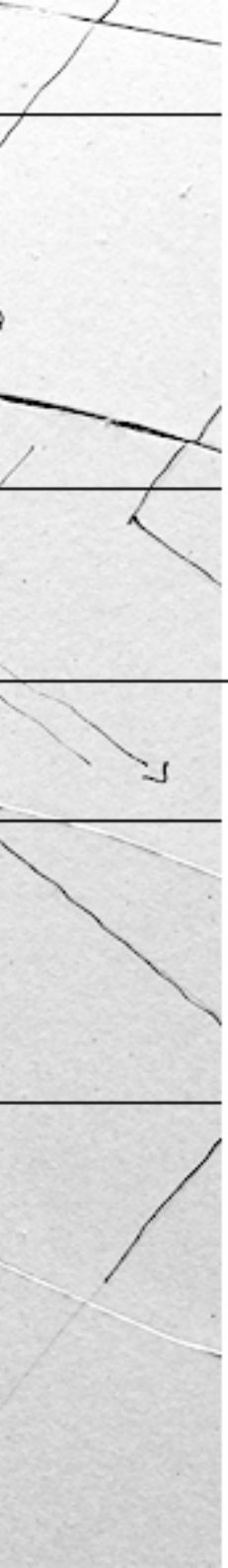
Fig 6.0 Model in June, Author (2016)

6 Design Development

Fig 6.1 Programmatic layout 1, Author (April 2016)



6.1 Iterations

First Design Attempt

Programmatic intent:

The first design attempt explores the complexity of Moreleta Park surroundings while continuing to explore the potential impact the project can have programmatically within its context in order to try and create a more socially cohesive environment.

In response to theory by Hertzberger (2008) and Alexander (1971), who encourage introducing programmes that help integrate educational facilities into the community , the first step was to identify current practices in the surrounding area such as hospitality training and business opportunities (discussed in chapter 4) which can be used as a catalyst that helps bind a community activity with the educational facility.

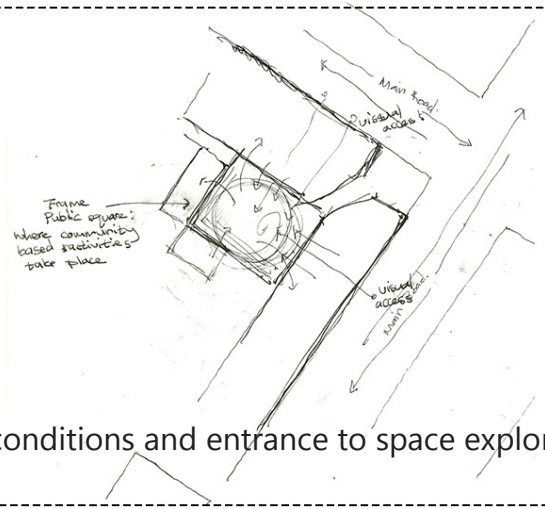
Critique:

Programmatically a high school was considered at first, however after discussions held with educators from Pure Hope Foundation and theory on education by Hertzberger (2008) and Alexander (1971) it was decided that vocational education should rather be considered. A vocational facility is able to offer resources to teenagers and the community, thus supporting a paradigm shift in educational thinking. Supporting vocational education also helps strengthen an active network in place at the Moreleta Park church focused on skills development and training.

