

design development_06



massing_

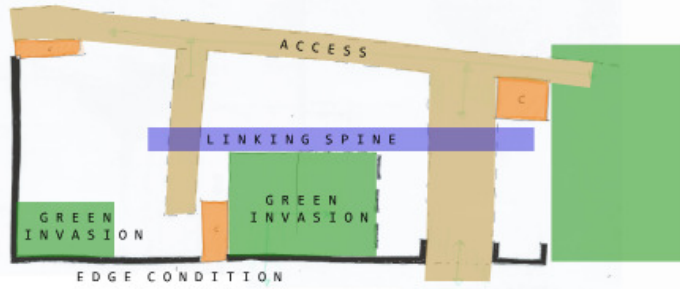
The current state of the Prędio Pott building, reminiscent of a romantic folly, with rambling overgrown vegetation amongst crumbling walls, provides for very striking and powerful architectural imagery. Initial design responses were largely based around the found structural analysis of the site which identified specific zones of the site which became informal courtyard spaces filled overgrown with vegetation. Initial massing exercises which aimed to establish rough bulking of the site were carried out as seen in illustration 120 (left). These incorporated the existing green courtyard spaces as found in the ruin as a means to focus new built fabric insertions.

The façade of the building is important to the historical significance of the site. In addition, the façade becomes a critical element within the patina of aging which as described by Vattimo, suggests at the fragility of the architecture (2005; 60). By respecting the façade as a defining edge to the site, the initial massing ideas concentrates on the introduction of built fabric from the adjacent

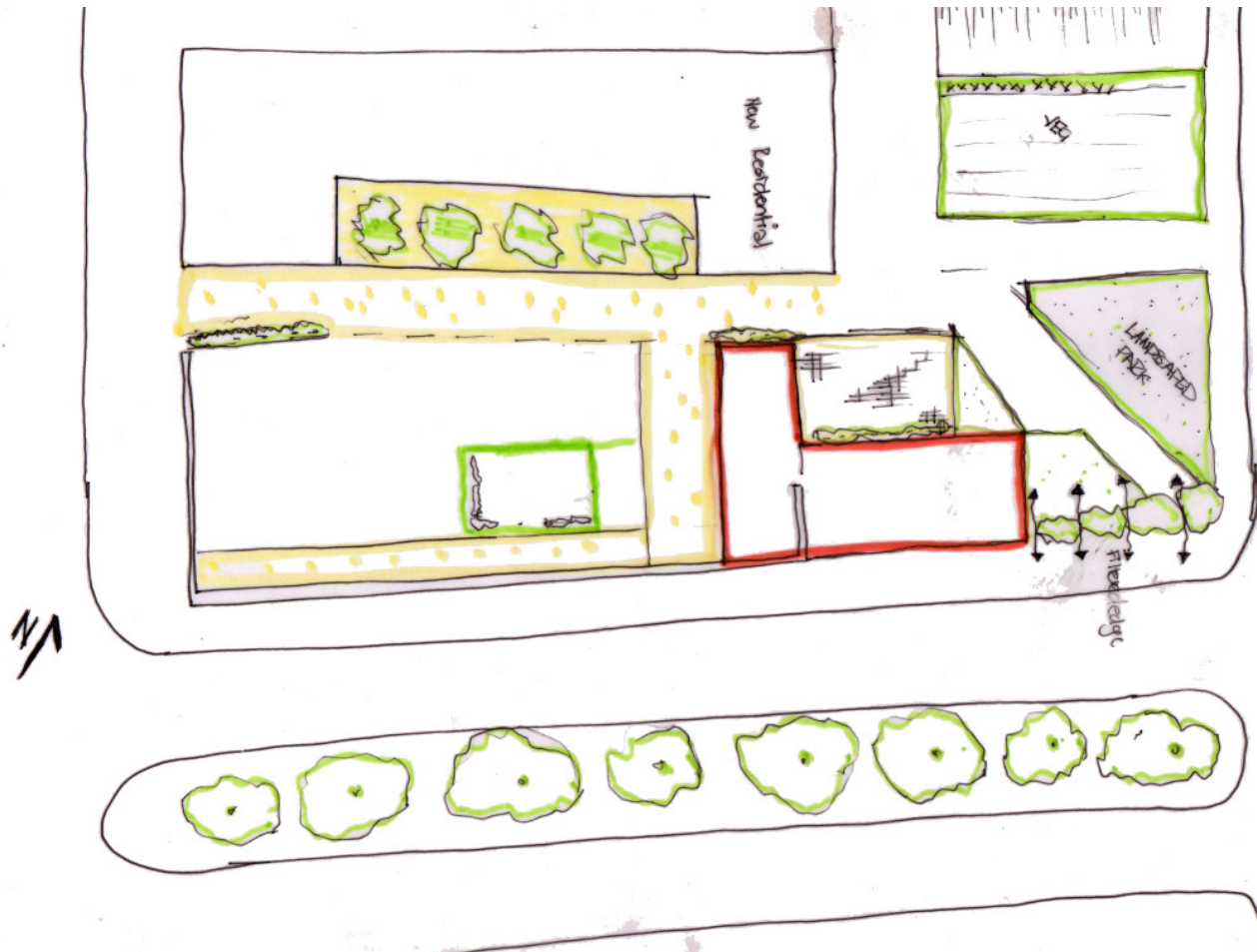
site, allowing for interaction between new and existing functions within the building while still maintaining the prominence of the facade. The new intervention then can be expressed as an additional layered element within the building patina.

The north eastern section of the Prędio Potts building, with its distinctive tower elements, becomes the knuckle between existing building and the new bulk. The re-use of existing vertical circulation routes (shown in orange in illustration 123) allows for an integrated connection between proposed and existing fabric. A large commercial component (red) is inserted in response to the prominence of the street corner.

The vacant site behind the building is largely left open to serve as ground based gardening areas for the culinary school. A massing responding to Avenue Samora Machel is used to create a continuous street interface along the proposed pedestrian boulevard.



