
- w.c.
- Assisted w.c.
- Food store
- Store
- Administration office

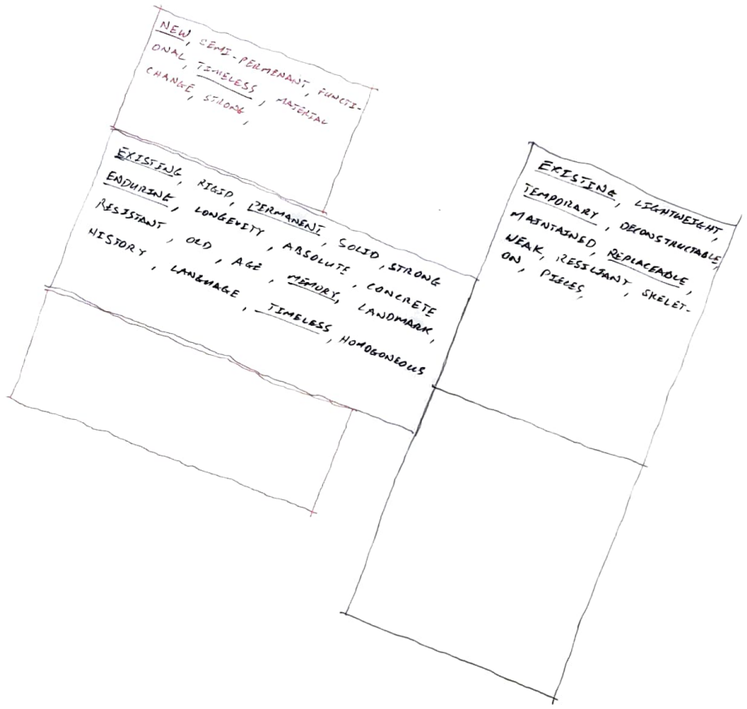


Fig. 20

Sketch: Analysing the enduring characteristics associated with aspects of the existing and proposed building in order to aid with the positioning of the programme.

Site Analysis

The existing access to the site is up a narrow road between the backs of other buildings. The more attractive entrance to the site is the north where you can get a full view of the impressive Silos. This would be used as a pedestrian entrance with the existing road entrance better used for deliveries.

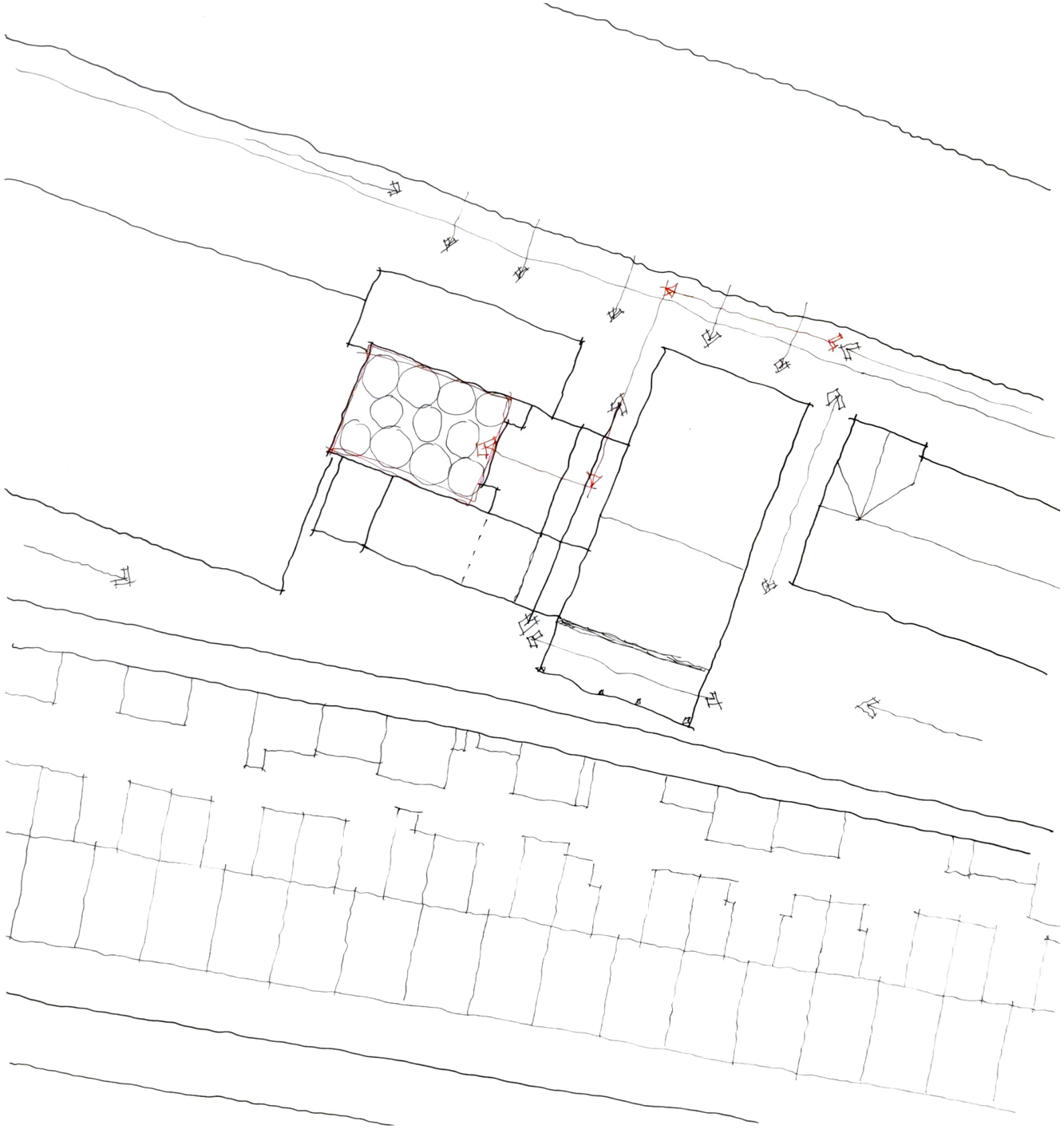


Fig. 21

Sketch: Early strategy for updated access and exitsing routes through the site.

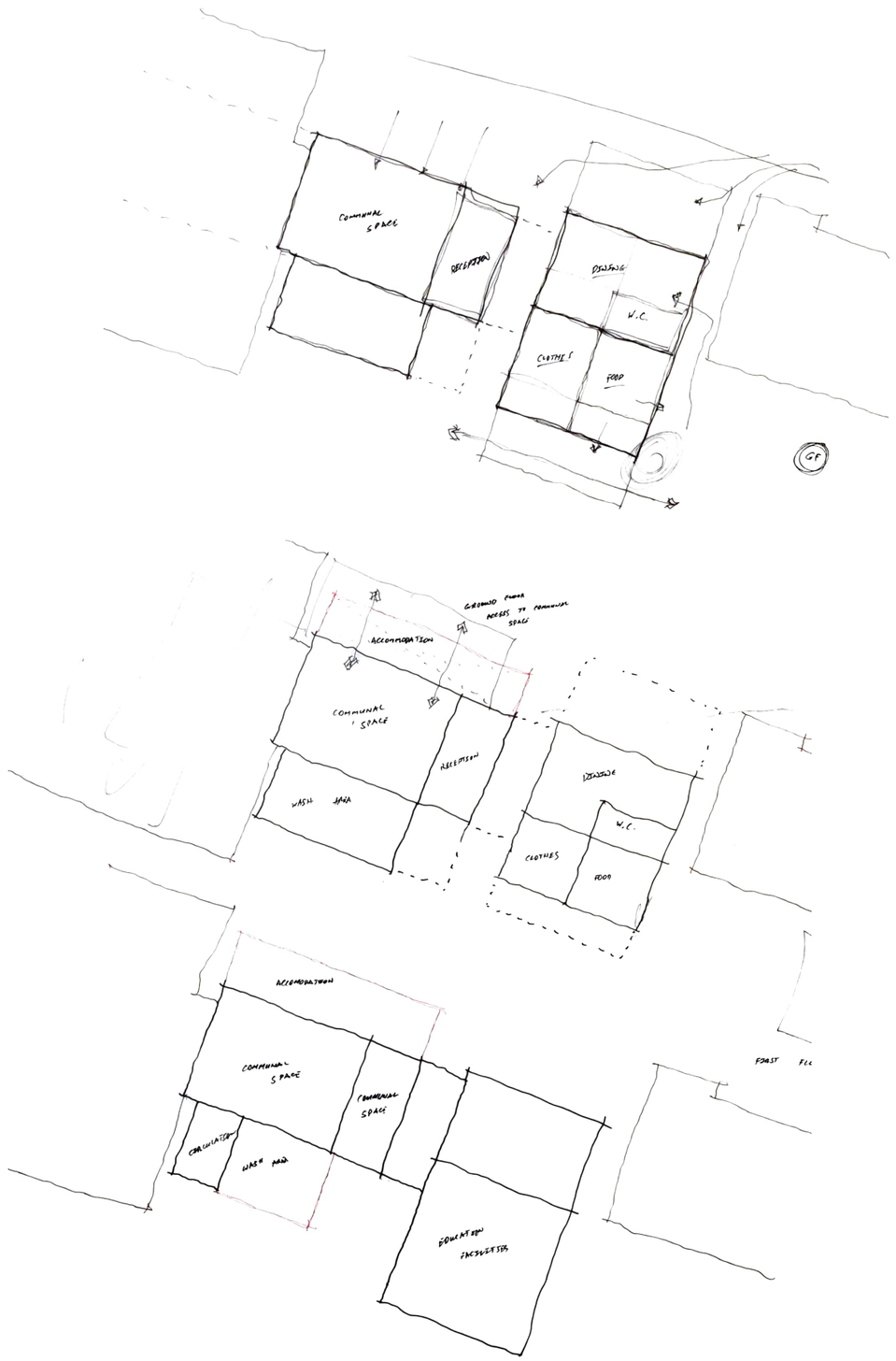


Fig. 22

Sketch (left): Testing the feasability of new build zones.

Sketches (right): Initial programming of spaces based on their criteria and reacting to the site's potential.

An approach to the strong visual characteristics of the existing grain silos would be important to establish early on in the development of the scheme. Height is a key feature of the silos and so encroaching on this with a new build would not respect the existing structure. Therefore, the initial design remained at the foot of the existing structure.

The rhythm of the silos was also a driving factor of the new design. The four exterior silos on the north and south side divided the facade into fourths. Any new additions would proportionally follow this numerical division.

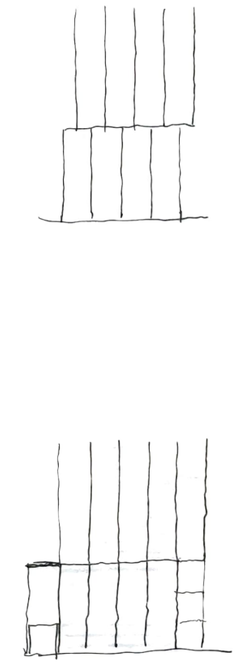


Fig. 23

Sketch: Establishing an aesthetic rhythm responding to the authoritarian silo langauge.

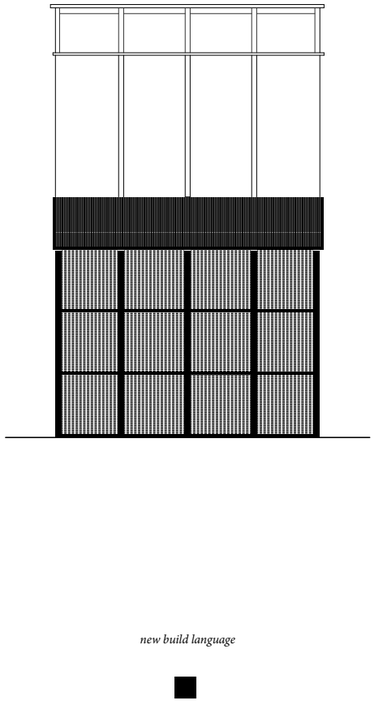


Fig. 24 Final Concept Diagram Reacting To The Silo Rhythm and Informing The New Architecture.

The existing silos were used for storing grain in the past. They were designed for intaking, holding and dispersing this grain. A grain elevator was implemented to transport the grain vertically to the top of the silos when it arrived on site. Once at this height it would be horizontally moved along the top of the silos in a roofed room and distributed into the desired void for storage. A funnel would seal the silo from the bottom and could be opened to allow a steady flow of grain out when required. This anatomy is optimal for grain storage as the silos remain sealed, dry and dark. However these are not pleasant features for human habitation.

The strategy for creating positive spaces for use by people was to capture light. The room which housed the horizontal transportation of grain above the silos is proposed to be removed. Specific funnels at the bottom of the silos have also been removed in order to create an unbroken passage for light to pass down through the silos and to the ground floor in a dramatic fashion.

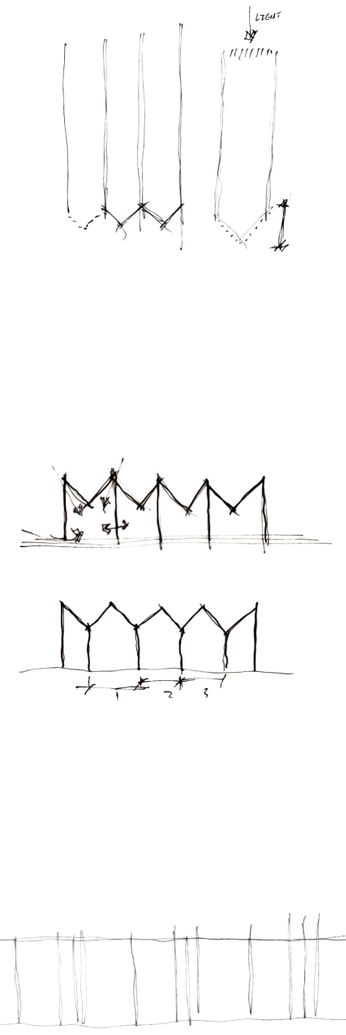


Fig. 25

Sketch: Instituting a strategy towards the silos and their existing characteristics.

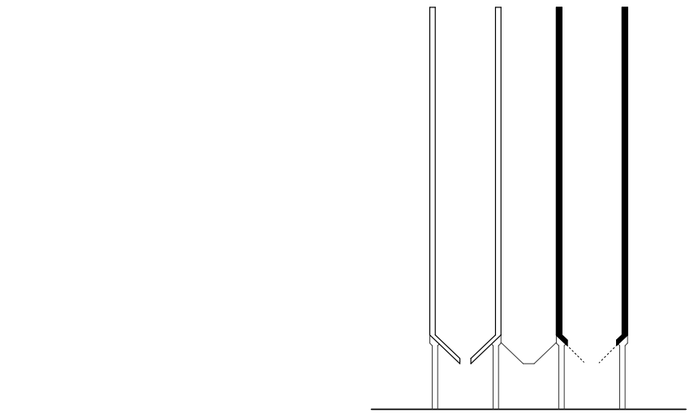


Fig. 26 Final Concept Diagram Reacting To The Silo Characteristics and Informing New Strategy.

The arrangement of silos in the Phibsborough Flour Mill is not typical. Most layouts consist of the same number of silos side-by-side. However in this arrangement, the structure houses four silos on either side and three silos in between. This creates an irregular column pattern at the ground floor and a complex geometry between each cylinder.

This complexity can create a very interesting language and inform the new architecture. The silos create a series of 60 and 120 degree angles which laid out altogether begin to form a diamond shaped grid system.