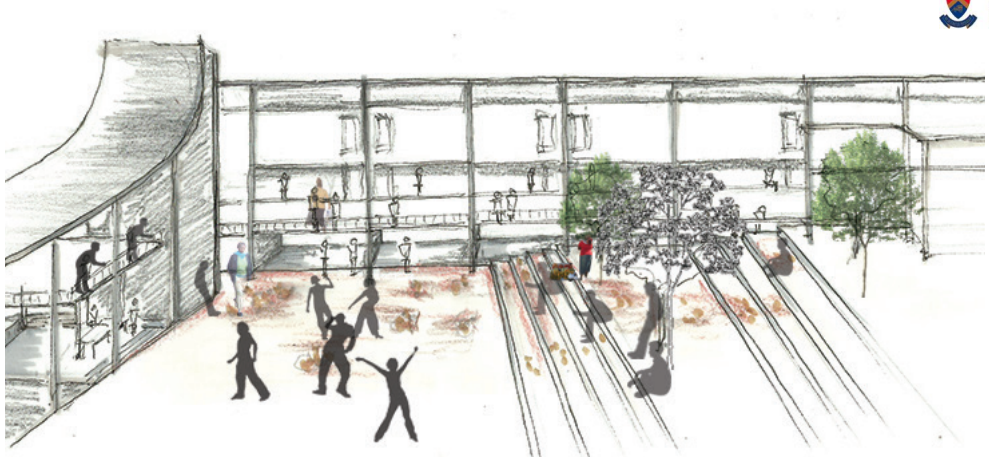
Fig 6.2 Parti diagram 1, Author (April 2016)

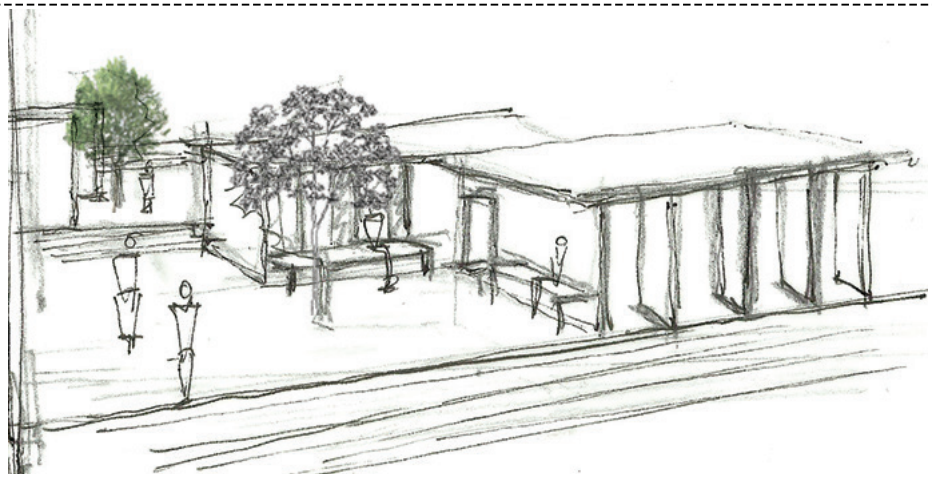
Meeting spaces as a place of common ground

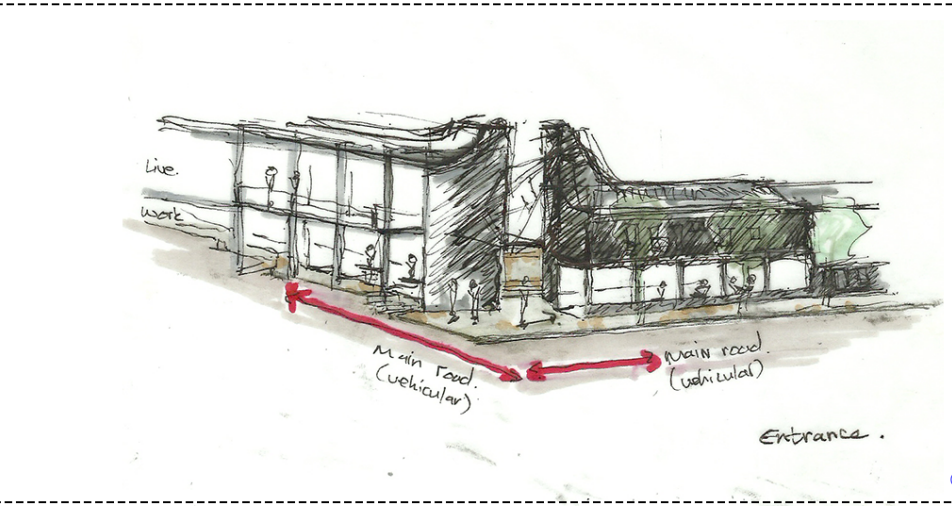
Building frames in-between space



Edge conditions and entrance to space explored







Architectural intent:

The first design proposal was an intuitive reaction to initial theory by Hertzberger (2008). It responds to the notion that public meeting spaces can act as a catalyst in order to find common ground between the users of the building and the surrounding community.