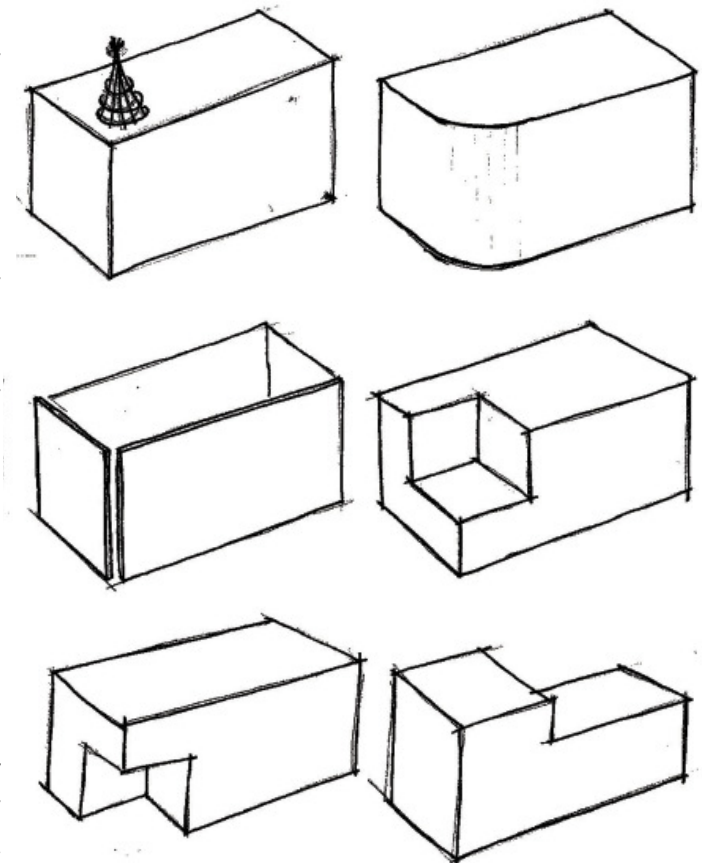
ILLUS. 123 (OPPOSITE) Initial massing views (Hart, 2011), ILLUS 124 Diagram of found structural analysis (Hart, 2011), ILLUS. 125 (LEFT OF PAGE) conceptual planning (Hart, 2011), ILLUS. 126 Initial functional massing (Hart, 2011),



corner treatments_



The location of the site within the Baixa, at the intersection of the main East-West vehicular artery (Avenue 25 September) and the North-South pedestrian spine along Avenue Samora Machel, create an important corner aspect within the building. The construction of the Predio Potts building occurred as a number of phases, with the portion immediately adjacent to the corner being the first to be completed. The construction of the later addition along avenue Samora Machel is somewhat more expressive with the two larger towers, flanking each side of the original arcade, giving the building a much more imposing massing. This draws emphasis away from the corner façade detail which traditionally would have been expressed as more prominent within the scheme. Methods of responding to the corner were explored as shown in illustration 128 to explore methods of addressing the southern façade corner. As seen in the massing examples, the traditional manner of expressing the importance of a corner relies on the manipulation of its massing, whether additively, in the form of a raised component added to the mass, or subtractive, with the removal of bulk to form a negative void increasing the volume of space occupied by the corner. Examples of methods of corner treatments within the Baixa area can be seen in illus 124-127.



ILLUS. 127 Central Printers, Maputo (Hart, 2011), ILLUS 128 Chamfered corner detail, Maputo (Hart, 2011), ILLUS. 129 Office building diagonally opposite Predio Potts (Hart, 2011), ILLUS. 130 Predio and Achri building, Maputo (Hart, 2011); ILLUS. 131 (ABOVE) corner massing treatments (Ching, 2007)

access road_



proposed demolition for new vehicular access

The culinary school and kitchen areas require associated service areas for the delivery of goods and equipment as well as the allowance for services such as gas deliveries and refuse collection. The busy nature of avenue 25 September, as well as the general parking congestion within the Baixa area make street delivery difficult. This necessitates the provision of a dedicated service alley allowing access to the site and facilities. The original arcade entrance to the Prędio Potts building from avenue Samora Machel, while allowing for access to the site, creates a convoluted route through the site, which would be unsuitable for large delivery vehicles. Looking at the larger block context, the large proportion of ruined and abandoned

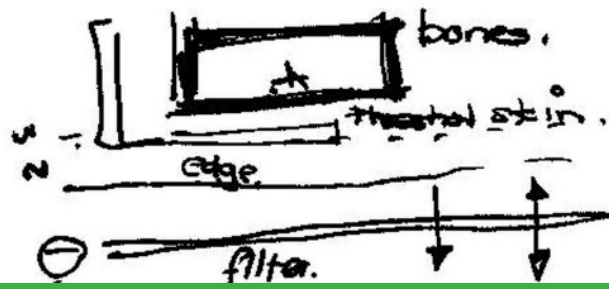
warehouse space as well as the pre-existing organic subdivision of blocks seen within the Maputo city grid provides an opportunity for an access road to be introduced running parallel to avenue Samora Machel, between avenue 25 September and avenue Zediquias Manganhela.

An analysis of existing street facades (illustration 132) was completed. Facades seen as contributing towards the heritage value of the urban block where maintained, with a small, single story warehouse being identified as a possible point of breakage. The building, seen in illustration 133, is largely abandoned with much of its building material having been removed following the 1990's fire.

ILLUS. 132 (TOP) Street elevation Avenue 25 September (Hart, 2011), ILLUS 133 Proposed demolition of building (Hart, 2011)

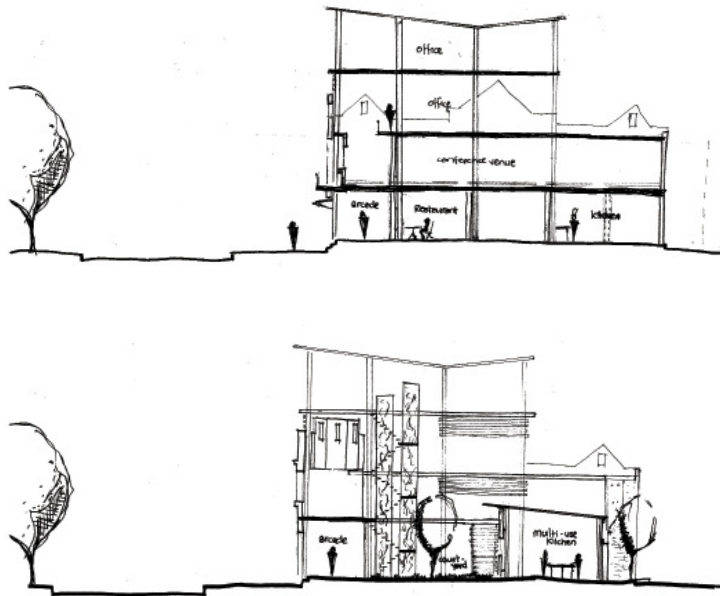
threshold exploration_





“A building cannot be a human building unless it is a complex of still smaller buildings or smaller parts which manifest its own internal social facts”