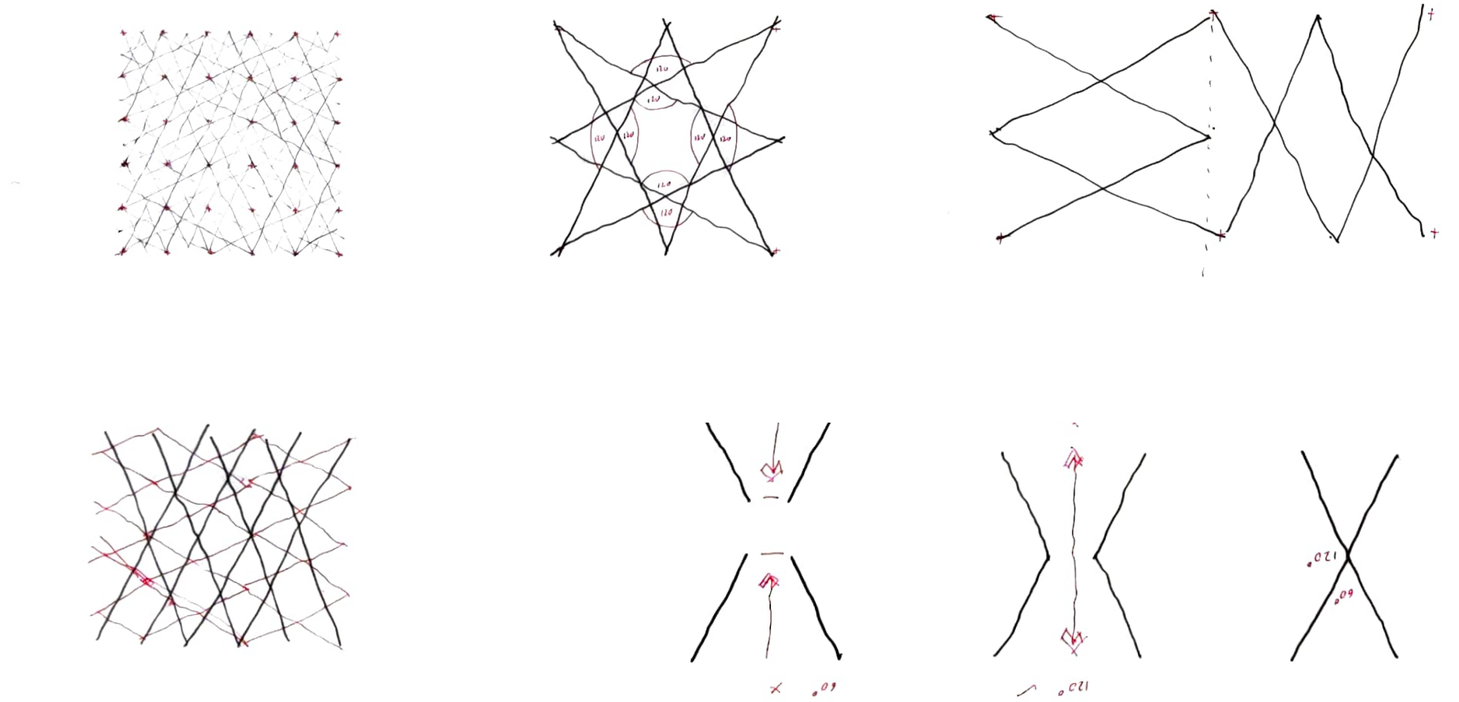


Fig. 27

Sketch: Responding to the geometry created by the silos and the ground floor column arrangement it creates.

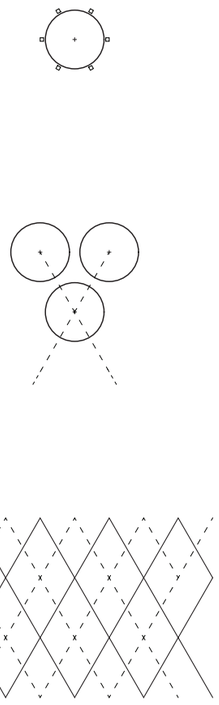


Fig. 28 Final Concept Diagram Reacting To The Existing Silo Geometry and Informing The New Geometry.

The programme of the buildings is important in the success of the transitory habitation and aiding of the homeless. It is also important to match the programme with a sensible approach to endurance such as is highlighted in the Resolution of Research part of this book.

Certain uses will be needed more readily than others over the lifespan of the building. Others will fluctuate overtime but may need easy access when needed such as the food and clothes provisions. This criteria was analysed and culminated in a chart which outlines the optimal location and therefore enduring methodology that each piece of programme should take.

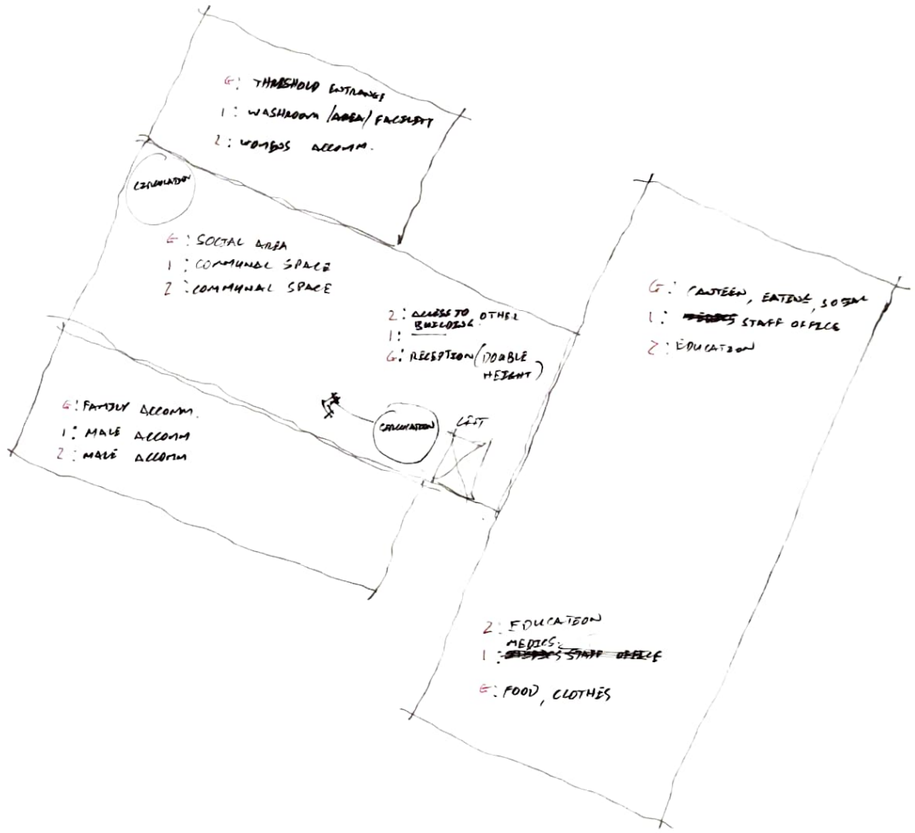


Fig. 29

Sketch: Planning the arrangment of spaces within the existing architecture depending on their enduring characteristics.

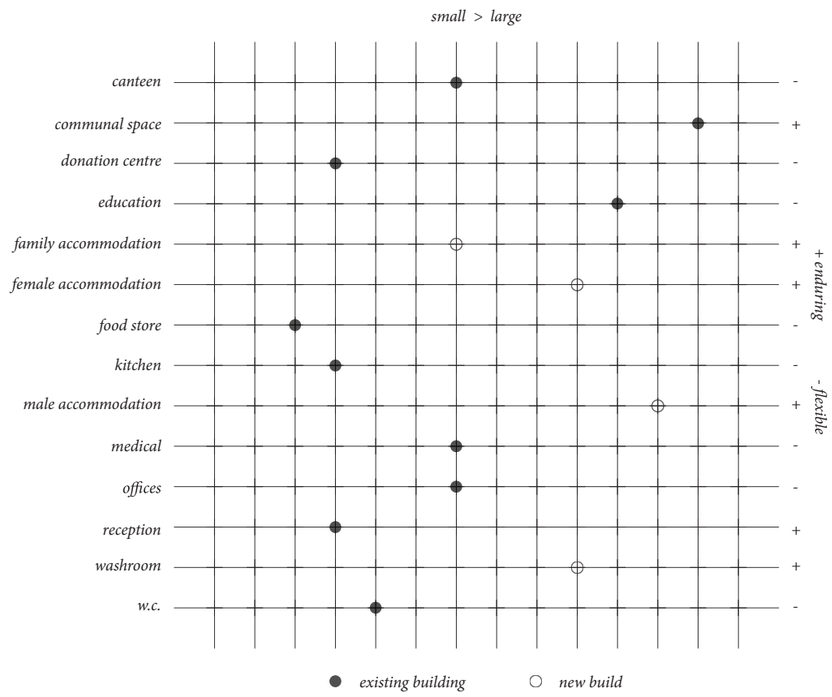
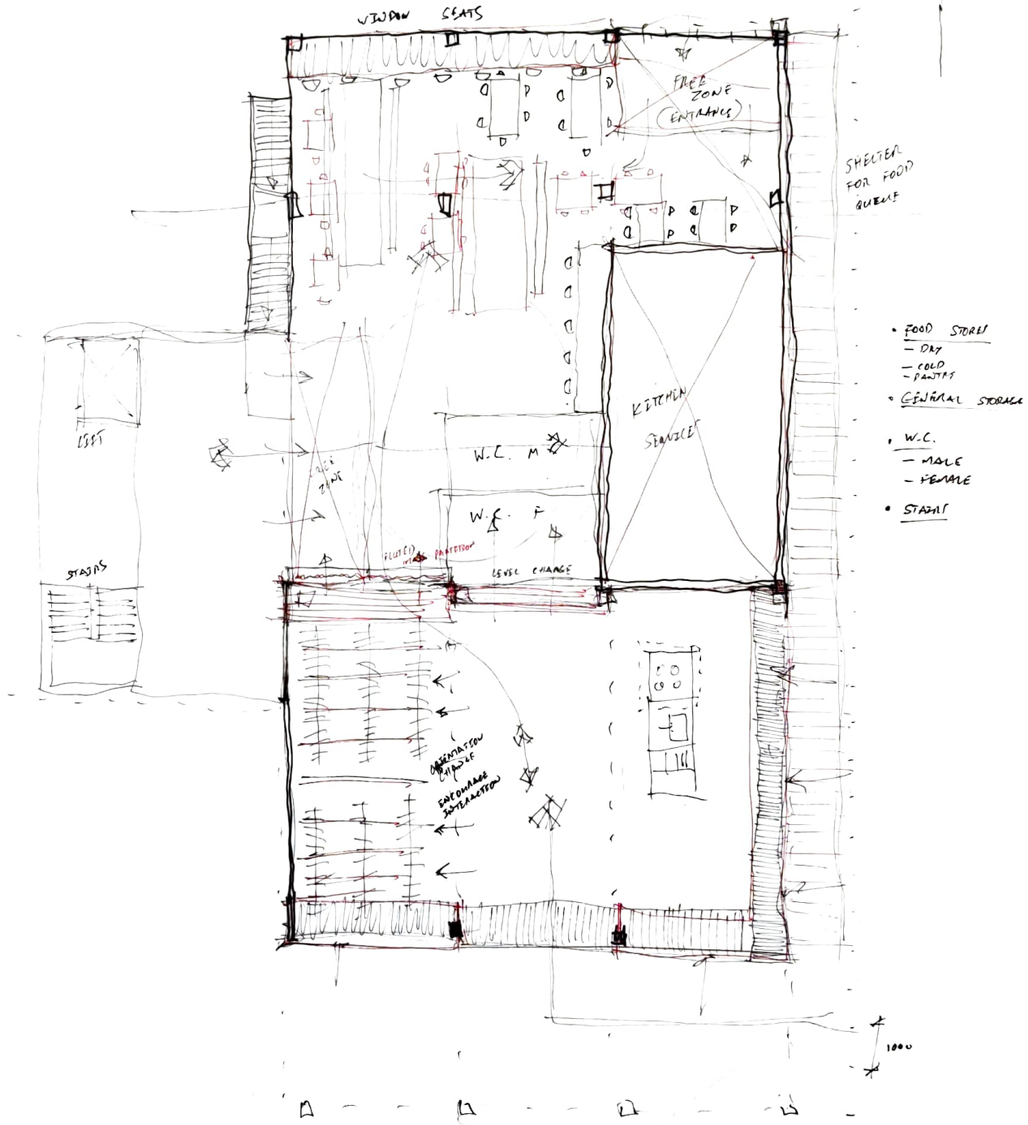


Fig. 30 Final Concept Diagram Stratagising The Locations of The Programme By Outlining Their Criteria



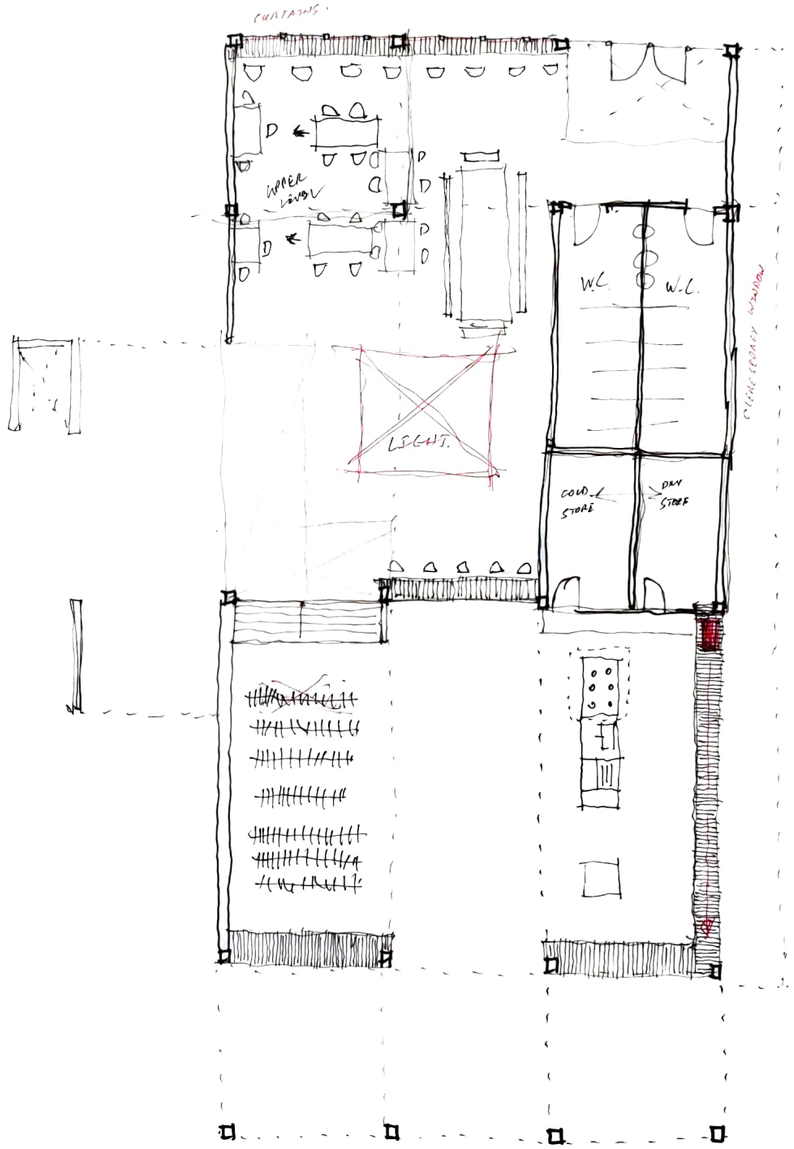


Fig. 31

Sketch: Initial layouts of the warehouse plan using the information gained from figure 30.

Process

The Grain Silos at present consist of 11 cylindrical silos in an off-axis pattern anchored back to a tower which served as the grain elevator. The reinforced concrete Silos each sit on 6 concentric reinforced concrete columns (which make a total of 45 columns) and these inhabit the ground floor. There's is an existing stairwell in the tower. This existing overall structure encompasses the rigid and robust aspects of my thesis.

The existing warehouse to the south-east of the site is currently clad in a mixture of corrugated metal panels and concrete blocks. The structure consists of steel columns and beams. The roof is a two bayed pitch roof and held up by trusses. This building encompasses the flexibility and adaptability aspects of my thesis.

The new areas of design will aim to echo and build upon the existing enduring language of the site.

The work of Bernd and Hilla Becher guided my process in discovering an enduring architecture in a modern context. Observing the beautiful photographs in their work on industrial gravel sheds and grain silos gave me insight into the aesthetic reasoning of such buildings. From sketching out their work I began to form an opinion on the characterful structures.

Their facade materials were typically cheap and easily changed if the building required future growth or machine access. Their scale was not solely considerate of humans, but also of the equipment within and surrounding the architecture. This culminates in a building which reacts purely to function. All else follows after this main criteria. The form follows the function and the exterior of the building caters towards flexibility. This lack of concern with aesthetics and style allow these buildings to be timeless. They do not follow trends or fashions and so become free of time. This is an important factor in an architecture which aims to last such as an enduring architecture.

Through this study, I obtained valuable conclusions which are important to bring forward into an enduring architecture.