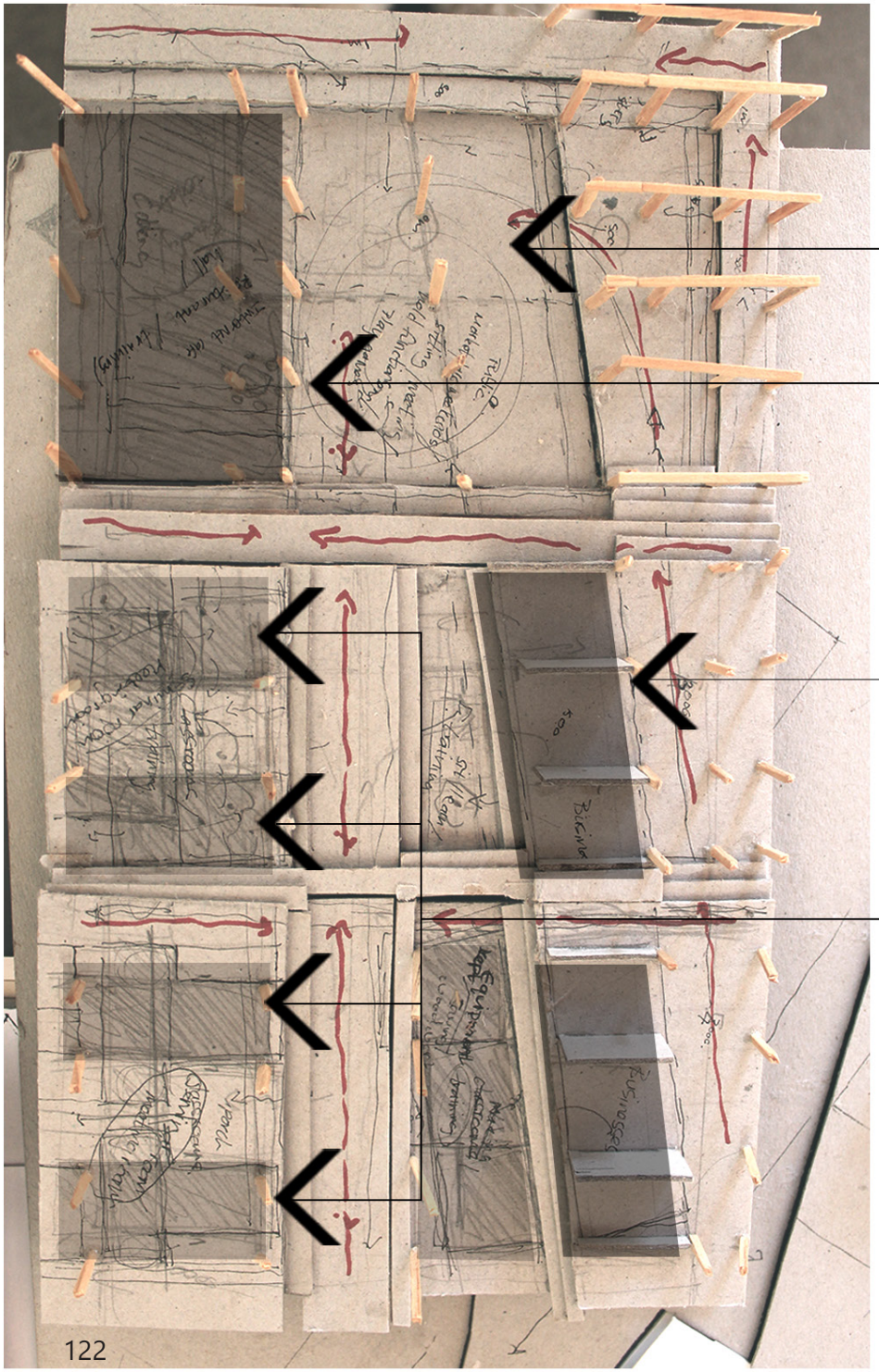
The model begins to explore how the in-between space can be framed by walls and columns, level differences and thresholds thus spatially exploring how a building frames negative space. The model also investigates how the edge conditions can be activated in order to draw people onto the site.