(Alexander, 1977; 469)



ILLUS. 134 (OPPOSITE) Threshold 1 from las Ramblas (Hart, 2011); ILLUS. 135 (OPPOSITE) Threshold 2 - historic shell (Hart, 2011); ILLUS. 136 (OPPOSITE) Threshold 3 - new intervention (Hart, 2011); ILLUS. 137 (OPPOSITE) Parti diagram (Hart, 2011); ILLUS. 138 Section A-A (Hart, 2011); ILLUS. 139 Section B-B (Hart, 2011)

The building is experienced from multiple angles within the Baixa, but perhaps the most important, is the experiencing of the building from the proposed pedestrian boulevard - las Ramblas. As a pedestrian moving along this green spine, a series of threshold spaces will be experienced, the first of which being the trees, which begin to act as a filter to the façade (illustration 134). As one moves off the boulevard, the experience of the historic façade becomes the second threshold of the building (illustration 135) and then finally as one moves through the edge created by the façade one experiences the new architectural insertion (illustration 136).

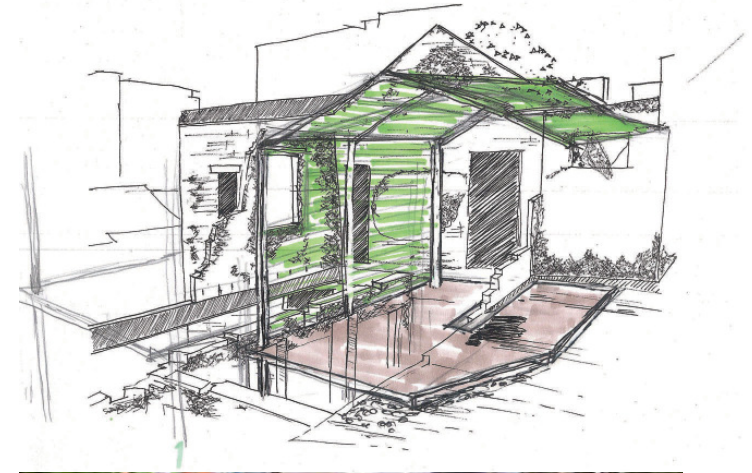
An analysis of heritage charters undertaken in chapter three of this dissertation established a set of guiding principles with regards to a new intervention within the ruin. It is the author’s opinion that the heritage significance lies in the method of construction as well as the stylistic importance of the façade of the building as an integral element within the Baixa urban fabric. As an object in the city, it is in strict juxtaposition with its surrounding contextual architectural styles and as such becomes a landmark building within the area. This juxtaposition of materials and styles will be re-interpreted into the conceptual development of the building.

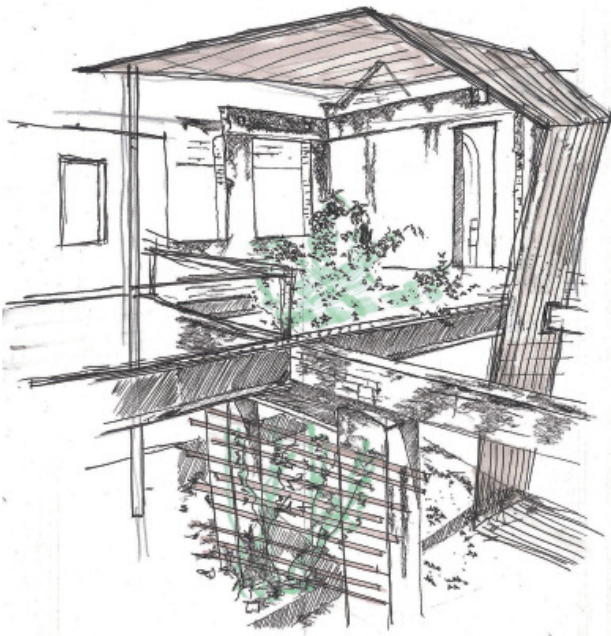
An interpretation of the existing building structure is expressed in the proposed steel framed, light weight insertion. This also facilitates the removability of the structure as outlined in the Burra charter.

The response to the emphasis of the corner was one of increased mass, to balance out the existing height created by the towers. The proposed 4 storey commercial element is therefore positioned at the most economically viable location of the site.

“A building cannot be a human building unless it is a complex of still smaller buildings or smaller parts which manifest its own internal social facts” (Alexander, 1977; 469) The creation of smaller pavilion like buildings within the greater whole of the ruin is a response not only to the exiting structural limitations of the site, but also in response to the intended inclusion of greened courtyard spaces as can presently be found within the building. The breaking up of internal spaces within the site, whether as built or natural rooms allows for the creation varying interactive spaces which can begin to suggest functions within the building as a complex. Alexander further states that positive outdoor spaces rely on a degree of enclosure in order to provide the occupant with a sense of security (1977, 522). In order to define the greened courtyard space within the proposed development as well as creating a more consistent edge to las ramblas boulevard, proposed bulk is also expanded to the north of the site into the open site. This height and language of this new intervention will be gained through an understanding of proportion and scale used within the Prédio Potts building. While a suggested massing for this addition can be seen in illustration 145, the final design has not been dealt with within the scope of this dissertation.

vegetated landscape_





“In a healthy town every family can grow vegetables for itself... it is a fundamental part of human life” (Alexander, 1977; 819). The envisaged gardens within the culinary school as well as the existing vegetation which has gradually overtaken the ruin play a large role in the conceptual development of the building. The Slow food movement embraces a principle using locally produced, seasonal and fresh produce within the kitchen environment. As urban dwellers become increasingly reliant on store brought food for survival, (Alexander, 1977, 820) the separation between food and its productivity has been amplified.