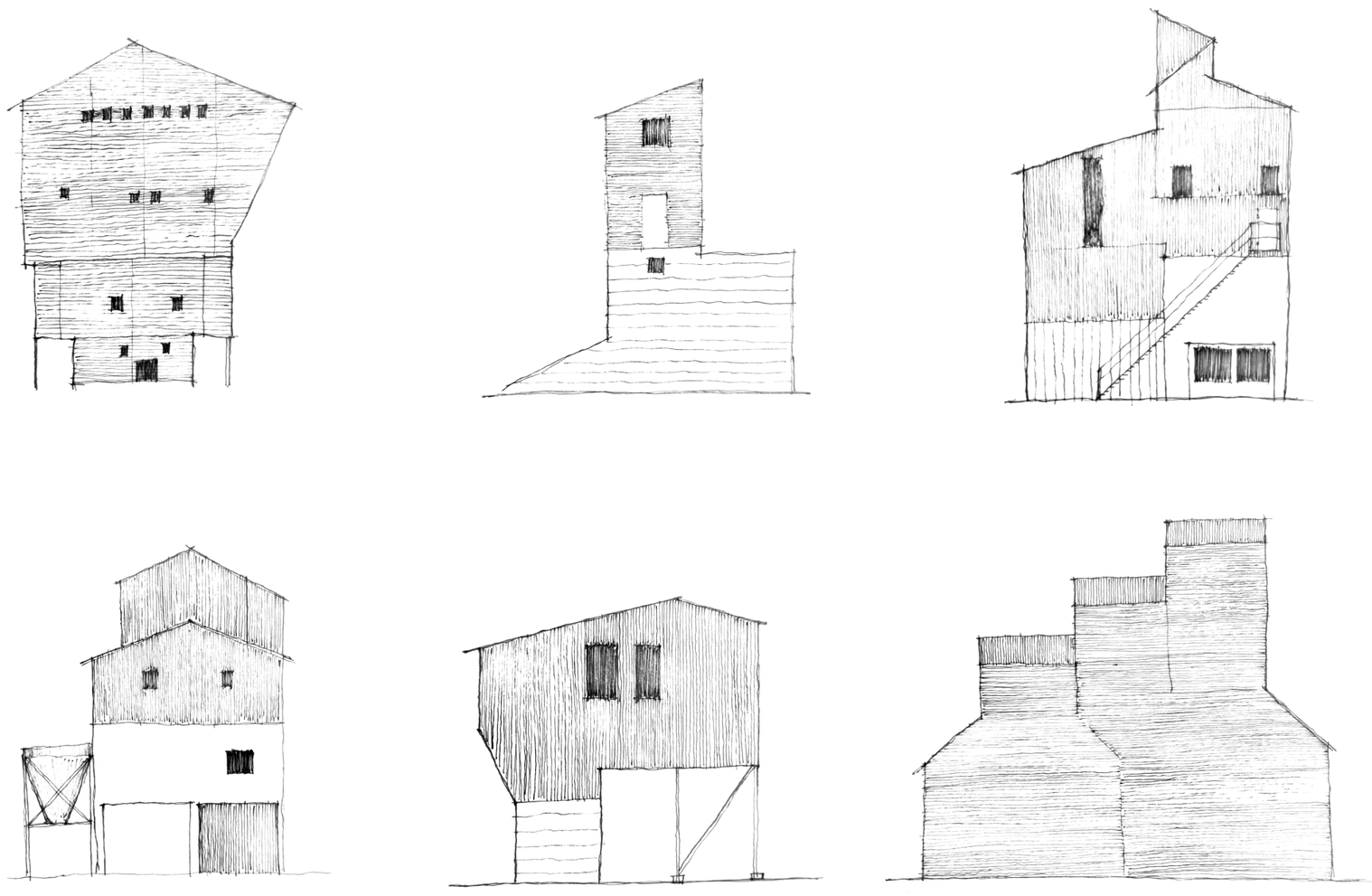
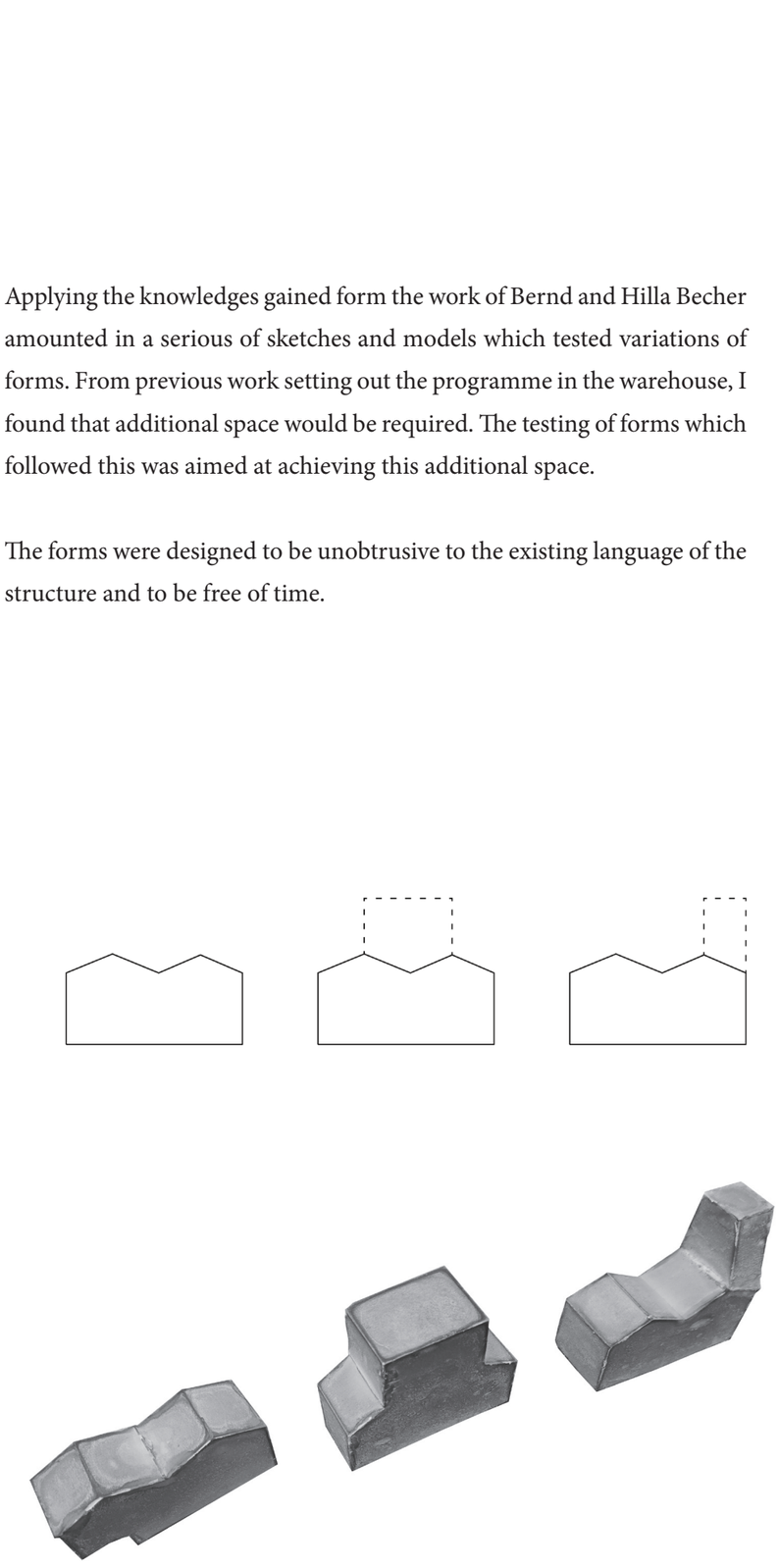


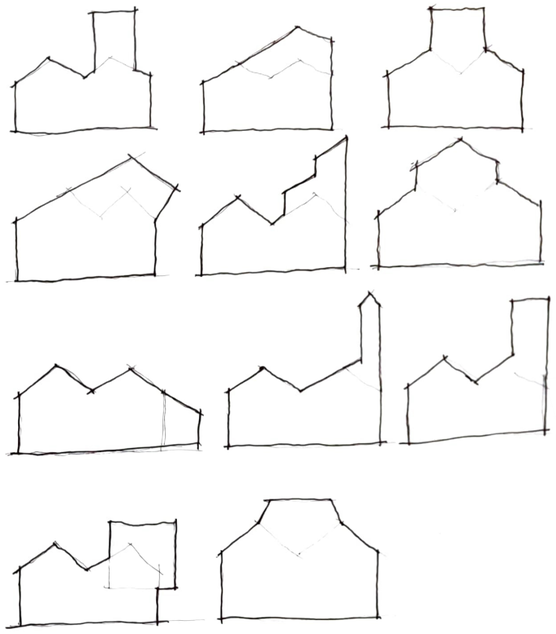
Fig. 32

Sketches: Understanding the functional architecture photographed by Bernd and Hilla Becher and its timeless characteristics.

Applying the knowledges gained form the work of Bernd and Hilla Becher amounted in a serious of sketches and models which tested variations of forms. From previous work setting out the programme in the warehouse, I found that additional space would be required. The testing of forms which followed this was aimed at achieving this additional space.

The forms were designed to be unobtrusive to the existing language of the structure and to be free of time.





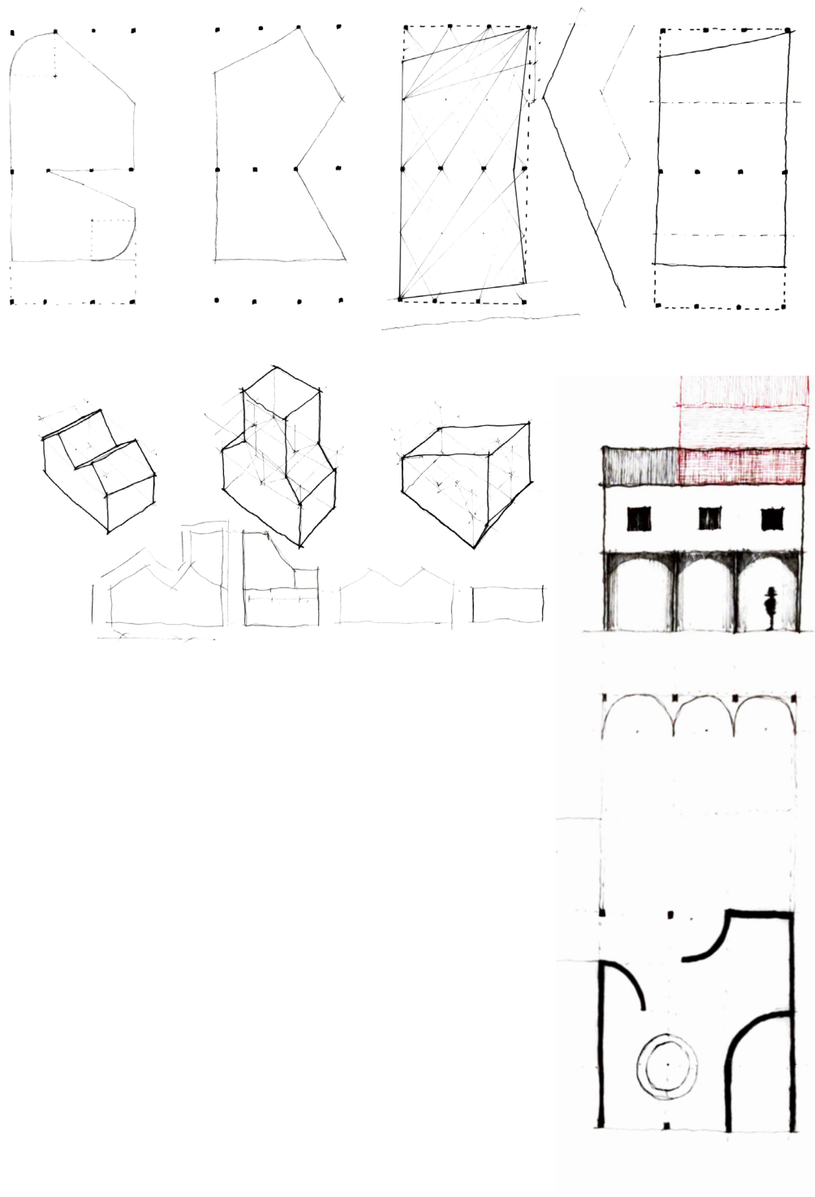


Fig. 33 (Left) Cast Models Testing Variations of Form.

Fig. 34

Sketches: Testing variations of the warehouse form both in elevation and plan.

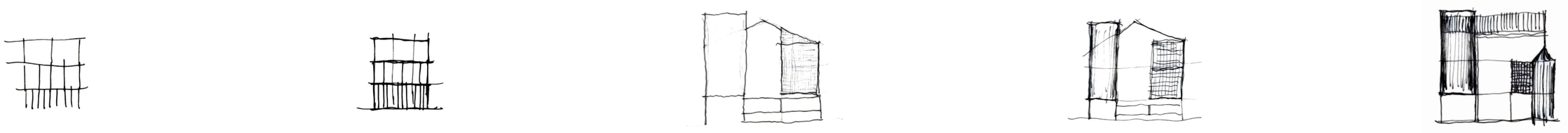


Fig. 35

Sketches: The development of form for the warehouse throughout the entirety of the project.

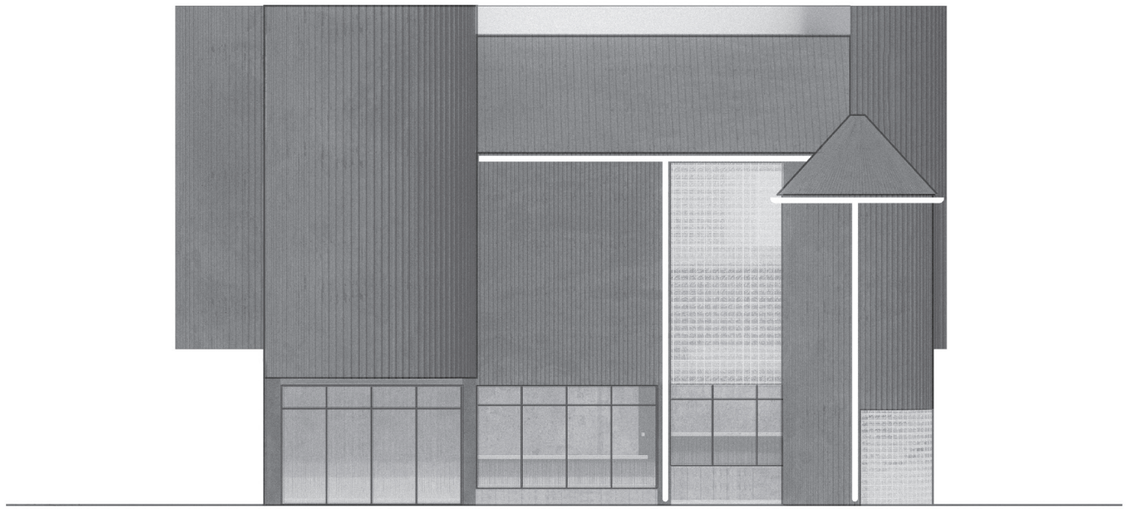


Fig. 36 The Final Form of The Warehouse Facade Evoking The Ideas Learned from Bernd and Hilla Becher.

The geometry and layout of the accommodation is informed by the existing geometry of the silos with the aim to achieve privacy and a feeling a safety through the layering of spaces for the potentially vulnerable users using them. Access to the accommodation areas is through a set of spiral staircases housed in two of the silos and circulation which penetrates horizontally through the silos. The circulation accesses the experience of being within the silos with vast open space above and below. Strategic cuts have been made in the silos to allow views through the three layers of cylinders while not interrupting the structural integrity of the existing structure.

The transitional accommodation sits either side of the silos on first and second floor level. The area of the these additions is left open on the ground floor only inhabiting a colonnade of stone columns echoing those beneath the silo. The public engagement space spills into this area to blur the lines between old and new. The transitional accommodation's structure comprises of the aforementioned stone columns and deep stone beams. They are expressed on the exterior of the new building. Their materiality is rigid, robust and enduring much like that of the existing silos. The skin of the building is also stone in order to endure. Areas of weathering on these materials have been purposely incorporated in order to represent the length of time the material has remained.