Critique:

Architecturally this proposal explores the spatial development of the plan and struggles to interpret the architectural intent through form. The conceptual design proposal was presented to external examiners in April and the critique was as follows:

- The architectural language needs to be investigated further.
- The access and movement of the users through the site can be better considered and defined.
- The levels of thresholds from public to private space needs to be better considered.
- Better resolution of the surrounding urban fabric will help ground the project within its context. Therefore circulation and access routes should be more rigorously determined.

Fig 6.3 Sketches of proposal 1, Author (April 2016)



Central communal gathering space

Community vocational Facility: A resource centre is propsed offering access to a library, meeting rooms, study spaces and a computer lab

Public local amenities: hospitality training and food business

Local businesses and accommodation:
The urban framework and supportive theory suggests that the CVF be integrated with local functions and therefore live/ work units are proposed along the main boulevard.

Community vocational Facility:
Skills and development training

Fig 6.4 Programmatic layout 2, Author (May 2016)

First Iteration

The development of the stated hypothesis begins to take shape as supportive theory and precedent studies are concluded on. Therefore the remainder of the iterations are looked at through the lens of identifying how spaces of interaction, urban conditions and multifunctionality of the spaces can be interpreted programmatically and architecturally. These principles, used to evaluate the project, are founded on the programmatic and architectural conclusions made previously in the dissertation as they encourage how a citizenship approach to education can be achieved spatially.