As a means of re-establishing this link, the vegetated gardens are envisaged as not only an educational tool, but also as a much needed greened urban retreat within the confines of the urban environment. In an urban environment the limited productive land available encourages the use of vertical planting to maximise the density of production.

The creation of a hard urban edge responding to the ramblas is offset with the introduction of greened courtyard space to the west of the building. This creates tension between the organic natures of the

ILLUS. 140 (OPPOSITE) Urban edge condition (Hart, 2011), ILLUS 141 (OPPOSITE) Salad bar (Velazquez, 2010), ILLUS. 142 (OPPOSITE) Vegetated walls (Velazquez, 2010), ILLUS. 143 Conceptual diagrams (Hart, 2011), ILLUS. 144 Conceptual diagrams (Hart, 2011), ILLUS. 145 Proposed addition to create urban edge along Samora Machel (Hart, 2011)

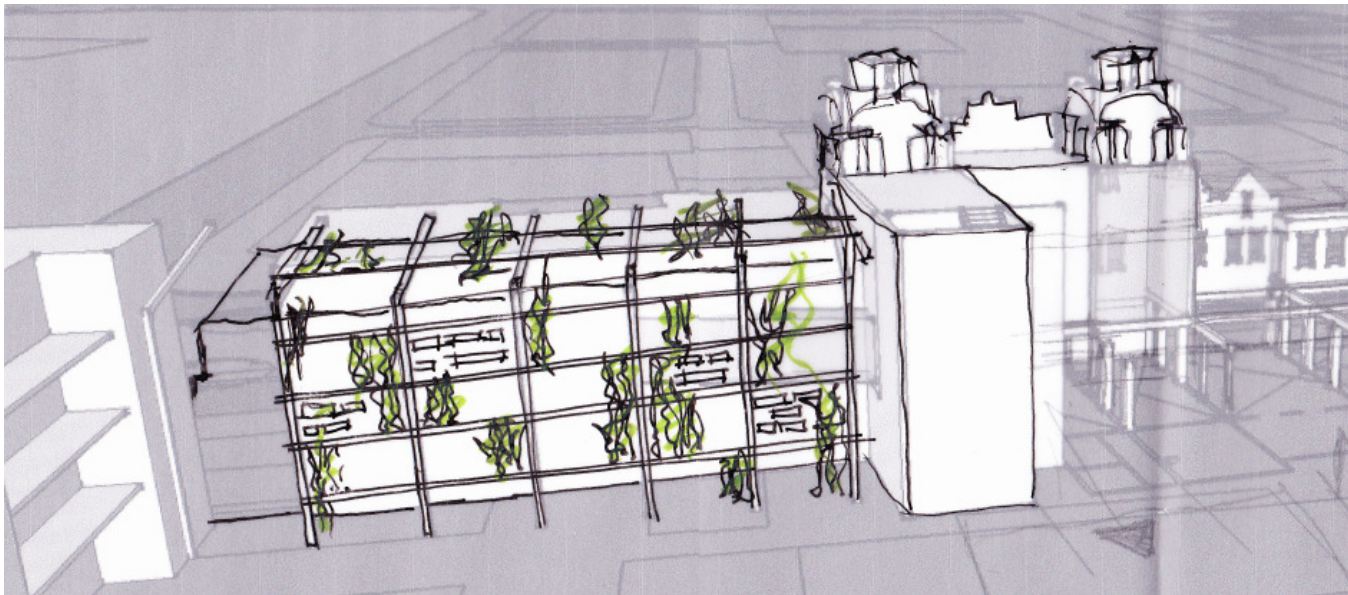




vegetated in juxtaposition to the rigid geometry of the building and began to allow for the introduction of planted screens in and around the building and site onto which the vertical planting elements can be attached.

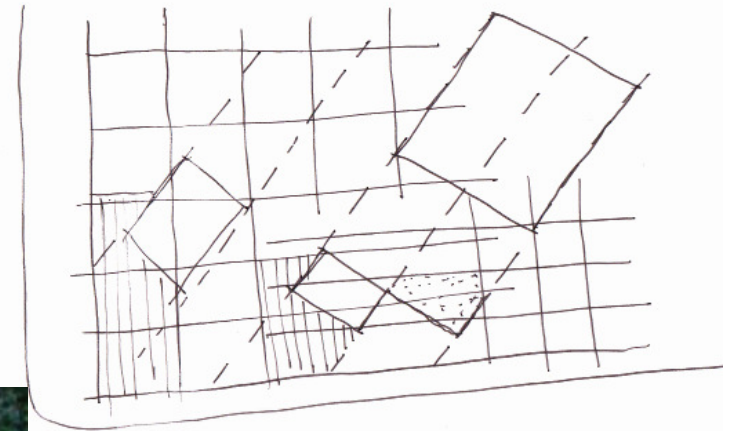
The initial, very freeform and organic nature of these elements which twisted and pierced through the ruin, became distilled into simpler, more controlled screening elements and productive areas.

ILLUS. 146 (OPPOSITE): artistic impression Predio Potts (Hart, 2011), **ILLUS 147** Greened planting element (Hart, 2011), **ILLUS. 148** Vegetated walls (Velazquez, 2010), **ILLUS. 149 (OPPOSITE)** Conceptual design September 2011 (Hart, 2011),