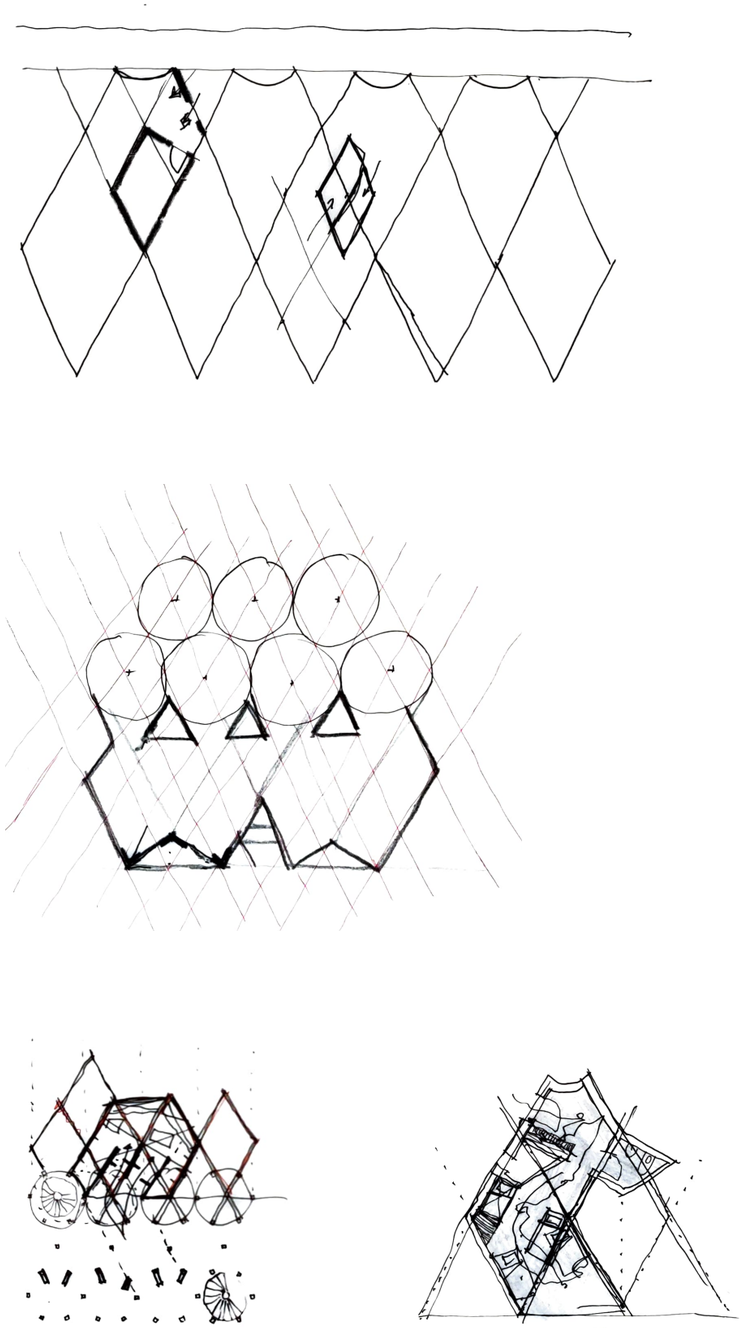


Fig. 37

Sketches: Early stages of the accommodation plan with the creation of passive safety as a driver of the design.

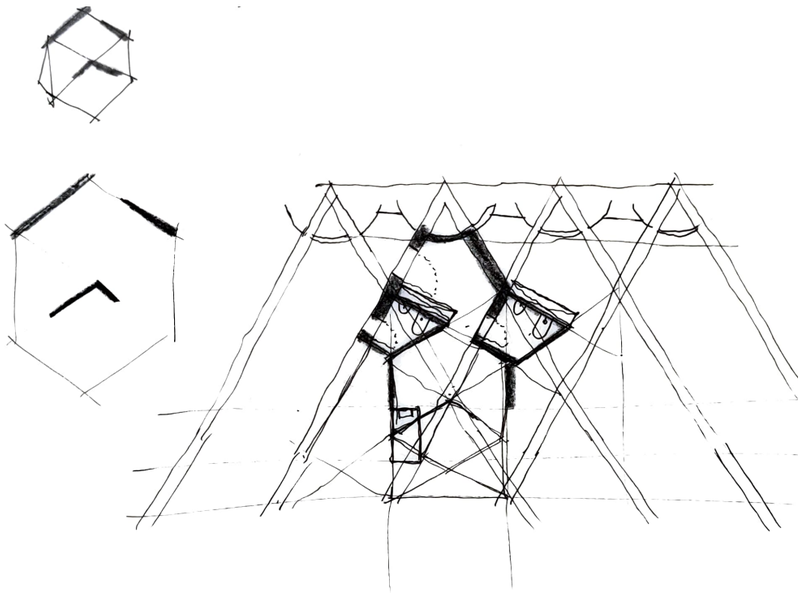


Fig. 38

Sketches: Further development of the accommodation layout with the exploration of a meandering route created through angled walls.

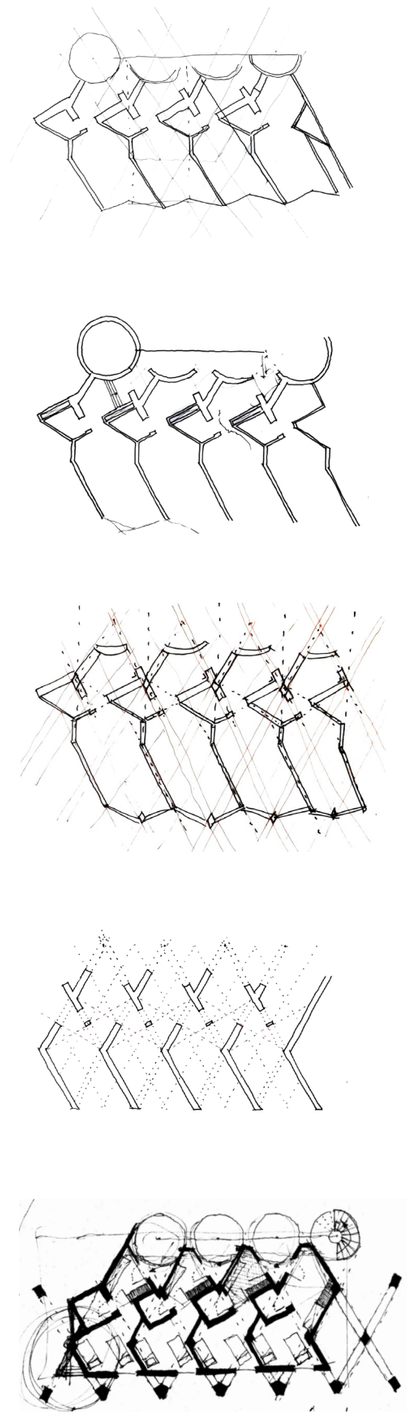


Fig. 39

Sketches: Clarity of meandering design.

The ground floor beneath the silos is now proposed as the main public engagement space. The existing columns create soft routes through the space and facilitate points of interest. The silos remain above this space and bring light down through them in dramatic fashion. The concrete housing above the silos and some of their funnels at the base of the cylinders have been removed in order to achieve this.

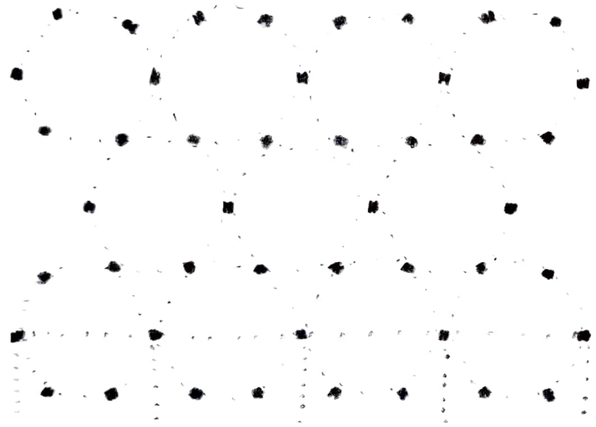
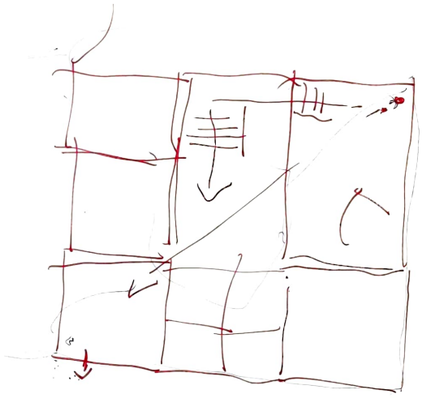
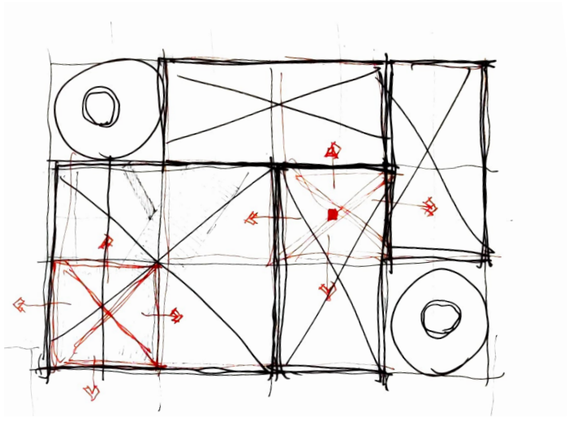


Fig. 40

Sketches: Existing ground floor arrangment of columns beneath the silos.





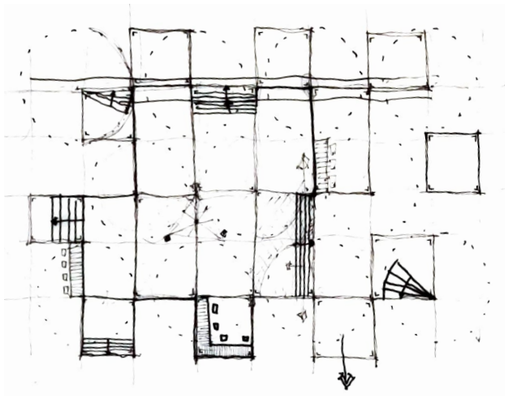
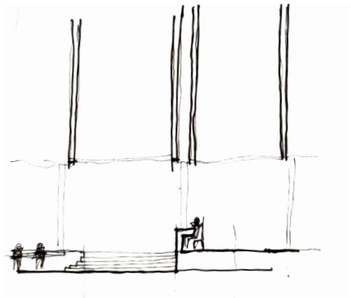
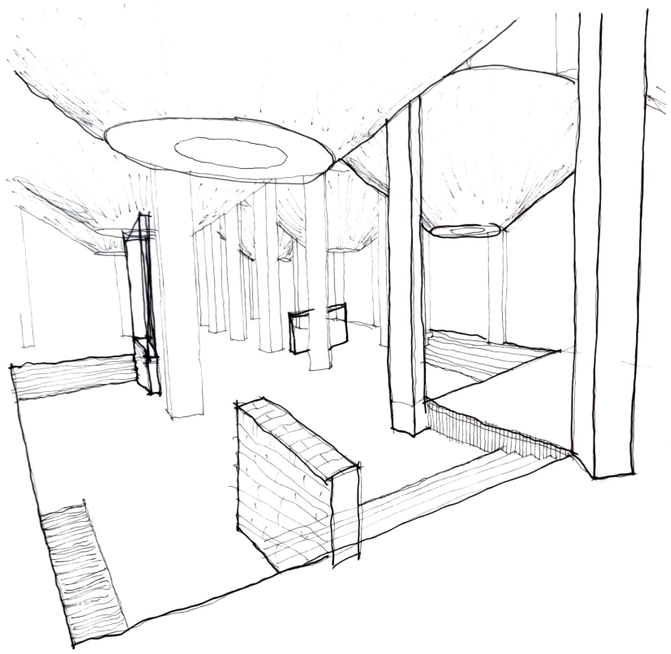
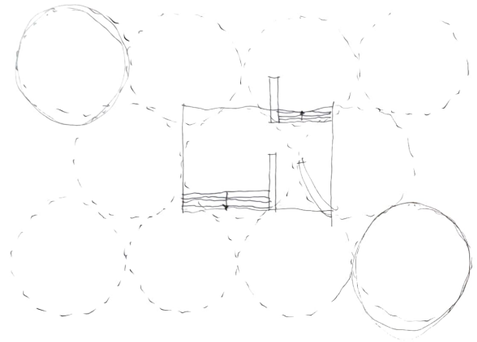


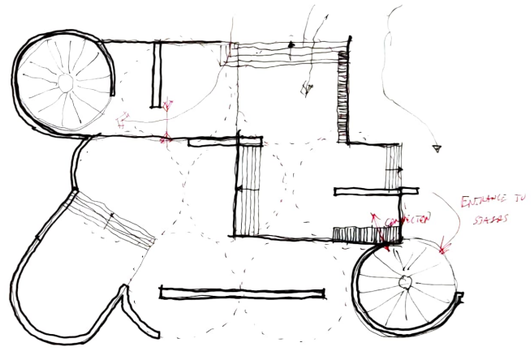
Fig. 41

Sketches: Developing a strategy for organising the loose public engagment space and balancing the existing column arrangment.









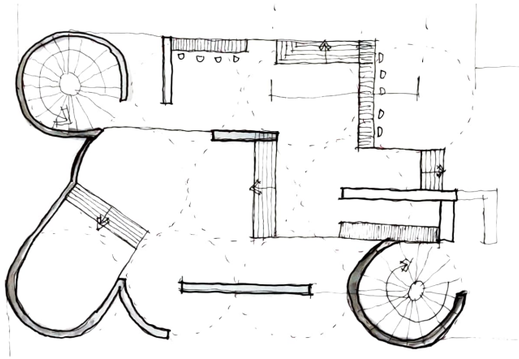


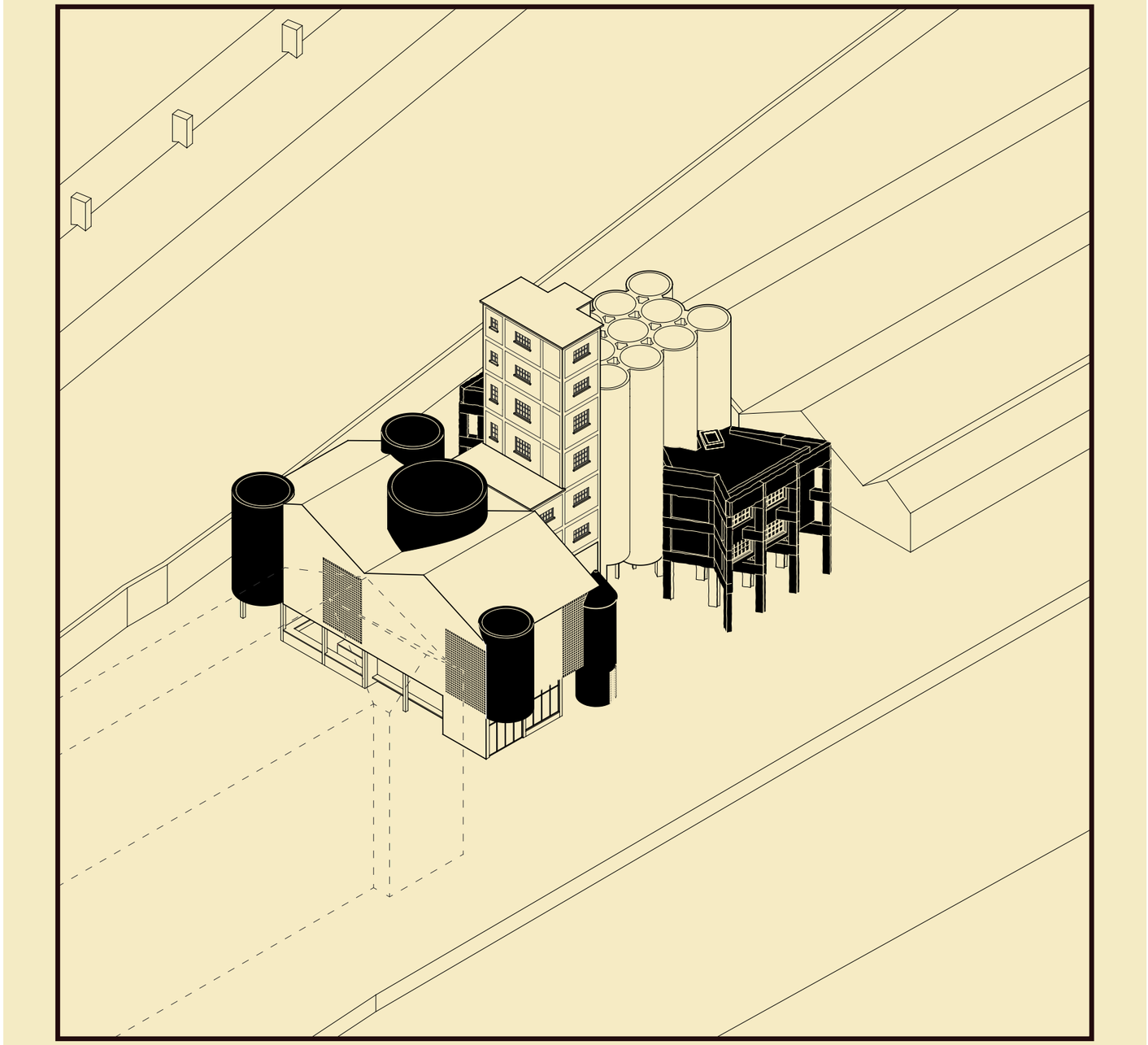
Fig. 42

Sketches: Progressed development of ground floor arrangement.