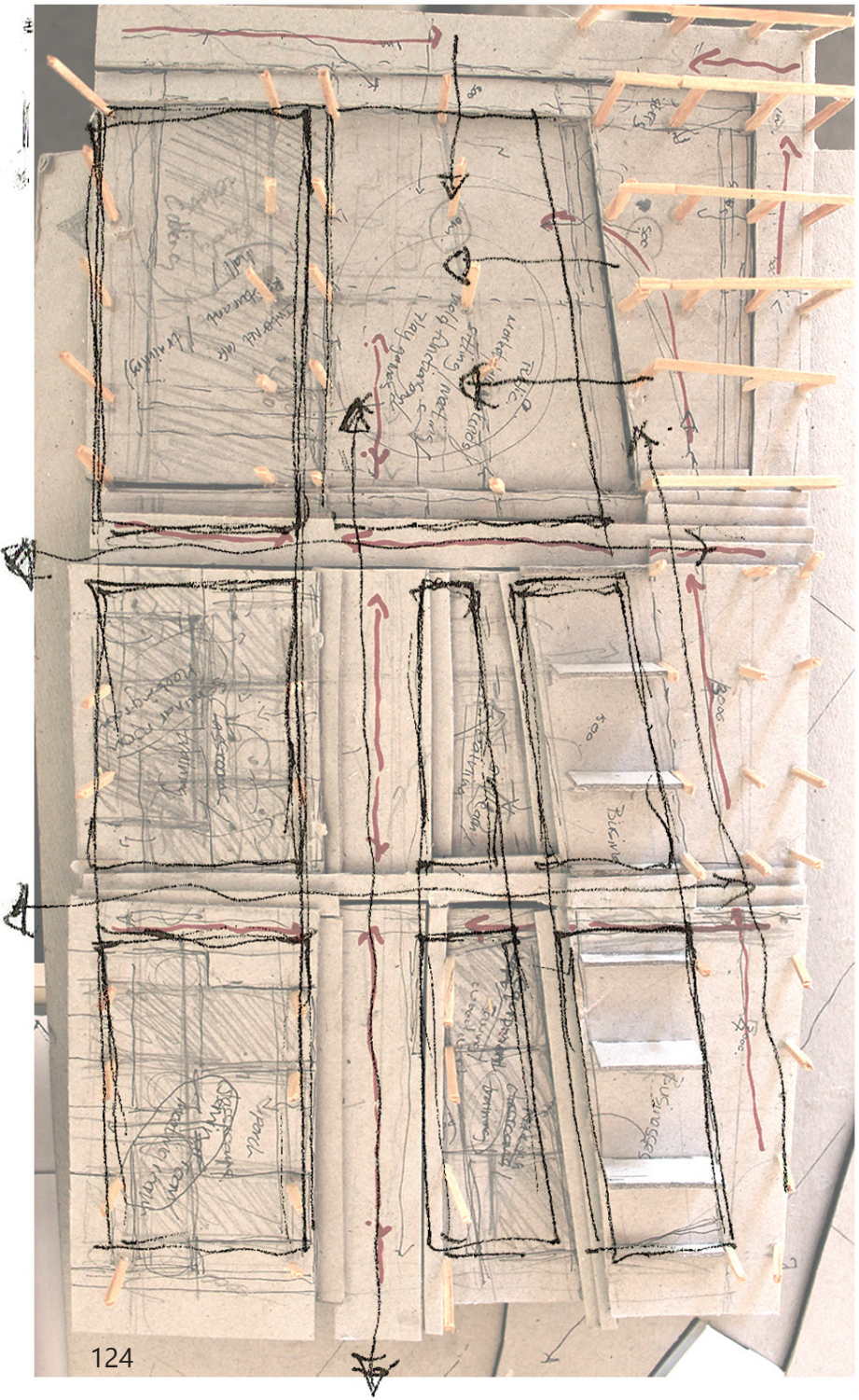
Programmatic intent:

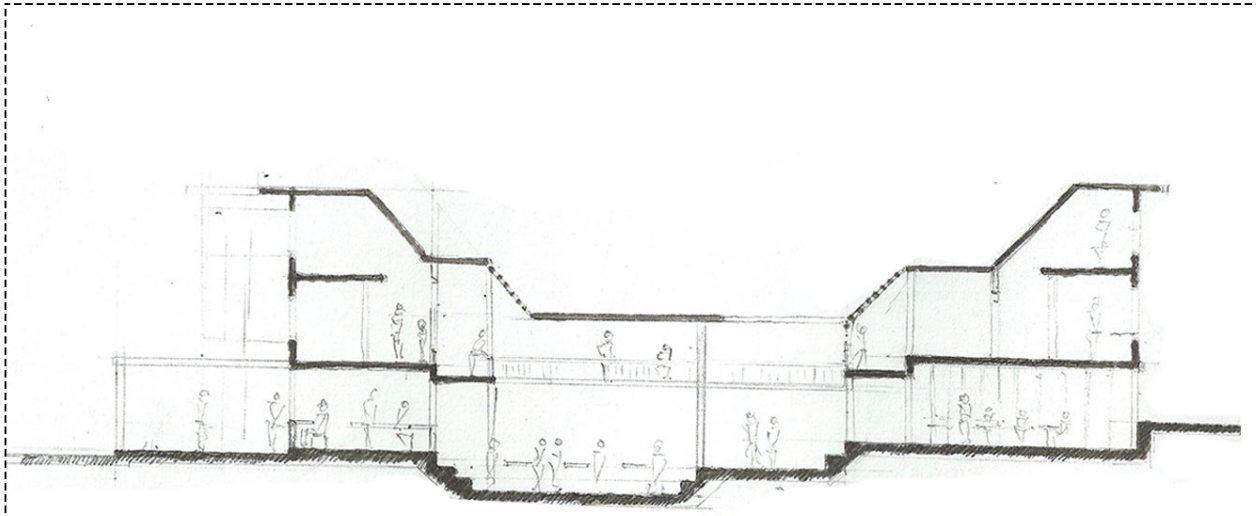
Urban conditions:
This iteration explores further the programmatic potential of a CVF as identified in chapter 2. Existing skills development and training courses are identified at the Moreleta Park church becoming the main programmatic drivers of the CVF. In response to the programmatic change of focus, this iteration attempts to understand the individual programme requirements and the potential this has spatially.