grid juxtaposition_

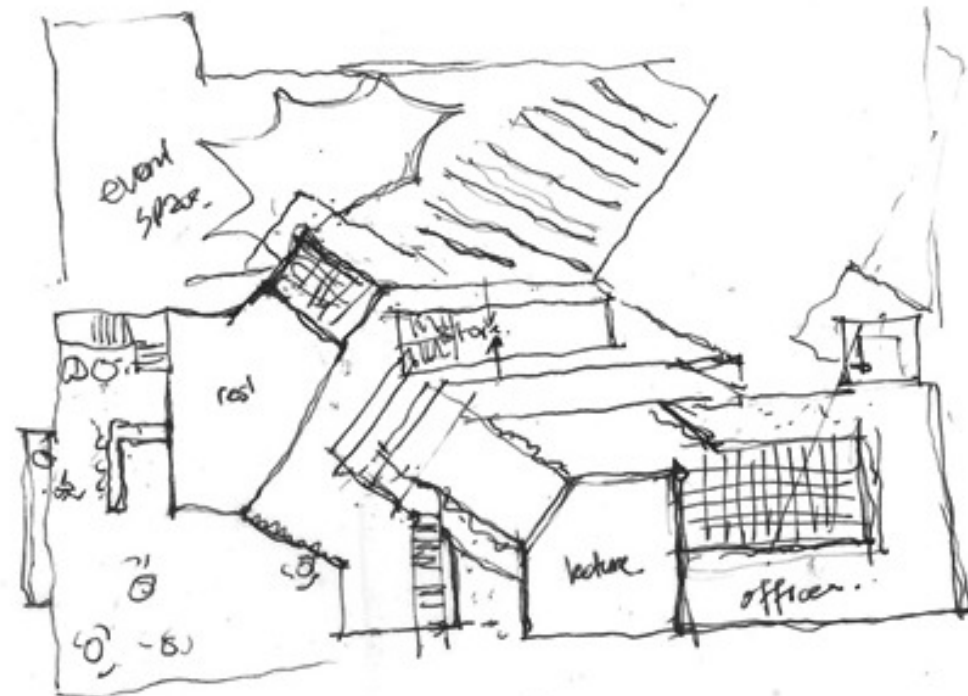
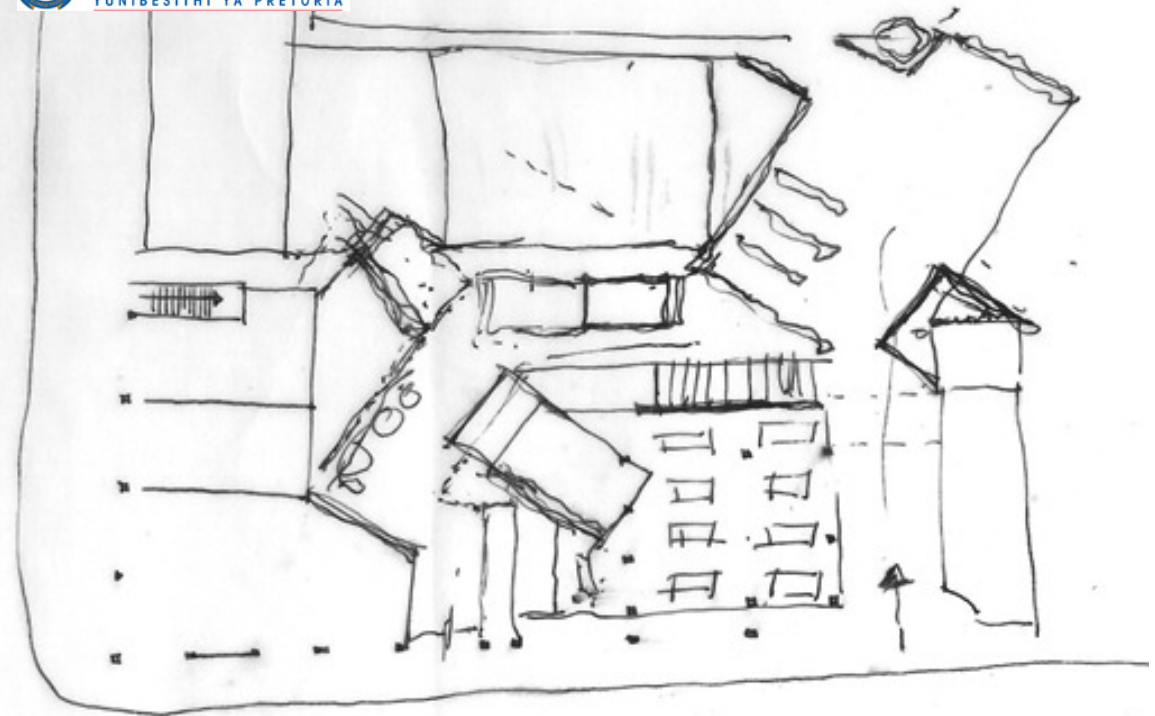


In order to maximise the efficiency of the productive spaces, solar orientation is taken into consideration. The Baixa city grid lies at an angle of 30° east of north. In order to best utilise the site for productive landscapes, a shift in the orientation of the vegetated spaces was made so that these areas could take advantage of northern light. In order to accommodate the two contrasting geometries a series of grids was introduced. One conforms to urban street patterns, and one, in juxtaposition, aligning to optimum planting orientation. This facilitates the introduction of productive courtyards which can begin to respond to the shift in grid by carving out space between the building masses.

While the introduction of vertical planting facilitates the connection between internal functions and external vegetation, two major horizontal productive vegetated areas can be found defining themselves within the site. The ground floor area, being the central linking square between culinary school and

the proposed housing and commercial element located on the northern edge of the block. The floor plane is broken up into a series of smaller courtyards which can begin to introduce linking social spaces between the kitchens. The central courtyard, which will house the more productive vegetable growing areas, can be closed off at night to ensure security of the produce, with the smaller courtyards being planted with herbs and spices. The secondary productive vegetated area is located on the roof of the main cooking kitchen, on the western edge of the site. This building is the only completely new addition within the site development and as such the vegetated roof serves to offset the loss of ground floor plantable area. A series of planters with drip irrigation systems will be housed on the roof in which fresh produce from within the building can be grown.

ILLUS. 150 (OPPOSITE) System of grids (Hart, 2011), ILLUS 151 (OPPOSITE) Carving out of building mass (Hart, 2011), ILLUS. 152 Ground floor conceptual diagram (Hart, 2011), ILLUS. 153 First floor conceptual diagram (Hart, 2011),



architecture as insertion_



ILLUS. 154 (OPPOSITE) conceptual language of insertion flat roof (Hart, 2011), **ILLUS. 155 (OPPOSITE)** conceptual language of insertion asymmetric pitch roof (Hart, 2011), **ILLUS. 156 (OPPOSITE)** conceptual language of insertion concrete flat roof (Hart, 2011), **ILLUS. 157 (OPPOSITE)** Impression of architectural insertion (Hart, 2011), **ILLUS. 158** conceptual rendering of new insertion (Hart, 2011), **ILLUS. 159** expression of differing functional boxes within ruin (Hart, 2011).