Fig. 43 1:50 Cast Model of The Ground Floor and Silo Arrangment Above.

Scheme

The final scheme culminates with new enduring architectural additions to the existing structure which echo the existing enduring language they connect themselves to. Endurance has been applied and tested through durable and flexible spaces alike. The quality of these spaces is enhanced by overcoming the challenged site and providing generous light. The scale of these spaces reacts to the human scale and the requirements of its intended user groups. The positioning of these spaces was established through the needs of the programme. The architectural language has been informed by the existing factors of the site and with a timeless finish in order to quietly transition into the future.



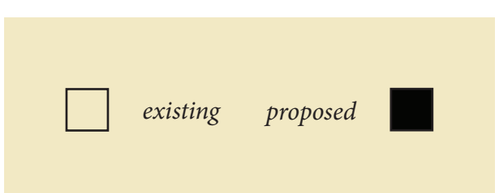


Fig. 44 Isometric View of the Overall Scheme.

GF

1. kitchen

2. donation centre

3. general food store

4. cold food store

5. assisted w.c.

6. canteen

7. public engagement space

1F

8. education

9. therapy

10. medical

11. transitional accommodation

2F

11. transitional accommodation

12. administration office

13. formable space

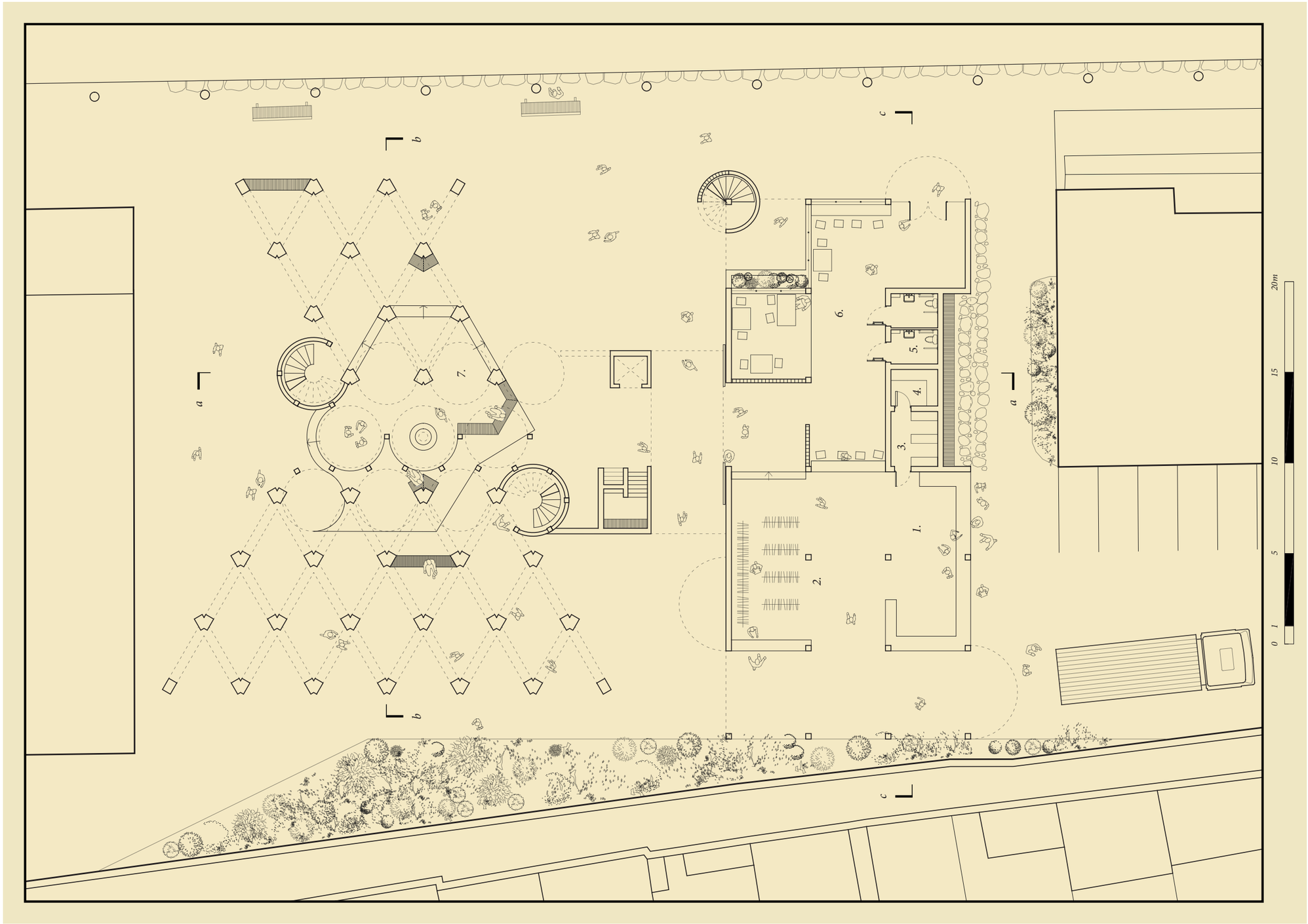


Fig. 45 Ground Floor Plan.

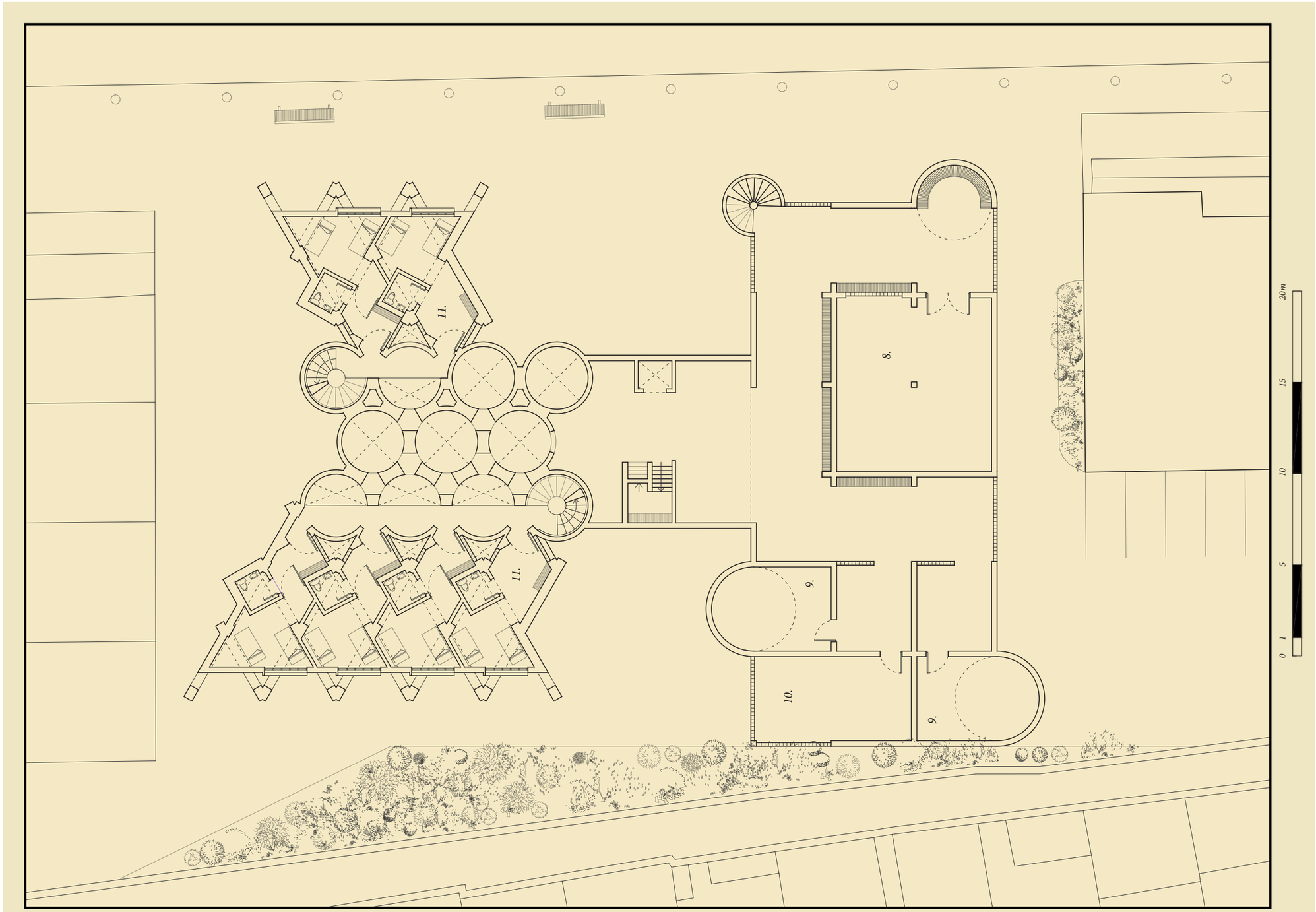


Fig. 46 First Floor Plan.

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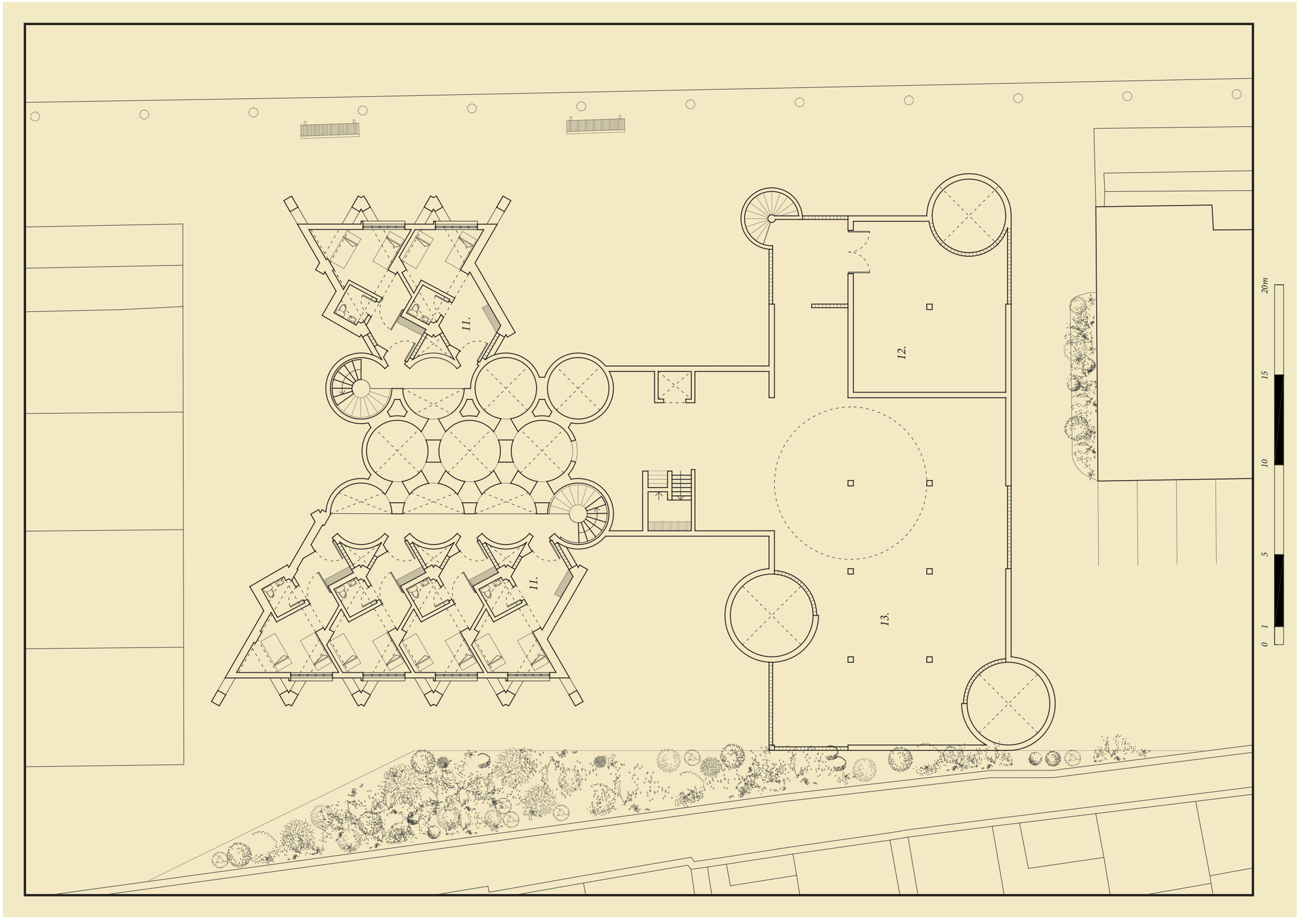


Fig. 47 Second Floor Plan.

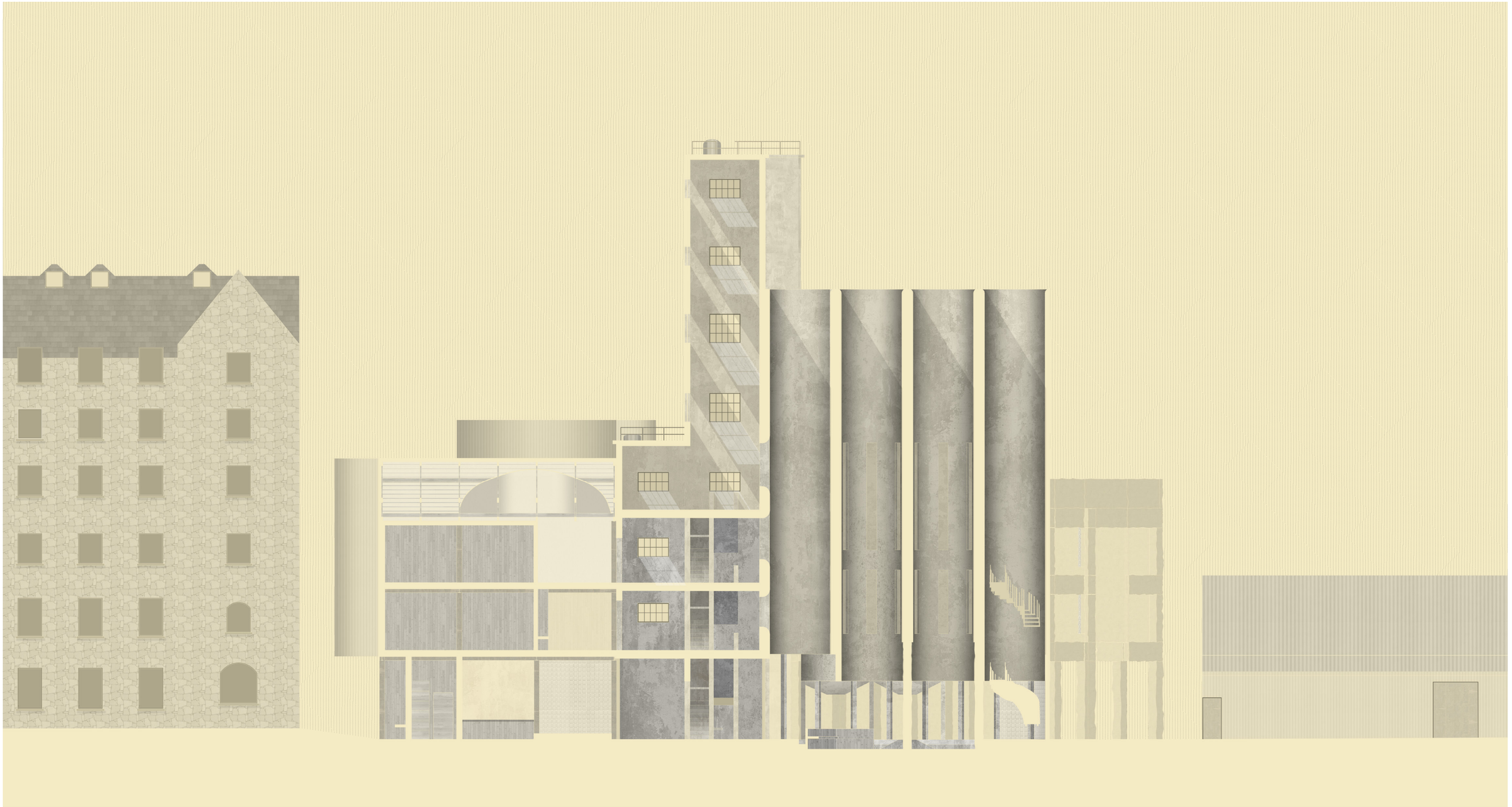


Fig. 48 Section a-a.