Critique:

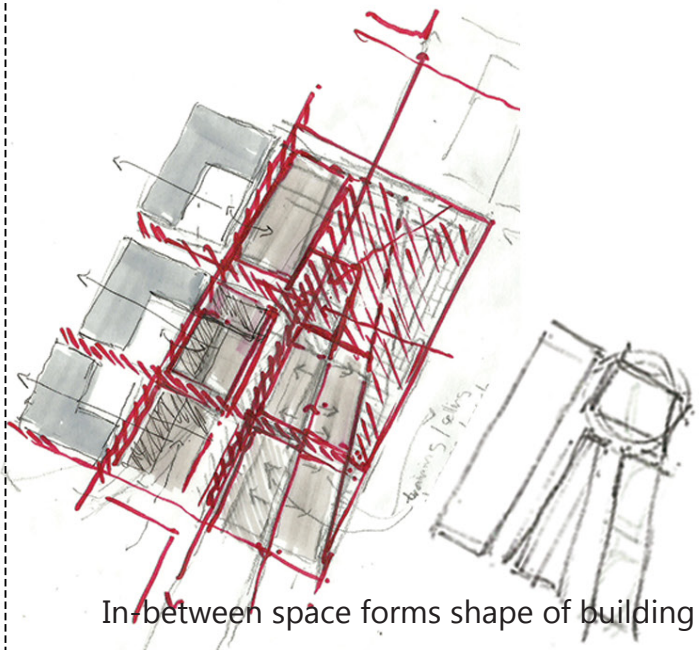
Multifunctionality:
The relationship between programme and the spatial function can be better resolved in order to create spaces that can be used for various functions.

Fig 6.5 Photo of model, proposal 2, Author (May 2016)