Building within the remains of the Prédio Potts building has allowed the expression of the new intervention to be one of an insertion within the historic shell. The application of the heritage charter principles, the premise of removability where possible, as well as the physical built fabric remaining on site, has allowed for the creation of smaller insertions which are positioned around the remaining structural members.

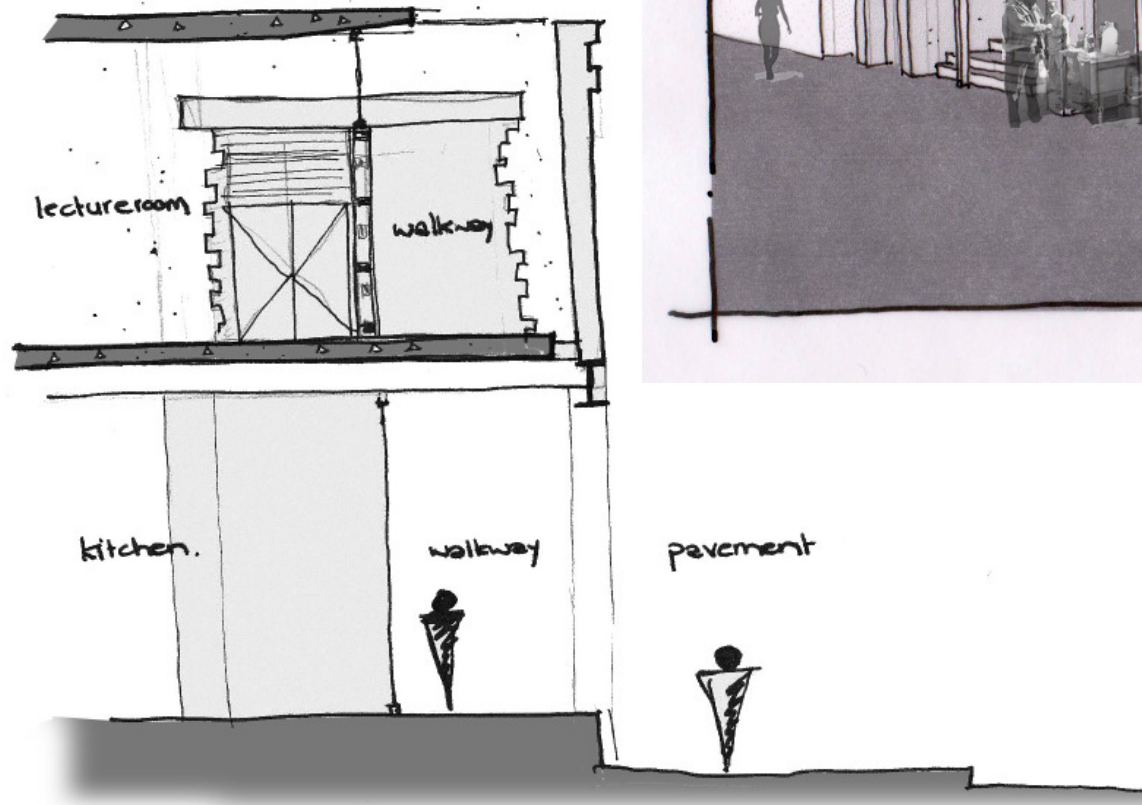


As part of the expression of materiality, the degradation and natural aging of the ruin becomes integral to the increasing fragility of the architecture. The notion of allowing for the ruin to continue degrading around the new intervention to a large degree is strengthened with the allowance for the proposed intervention to have a completely independent structural system. The structure will become a series of boxes which begin to interact with the historical structure and express an interpretation of massing that would once have been present in the building.

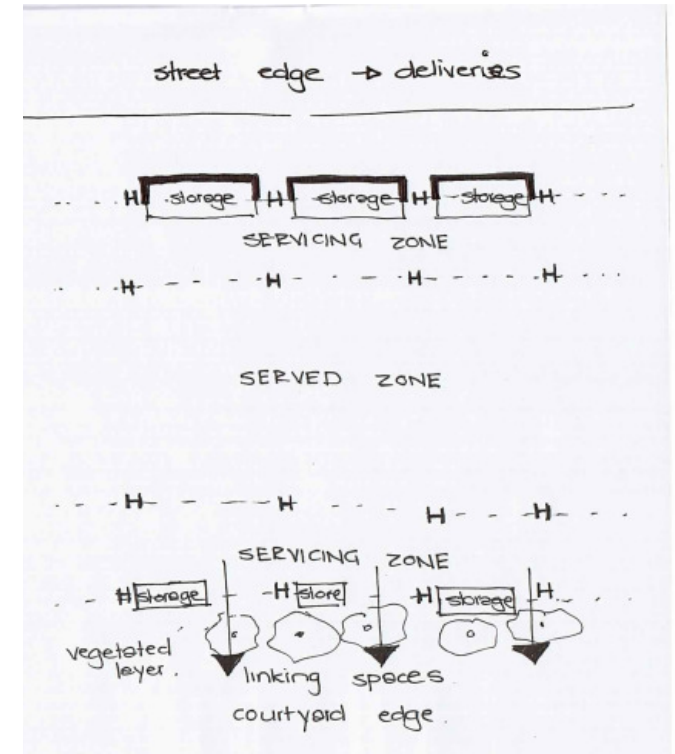
As seen in the interventions analysed within the Castelvécchio and Banca Popolare projects (see chapter 5), Scarpa's use of layering of materials, using both a direct material layering and the creation of layered components will allow for the juxtaposition of old and new elements within the building. The re-interpretation of materiality and spatial qualities once present in the building as well as the expression of old and new as separate layers upon the historical fabric of the building will allow the narrative of the building to be expressed.

street interfaces_

ILLUS. 160 Threshold exploration (Hart, 2011), ILLUS. 161 Population of street thresholds (Hart, 2011), ILLUS. 162 (OPPOSITE) Street elevation of proposed cooking Kitchen (Hart, 2011), ILLUS. 163 (OPPOSITE) Diagrammatic layout of major cooking kitchen (Hart, 2011),