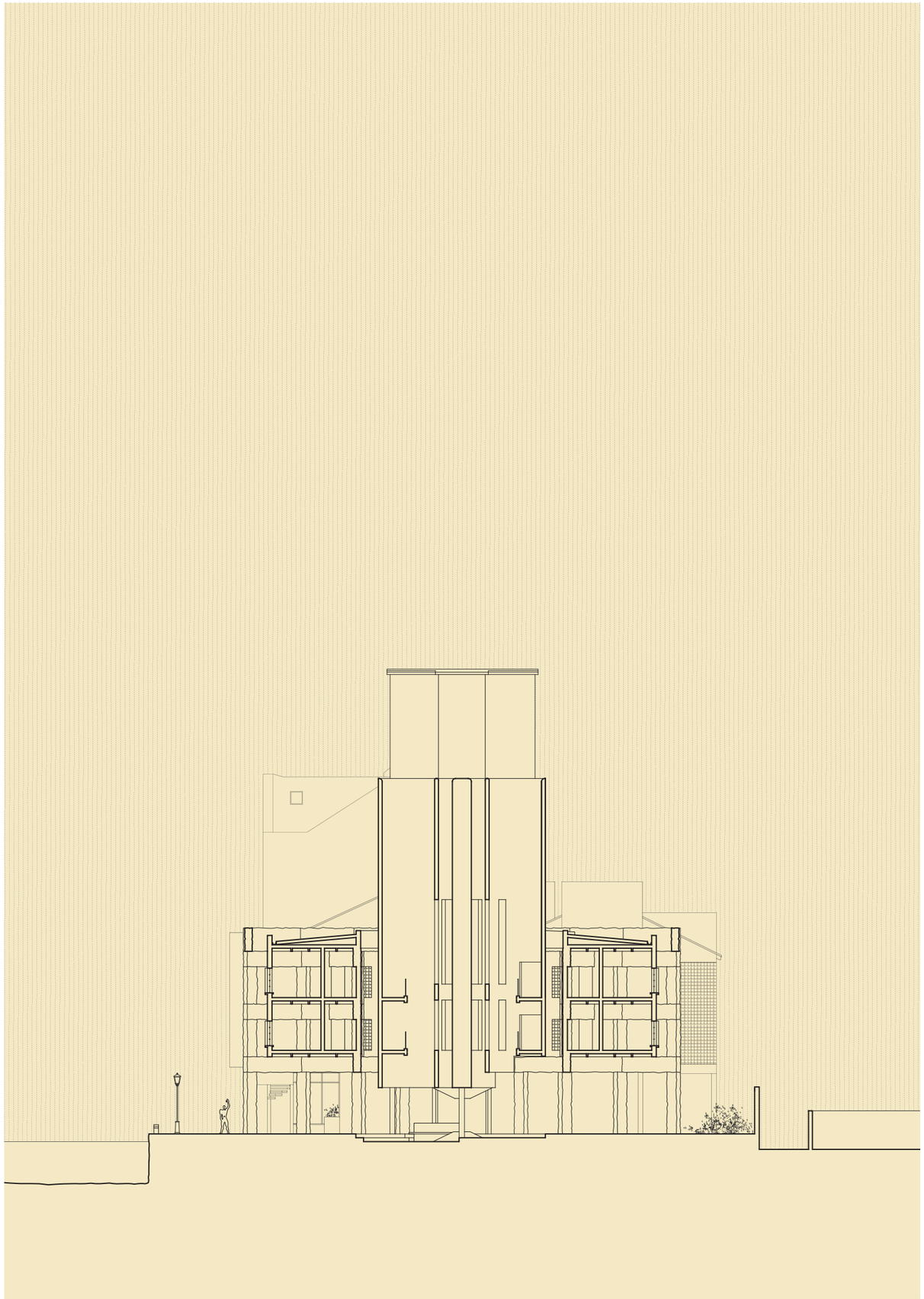
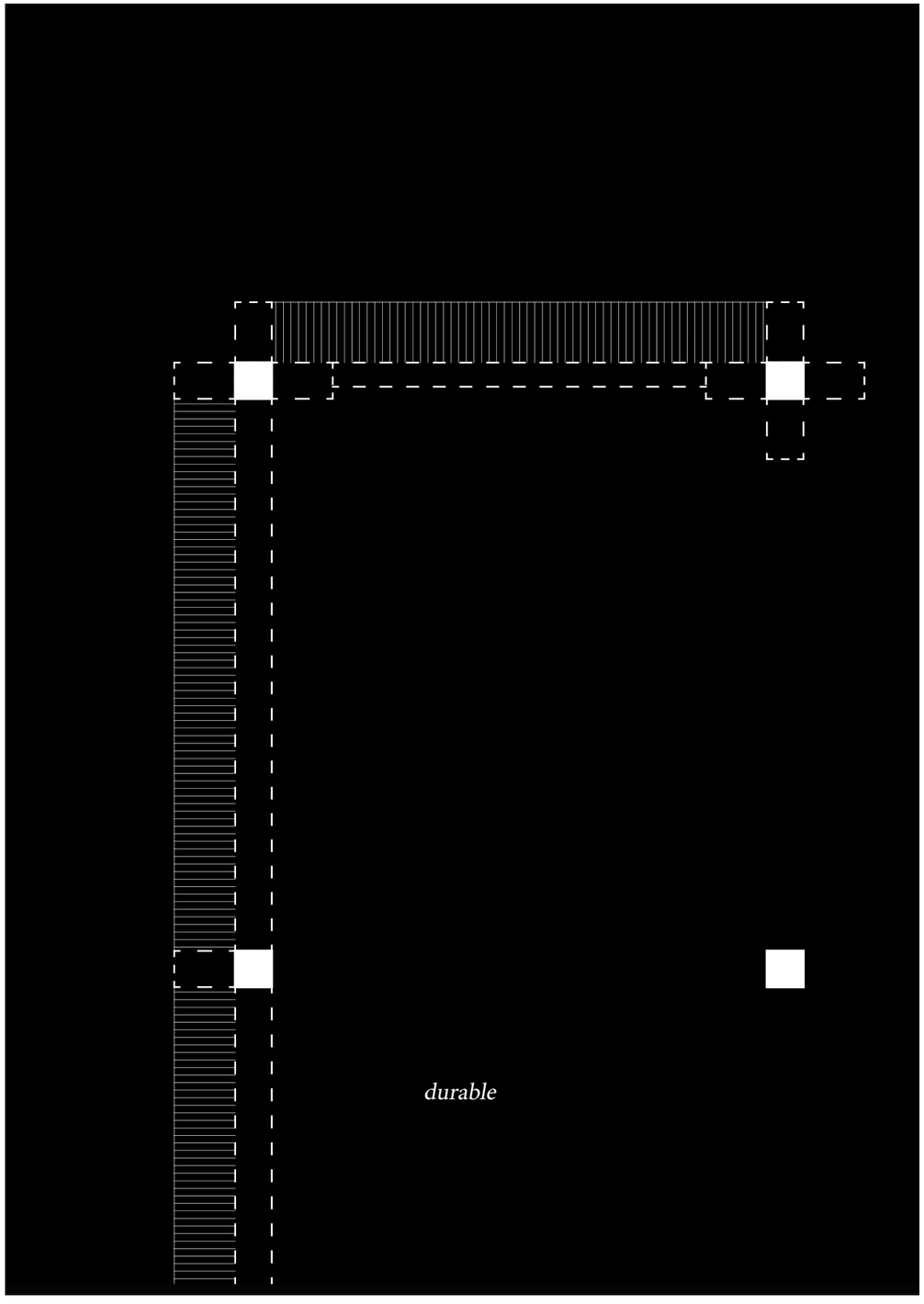


Fig. 49 Section b-b.

Fig. 50 Section c-c.



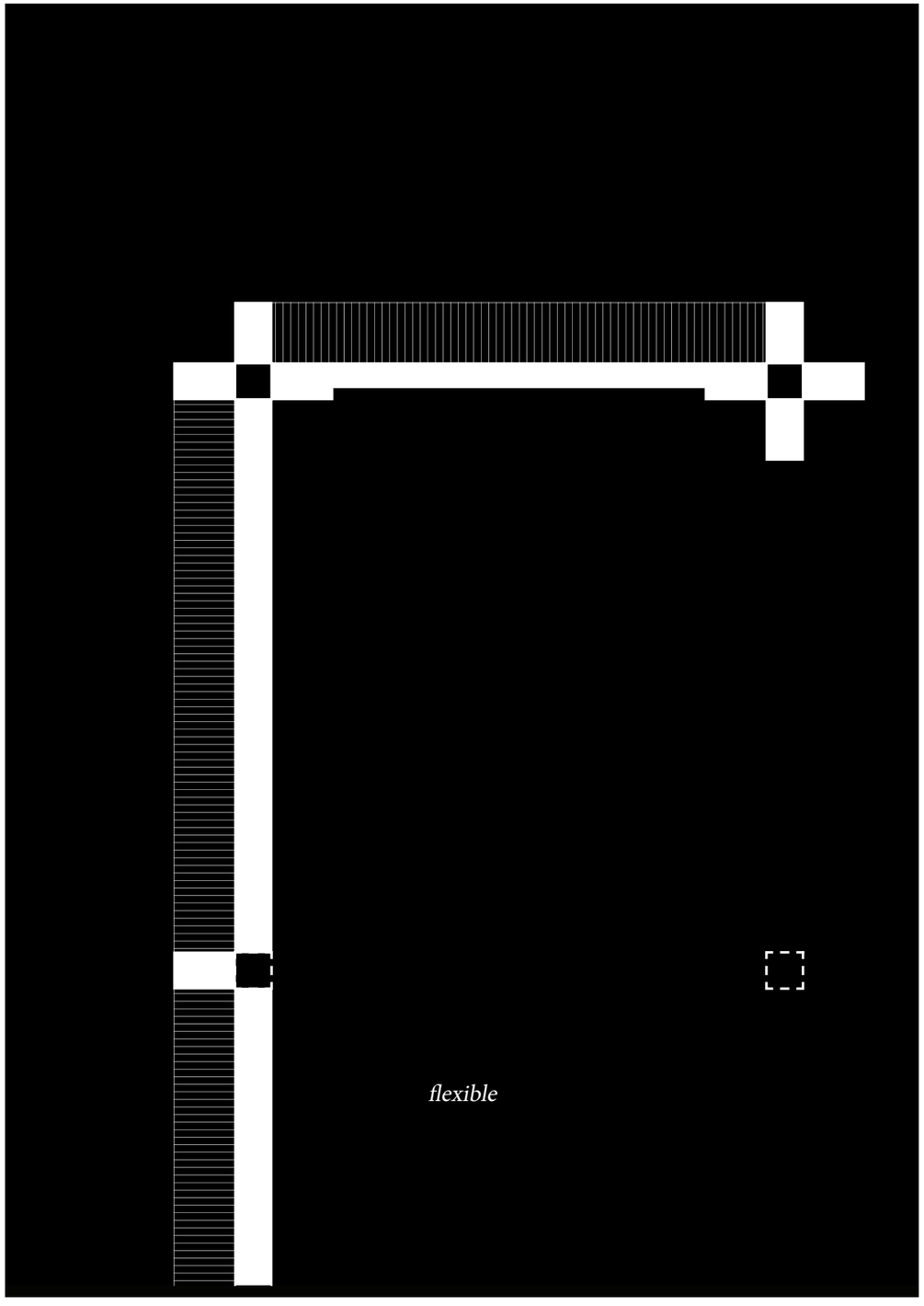
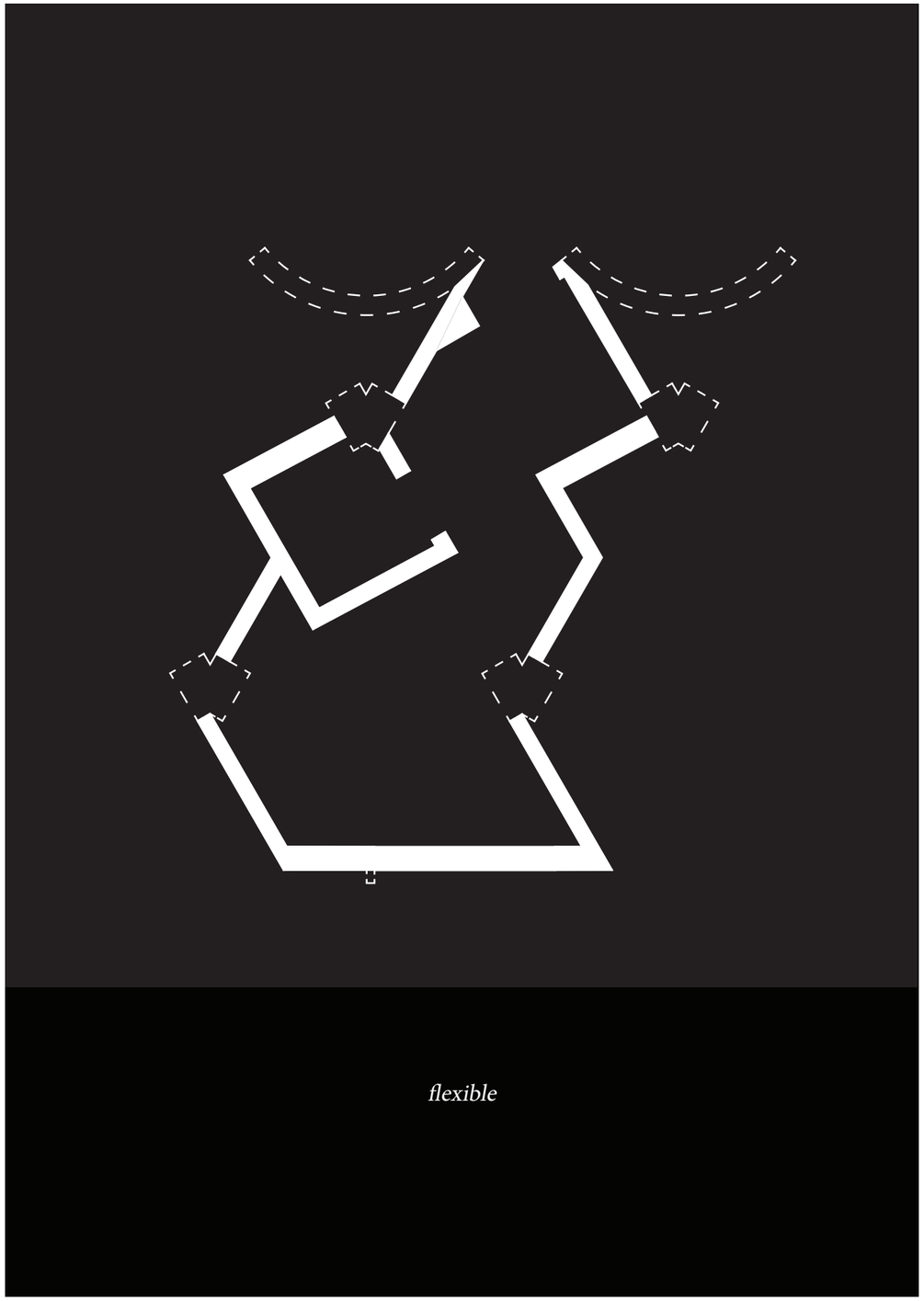