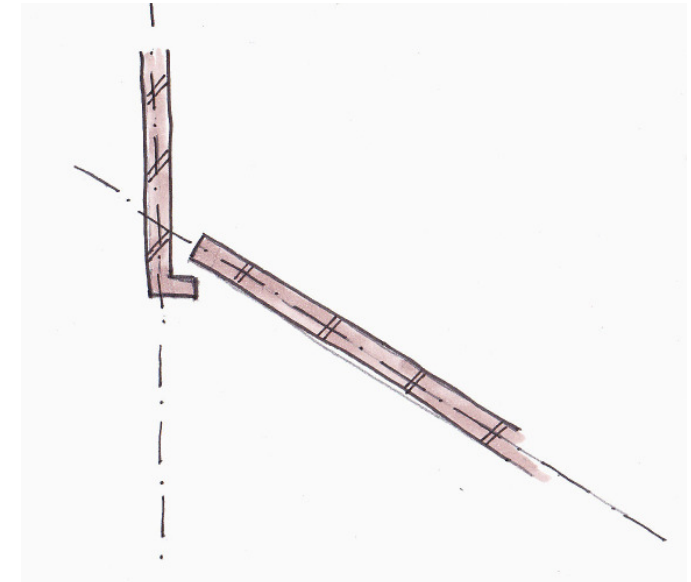
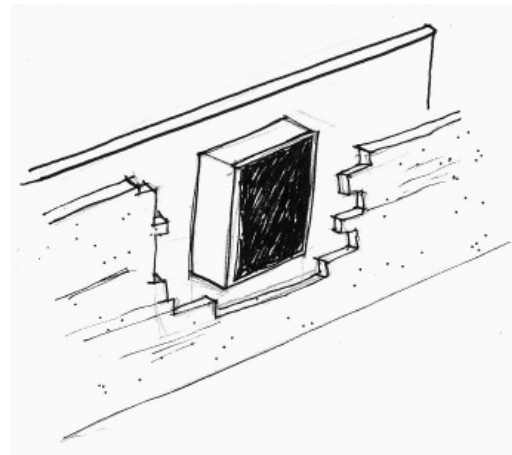
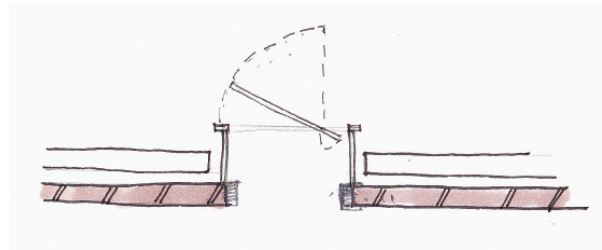
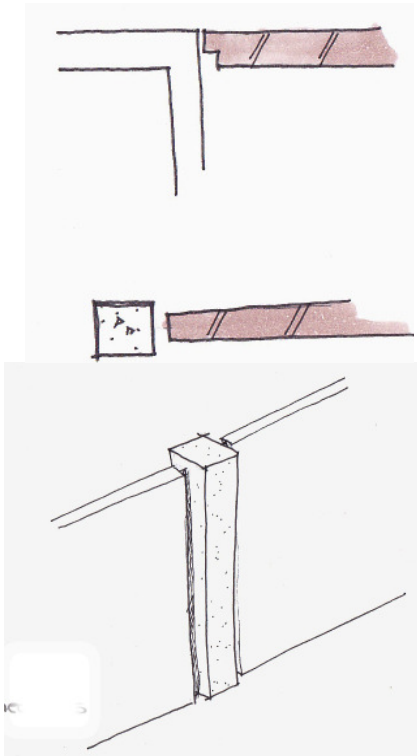


The strong informal trade within the Baixa area creates a vibrant and chaotic pavement culture (Hart, 2011). The strong link between formal and informal retail provides the unique opportunity for the layering of formalities between street and shop. As a manner of increasing the threshold levels between the street and building, the new shop fronts are pulled away from the strong historical façade element. Stepped threshold spaces become areas for informal vendors or urban users to occupy.



The proposed kitchen on the western edge of the site, re-interprets the language of threshold developed in the intervention within the existing building. The street edge requires a more stereotomic language due to security and storage requirements. The walls have been expressed as thick recessed masses, which break up the exterior street façade, while the large clerestory windows above allow important north lighting into the building. The separation of served and servant spaces is made to allow for circulation and storage areas separated from cooking surfaces. The gradual change in tectonic from the stereotomic nature at the street edge to a lighter tectonic relating to the inner vegetated courtyards allows for the introduction of planter boxes and screen elements into the courtyard façade.

design guidelines_



material connections_

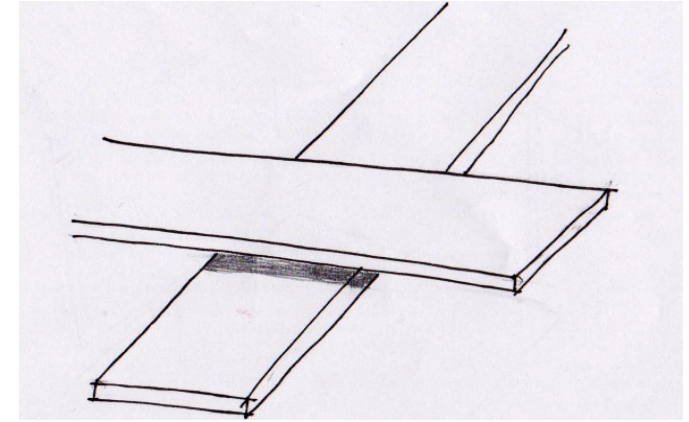
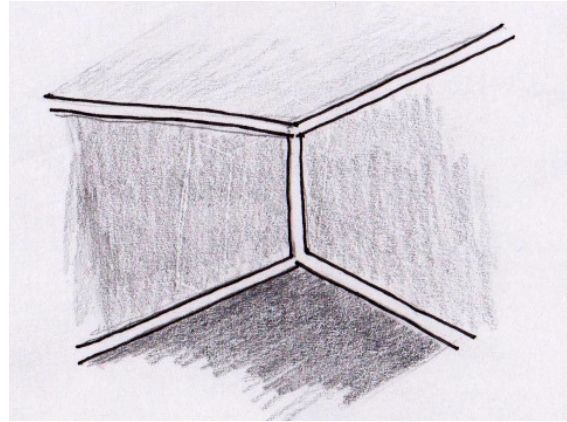
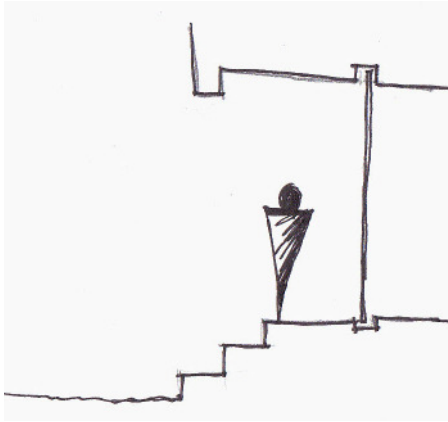
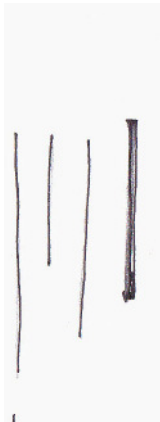
separation of materials at connections by means of a gap.