Fig. 51 (left) Durable Components in Warehouse Space

Fig. 52 (right) Flexible Components in Warehouse Space

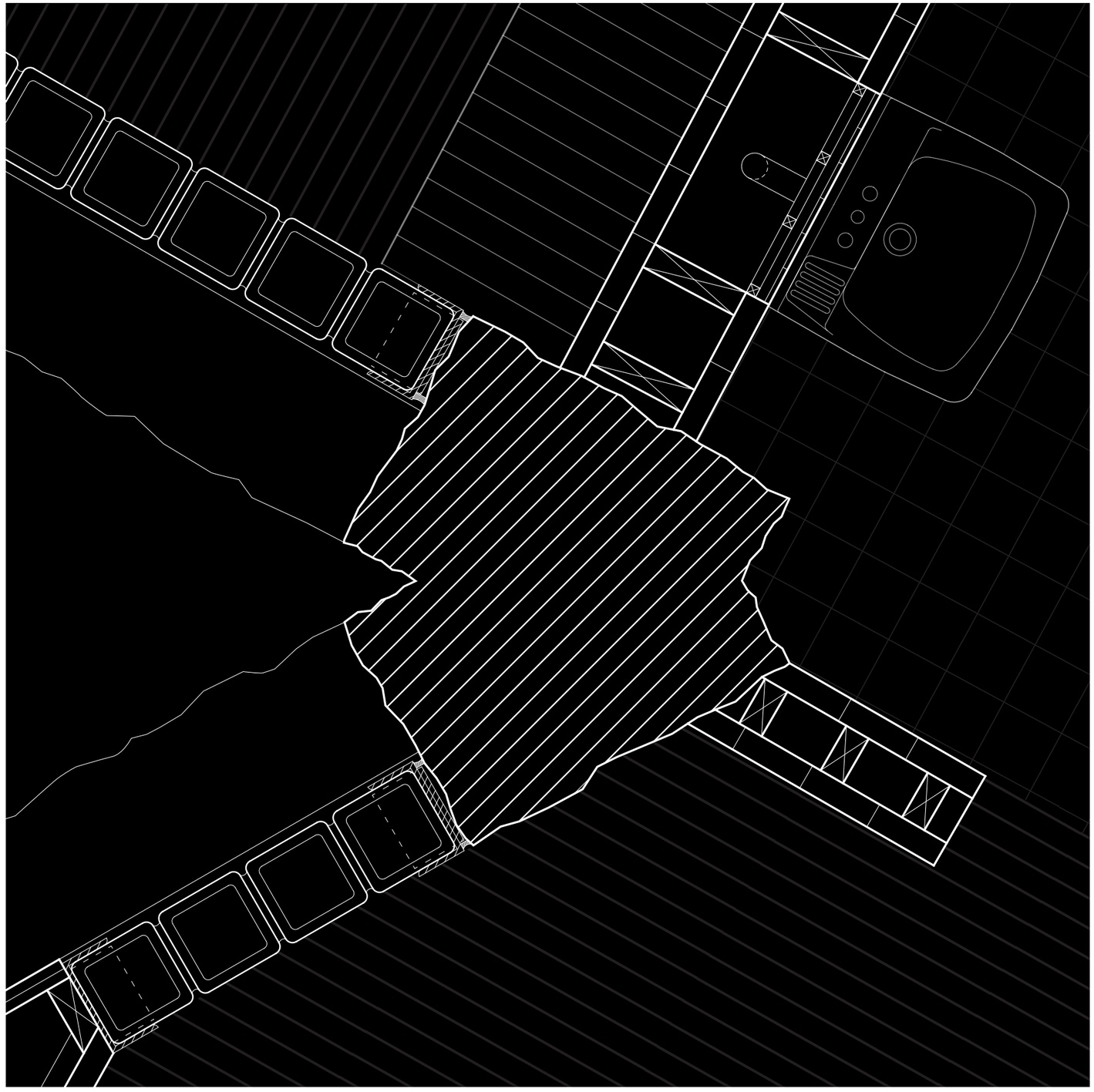
durable



flexible

Fig. 53 (left) Durable Components in Accommodation Space

Fig. 54 (right) Flexible Components in Accommodation Space



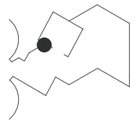
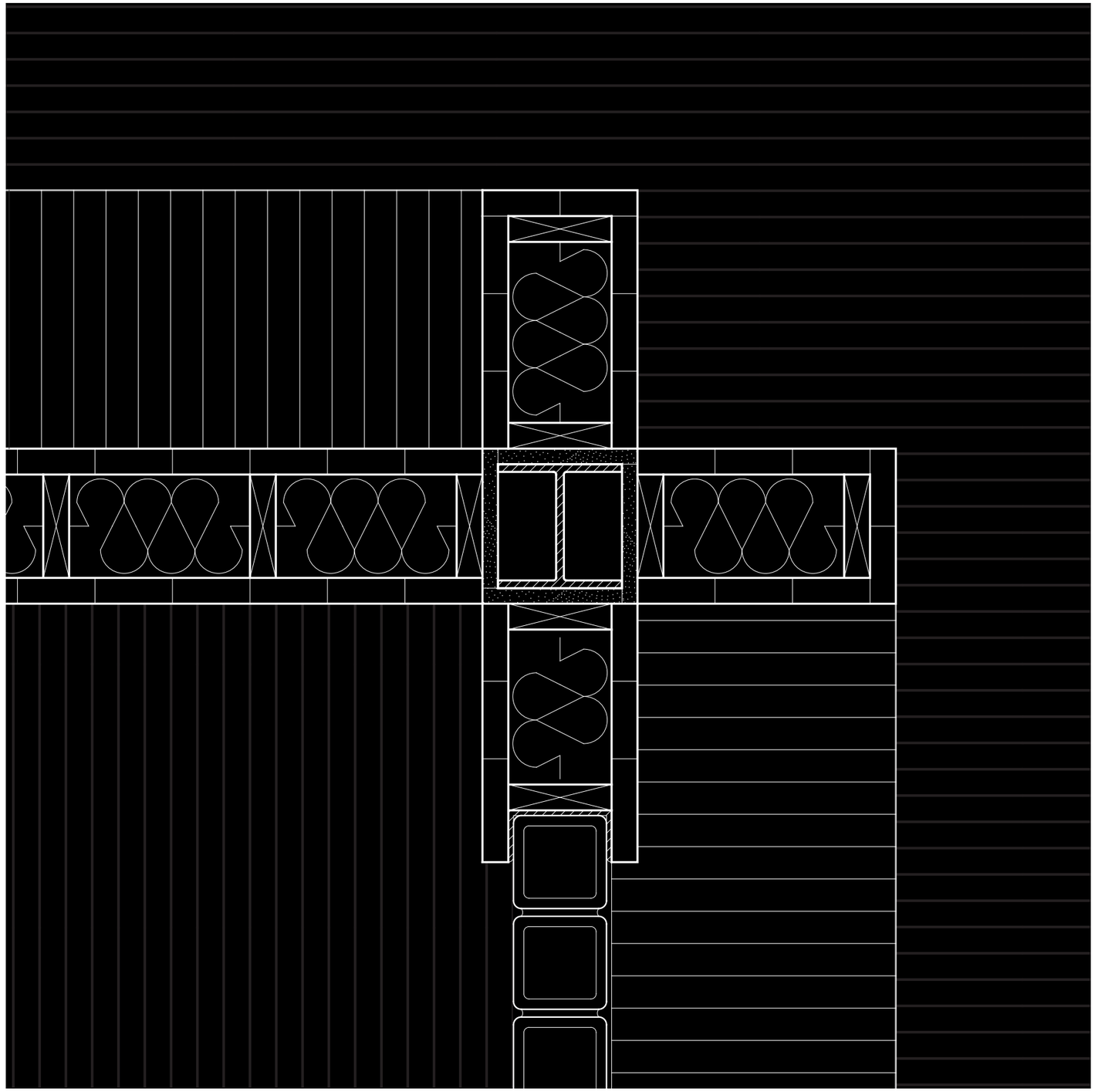


Fig. 55 Detail Drawing Highlighting The Durable Stone Column and the Flexible Surrounding Walls.



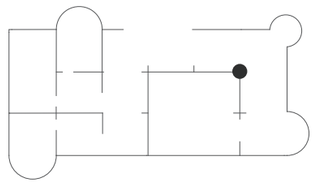
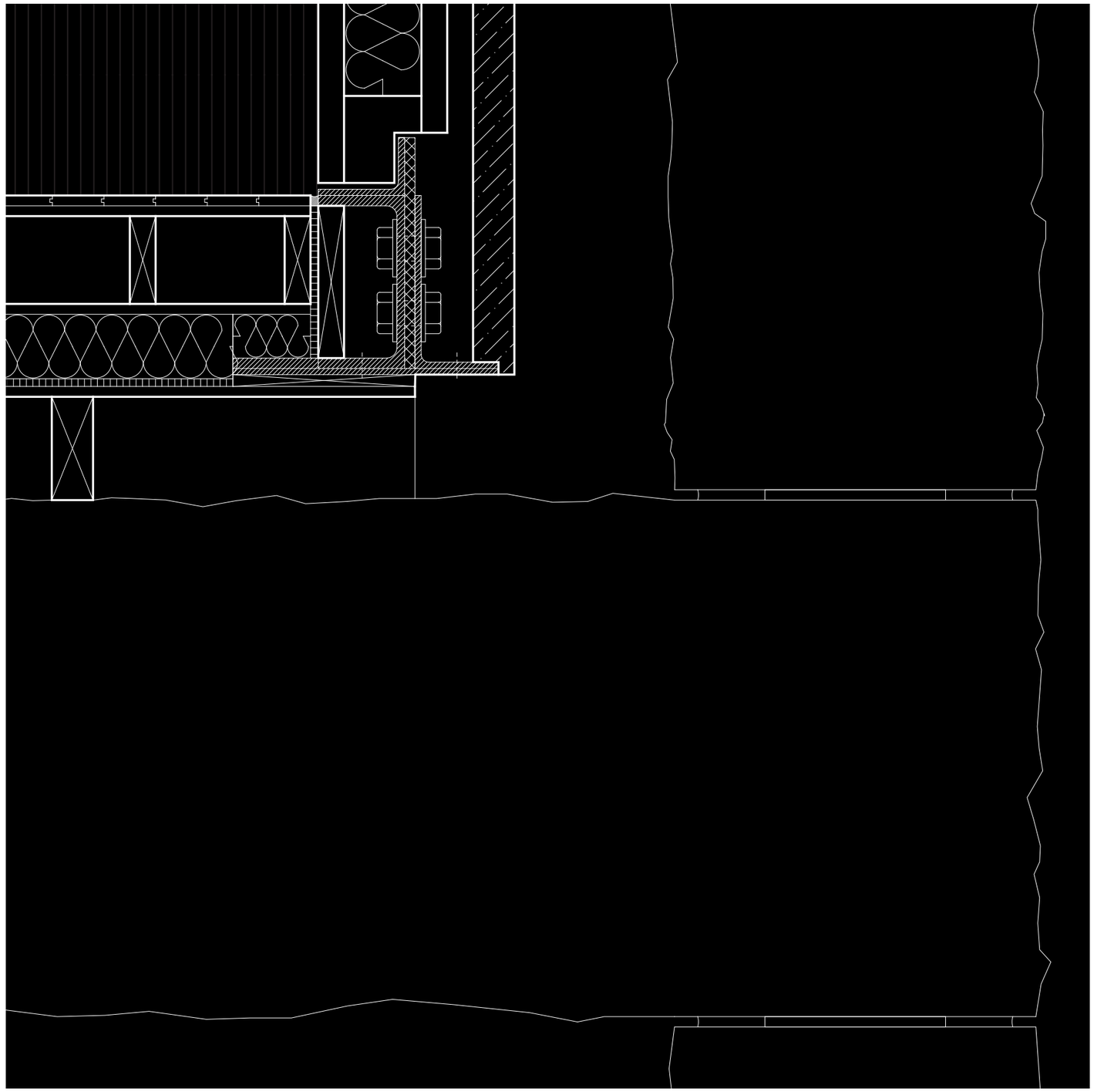


Fig. 56 Detail Drawing Highlighting The Primary Structural Steel Column and the Flexible Surrounding Walls.



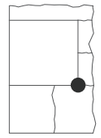
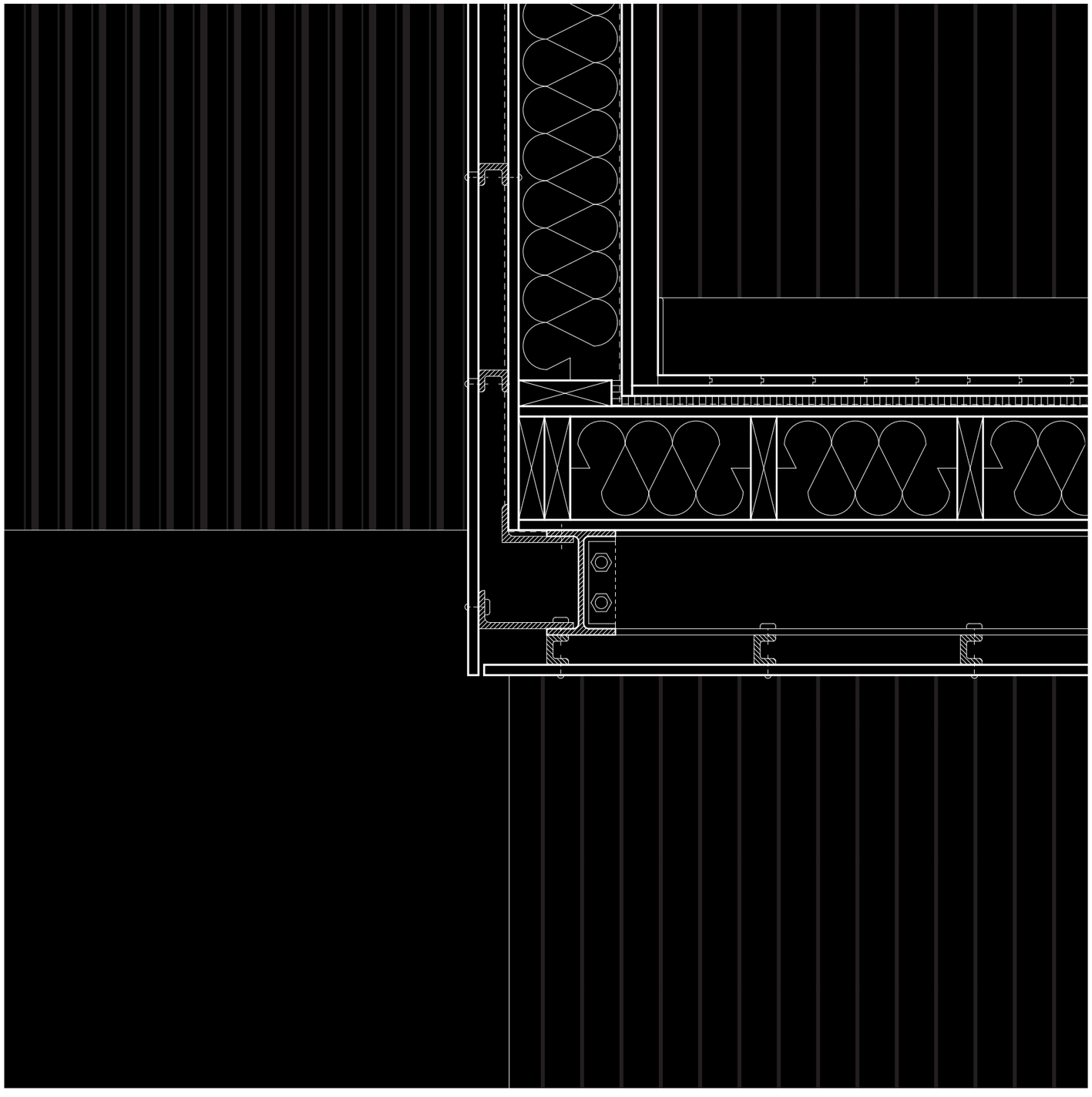


Fig. 57 Detail Drawing Highlighting the Wall & Floor Construction of the Accommodation and the Durable Facade.



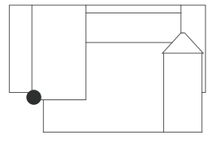


Fig. 58 Detail Drawing Highlighting The Wall & Floor Construction of the Warehouse and the Maintainable Facade.

Fig. 59 Image Depicting the Formable Community Space within the Warehouse.