projecting components_

old and new layers separated in plane, with elements which bridge the gap between and become integral to each others understanding as a single component.

intersection grid structures_

connections at points of intersection become expressed.



layered thresholds_

facade edge is pulled away from existing providing for informal retail opportunities and places of repose in stepped arcades.

seperation of floor, wall and roof planes_

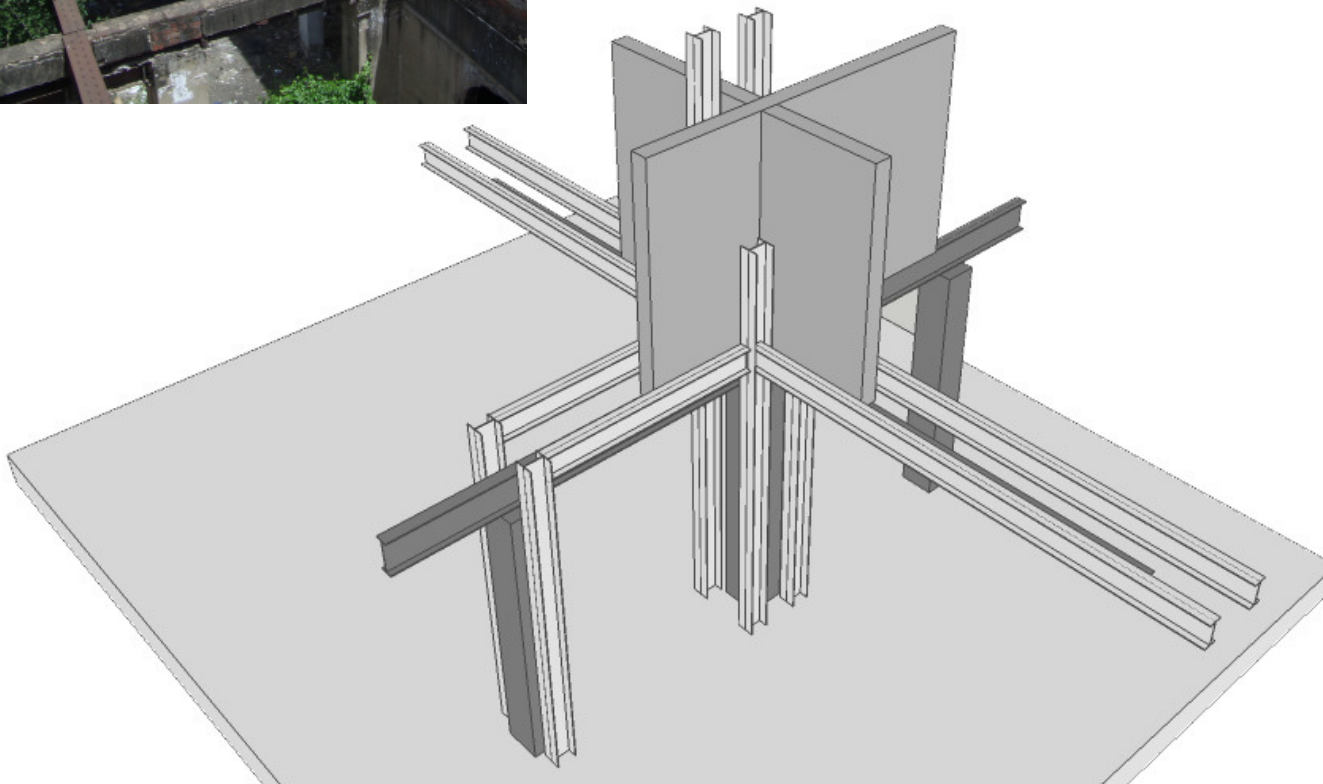
seperation of planes allows for the expression of materiality as well as the manipulation of scale and proportion.

overlapping planes_

intersection horizontal planes are expressed on differing layers to form a spatial heirachy.



structural additions_



As stated earlier in this dissertation, the exposed steel structural members within the building have been assumed not to be structurally sound. While the members do not show deformation following the fire, the new structure will have a completely independent structural system. With the majority of existing structure being kept as an object of significance within the building narrative, the new structure must thus be built around the old. This is achieved with the placement of steel H-sections on either side of the existing columns, with the new I beams being run over the top of the existing structure (see illustration 124). The slight separation of the elements allows for the understanding of the stratification of structural narratives.

vegetated roof detail_

In order to achieve an uninterrupted floor area within the served areas of the kitchen, the steel H-columns are placed on the outside of the space. This increased span necessitates the increase in member size of the roof structure. In addition, the services required to run in the ceiling void such as extractions systems become displaced below the roof structure to accommodate for the spanning beams in each direction. In order to accommodate the overhead services better as well as facilitate the use of the roof terrace for a productive area, a girder truss system is employed, with the composite steel deck flooring system being suspended below. This accommodates not only the span and services required inside the building, but also becomes the primary structure for the planter boxes to be placed on roof level.

Fibre cement planter boxes are supported above the truss on a secondary frame consisting of 70x70x6mm steel angles and supporting struts.



design perspectives_