Fig. 60 Image Depicting the Circulation Space and Accompanying Waiting Area for the Educational Space.

Fig. 61 Image Depicting the Ground Floor Atmosphere Beneath the Eleven Silo Voids Above.

Fig. 62 Image Capturing the Expression of Safety and Home Through the Layering of Space within the Transitory Accommodation.

Fig. 63 Image Depicting a Visual Connection Between the Transitory Accommodation and the Existing Silos.

Fig. 64 Image Intended to Evoke the Components of the Building that will Endure Without Failure, Long into the Future.

As mentioned earlier in this book, the proposed buildings are to echo the characteristics of the existing buildings they connect themselves to. Therefore in the case of the Transitory Accommodation, it takes on ideas of durability, robustness and firmness such as those seen in the existing grain silos. On the other hand, the Warehouse comprises of lighter materials, a flexible grid structure and a maintained facade. New features to this structure will replicate these same characteristics.

By visually expressing the endurance methodologies that these buildings associate themselves will celebrate the ambition of these structures and their place in society. Allowing the robust materials to weather, patinate and season will expose the longevity of the material. It will represent the time that the material has endured.

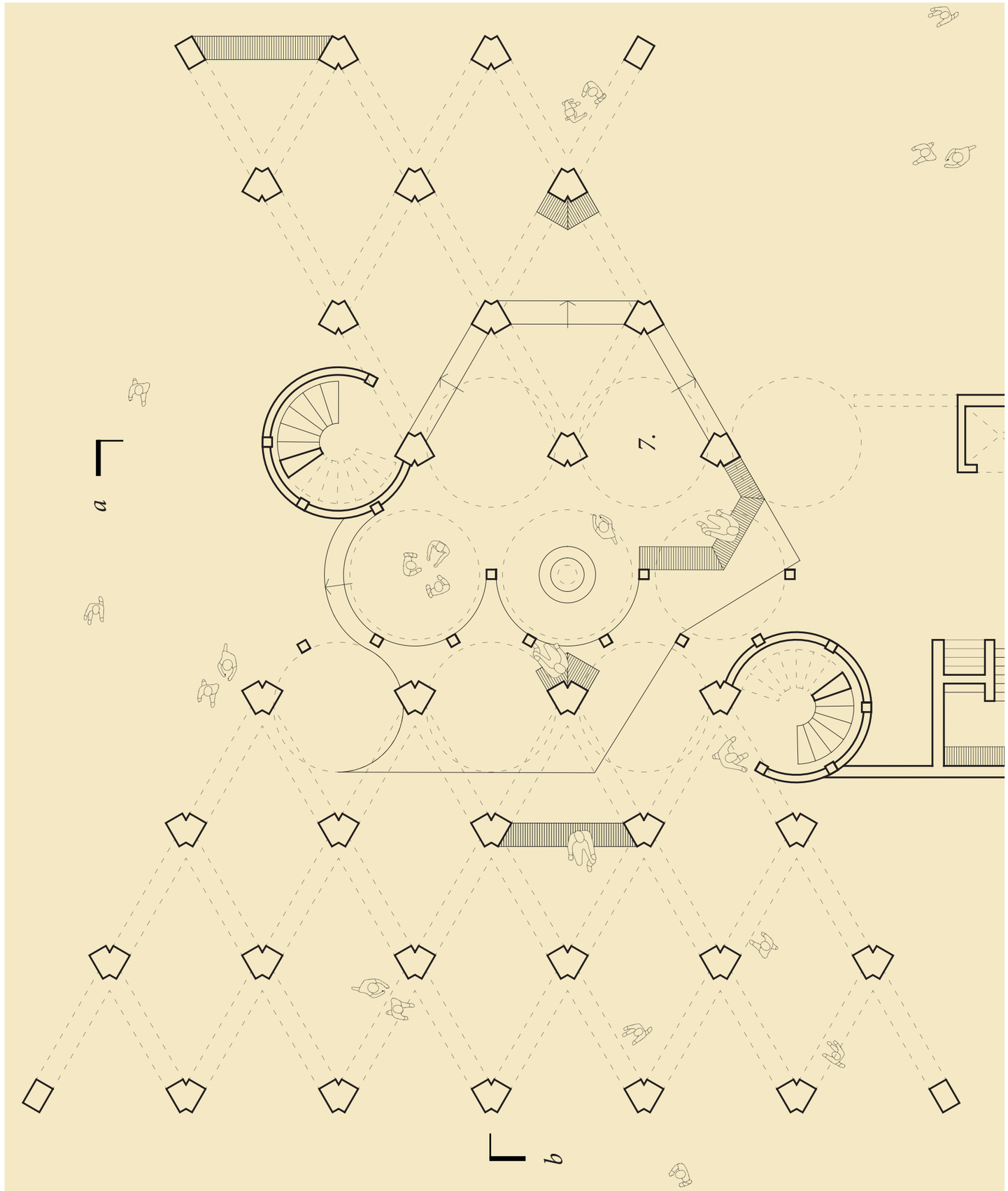
On the contrary, the materials of the warehouse will be maintained or replaced overtime as their durability is not meant to match that of the silos and transitory accommodation. The newer, cleaner and unblemished appearing materials will embody this approach.

Fig. 65 Image Depicting the Intention of Weathering on the Durable Materials.

Reflection

As the project progressed it became evident that it was being pulled in many different directions. Designing the scheme around endurance and the ideas brought forth in my research paper proved challenging in and of itself. Additionally, dealing with a complex user group such as the homeless required a heightened level of thinking for the design. Moreover, tackling an existing building and one with such distinct features and scale as the grain silos added another layer of complexity to the scheme. While the undertaking of these intricate design challenges seemed like the correct decision when viewed in isolation, as whole they proved difficult. The overall project benefited from the criteria I set myself and gave the project a richness and realness however at times it was hard to find a balance between these three overarching constraints.

Certain areas of the scheme such as the ground floor proved more problematic. There began to be a tension between allowing the public into this area and allowing privacy and safety to the vulnerable and sensitive primary users of the building. While I found benefits from allowing the public access, it was noted that it may problematic in reality. This would be something which I would further develop in order to achieve a harmony between both ideals.



Conclusion

Research into architectural endurance has shown value in responding to this year's theme of 'Urgency: Radical Thinking and Transformative Action'. Implementing the strategy established in the Resolution of Research section of this book through an architectural project has represented the possibility and outlined the methodology of achieving an enduring architecture. Structures already exist which have been built to last as outlined by the site selection of this thesis. Treasures such as these should not be left disused. Their endurance should be celebrated through use.

The importance of enduring architecture should not be overlooked. Longer lasting architecture has the potential to accomplish objectives which shorter term buildings cannot. Longterm problems can be resolved with the gift of time, and if an enduring architecture can provide this precious gift then it should be treated as an extremely valuable asset to society.

There is an inherent responsibility which comes with an enduring architecture. The architect of such a building has a duty to design for today's society as well as envisage future societies. As the world is moving into an uncertain time with regard to climate change and humanity's impact on the climate, this thinking and responsibility will be called upon more often. This approach therefore is not 'blue skies' thinking and can be applied immediately and urgently to achieve architecture which will endure.

Reference List

14 Henrietta Street. (2021, May 10). History of the House. Retrieved from 14 Henrietta Street: https://14henriettastreet.ie/about/history-of-the-house/

Emery, K. 0. (1960). Weathering of the Great Pyramid. Journal of Sedimentary Research, 140-143.

Frampton, K. (1983). Towards a Critical Regionalism: Six Points for an Architecture of Resistance. In H. Foster, The Anti-aesthetic: Essays on postmodern culture (pp. 16-30). Port Townsend: Bay Press.

Hashimoto, H. T. (2010). Urban stock over time: spatial material stock analysis. Building Research & Information, 483-502.

Igor Sartori, H. B. (2008). Towards modelling of construction, renovation and demolition activities: Norway's dwelling stock, 1900-2100. Building Research & Informwation, 412-425.

Kennihan, R. W. (2022, September). Beach Road House. AMAG 28, pp. 94-95.

Leatherbarrow, D. (2021). Building Time: Architecture, Event, and Experience. London: Bloomsbury Publishing Plc.

Leatherbarrow, M. M. (1993). On Weathering: The life of Buildings in Time. Massachusetts: The MIT Press.

Murtagh, T. (2022). Spectral Mansions: the making of a Dublin tenement, 1800-1914. Dublin: Four Courts Press.

Neill, P. (2020, December 16). Articles: Emission from the construction idustry reach highest levels. Retrieved from Environment Journal: https://environmentjournal.online/articles/emissions-from-the-construction-industry-reach-highest-levels/

O'Toole, P. L. (2008). North by Northwest: The life and work of Liam McCormick. Cork: Gandon Editions.

Rabin, E. (2005, December 18). Article: Durability Key Component Green Building. Retrieved from GreenBiz: https://www.greenbiz.com/article/durability-key-component-green-building

Simmel, G. (1911). The Ruin. In K. H. Wolff, Essays on Sociology, Philosophy and Aesthetics (pp. 259-66). New York: Harper & Row.

Stevenson, A. (2010). Oxford Dictionary of English. Oxford: Oxford University Press.

Stirlin, H. (1997). The Maya: Palaces and Pyramids of the Rainforest. Madrid: Taschen America Llc.

Stout, G. (2002). Newgrange and the Bend of the Boyne. Cork: Cork University Print. Retrieved from UNESCO World Heritage Convention: https://whc.unesco.org/en/list/659/

Sully, N. (2009). 'Dear Monsieur Le Corbusier, It is still raining in our garage….'. M/C Journal, 142-147.

Tom Avermaete, V. P.-C. (2019). Revisiting Critical Regionalism. OASE, 1-10.

U.S. Department of Housing and Urban Development. (2015). Durability by Design 2nd Edition: A Professional's Guide to Durable Home Design. Washington. D.C.

Wyld, D. C. (1990). Georgian Town Houses and Their Details. Essex: Courier International.

Ypma, H. (1998). Irish Goergian. Singapore: C.S. Graphics.

Bibliography

14 Henrietta Street. (2021, May 10). History of the House. Retrieved from 14 Henrietta Street: https://14henriettastreet.ie/about/history-of-the-house/

Cleary, J. (2022). Theorizing Place in a Warming World: what on earth does place mean now? Building Material Journal, 147-158.

Corbusier, L. (1987). Le Corbusier: The Decorative Art of Today. Massachusetts: MIT Press.

Corcoran, M. (2014). Tectonic Ornament: How Can An Ornamental Tectonic Synthesise function and beauty. Unpublished doctoral dissertation, Technological University Dublin, Dublin, Ireland.

Curtis, A. (2022). The Role of Serendipity in Architecture. Unpublished doctoral dissertation, Technological University Dublin, Dublin, Ireland.

Dethier, J. (2020, January 31). Inhabiting the earth: a new history of raw earth architecture. Retrieved from Architectural Review: https://archive.ph/20211122173941/https://www.architectural-review.com/essays/inhabiting-the-earth-a-new-history-of-raw-earth-architecture

Drew, P. (2001). Touch This Earth Ligtly: Glenn Murcutt in his own words. Potts Point: Duffy & Snellgrove.

Emery, K. 0. (1960). Weathering of the Great Pyramid. Journal of Sedimentary Research, 140-143.

Frampton, K. (1983). Towards a Critical Regionalism: Six Points for an Architecture of Resistance. In H. Foster, The Anti-aesthetic: Essays on postmodern culture (pp. 16-30). Port Townsend: Bay Press.

Gorgolewski, M. (2018). Resource Salvation: The Architecture of Reuse. Oxford: John Wiley & Sons.

Hashimoto, H. T. (2010). Urban stock over time: spatial material stock analysis. Building Research & Information, 483-502.

Henning, N. (1981). The structure of Newgrange. Antiquity, 54.

Igor Sartori, H. B. (2008). Towards modelling of construction, renovation and demolition activities: Norway's dwelling stock, 1900-2100. Building Research & Informwation, 412-425.

Kennihan, R. W. (2022, September). Beach Road House. AMAG 28, pp. 94-95.

Leatherbarrow, D. (2021). Building Time: Architecture, Event, and Experience. London: Bloomsbury Publishing Plc.

Leatherbarrow, M. M. (1993). On Weathering: The life of Buildings in Time. Massachusetts: The MIT Press.

McGarry, M. (2017). The Irish Cottage: History, Culture and Design. Dublin: Orpen.

McMenamin, D. S. (2012, November 30). The utility and aestheitc of landscape: a case study of irish vernacular architecture. pp. 46-53.

Mostafavi, D. L. (2002). Surface Architecture. Massachusetts: Massachusetts Institute of Technology.

Müller, D. (2006). Stock dynamics for forecasting material flows - case study for housing in the Netherlands. Ecological Economics, 142-156.

Murtagh, T. (2022). Spectral Mansions: the making of a Dublin tenement, 1800-1914. Dublin: Four Courts Press.

Neill, P. (2020, December 16). Articles: Emission from the construction idustry reach highest levels. Retrieved from Environment Journal: https://environmentjournal.online/articles/emissions-from-the-construction-industry-reach-highest-levels/

O'Toole, P. L. (2008). North by Northwest: The life and work of Liam McCormick. Cork: Gandon Editions.

Rabin, E. (2005, December 18). Article: Durability Key Component Green Building. Retrieved from GreenBiz: https://www.greenbiz.com/article/durability-key-component-green-building

Simmel, G. (1911). The Ruin. In K. H. Wolff, Essays on Sociology, Philosophy and Aesthetics (pp. 259-66). New York: Harper & Row.

Stevenson, A. (2010). Oxford Dictionary of English. Oxford: Oxford University Press.

Stirlin, H. (1997). The Maya: Palaces and Pyramids of the Rainforest. Madrid: Taschen America Llc.

Stout, G. (2002). Newgrange and the Bend of the Boyne. Cork: Cork University Print. Retrieved from UNESCO World Heritage Convention: https://whc.unesco.org/en/list/659/

Sully, N. (2009). 'Dear Monsieur Le Corbusier, It is still raining in our garage….'. M/C Journal, 142-147.

Tom Avermaete, V. P.-C. (2019). Revisiting Critical Regionalism. OASE, 1-10.

U.S. Department of Housing and Urban Development. (2015). Durability by Design 2nd Edition: A Professional's Guide to Durable Home Design. Washington. D.C.

U.S. Department of Housing and Urban Planning. (2002). Durbability by Design: A Guide for Residential Builders and Designers. Washington D.C.

Wyld, D. C. (1990). Georgian Town Houses and Their Details. Essex: Courier International.

Ypma, H. (1998). Irish Goergian. Singapore: C.S. Graphics.

Zumthor, P. (2006). Atmospheres: Architectural environments, surrounding objects. Basel: Birkhäuser

Table of Figures

Appendix

A Letter to Dublin City Council

My thesis idea, 'Towards an Enduring Architecture', relates to the proposed idea of increasing the longevity of buildings and how this is an opportunity for reducing the impact that construction has on the climate over a long period of time. Peter Yost is quoted in an article stating, "if you double the life of a building, you halve the environmental impacts of its constructions". Enduring buildings can outlast the existing crop of modern construction. An enduring building will inherit cultures, develop history and nurture memories. This is already prevalent in the Georgian buildings of Dublin which have protection orders due to their cultural significance. Thus, enduring buildings do not have to be new. Existing examples of enduring buildings have value and should not be overlooked. Their presence in a community is well established and enhances the built fabric of an area. Their longevity speaks to their durability and their history speaks to their cultural significance.

In chapter twelve of The Dublin City Development Plan 2022-2028 it is stated that "cultural infrastructure is a key social asset that must be planned for in the same way as we do for our water supply, our transport, our parks and our built heritage". This is a statement which I approve of. In order to hold onto our culture we must consider it at the same level as these social needs. However further into the document cultural buildings are defined as either a place where culture is 'experienced' or 'created'. My stance is that culture is a broader topic than this made up of niches. The impact of a building on culture has as much to do with its use as it does its impact on a place and people. A cultural building can be a landmark which is engrained in history such as the GPO or O'Connell Tower in Glasnevin Cemetery. It is important to note that these would not fall under the categories described in the Development Plan. This is where I believe the plan falls short. The extent to which a building is culturally significant should be determined through a case-by-case study rather than a broad standard. The criteria should move beyond the current sterile values. A human touch is required to measure the impact a building has had on community, place, people, history and culture. This would more closely match the engagement required to treat culture on a similar level to our water supplies, transport, parks and built heritage as initially stated in the document.