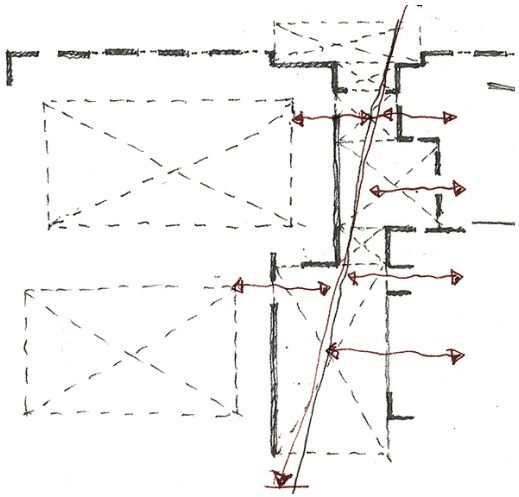




Roof as a defining element

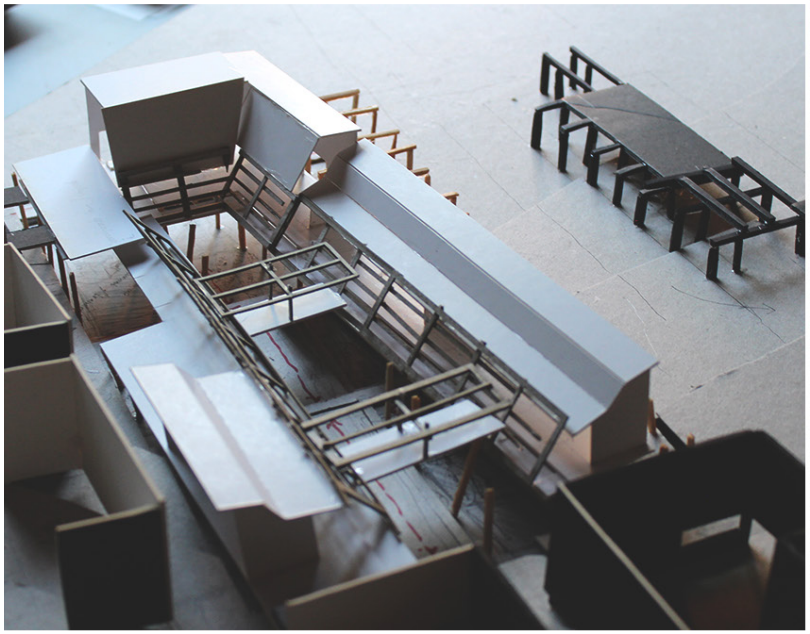


In-between space forms shape of building



Usasazo Secondary school layout

Fig 6.6 Parti diagram 2, Author (May 2016)



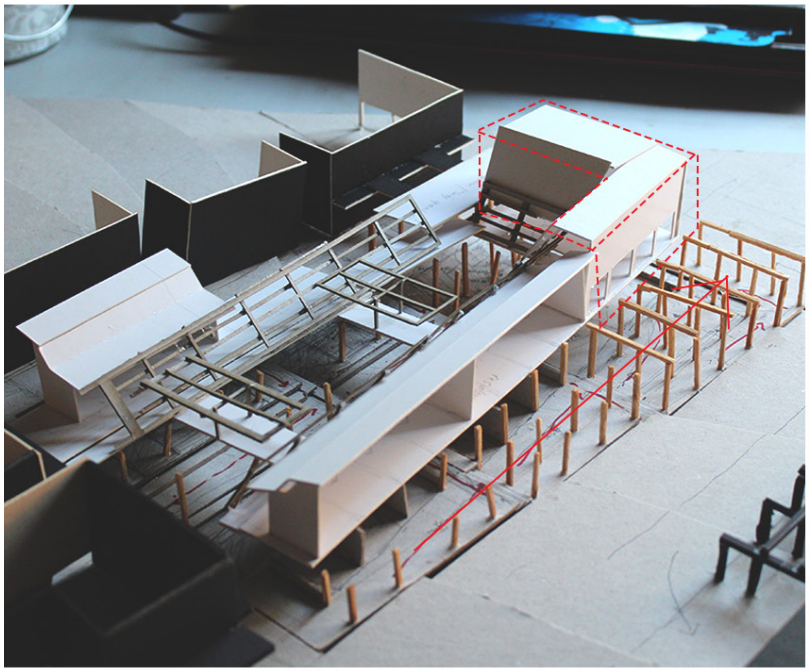


Fig 6.7 Sketches and photos of model, proposal 2, Author (May 2016)

Architectural language:
A rudimentary approach to this iteration was taken as the architectural intent, as discussed in chapter 3 of this dissertation, was still being explored and discovered. This proposal explores how the roof can become a defining element. The roof is interpreted as an element which moulds and defines spaces where interaction can take place between people which relates back to theory on an *extended school* approach (Hertzberger's 2008).

Spaces of interaction:
This iteration, rather than exploring how a building shapes space, explores the potential in-between space has in framing and informing the shape of the building in an attempt to create as many points where interaction can take place. This approach to space making was highlighted in a precedent analysed in chapter 3 by Noero Wolff Architects. The Usasazo Secondary school layout is informed by the in-between space encouraging an accessible environment where paths intersect with one another in order to create as many points of interaction between people as possible.

Urban conditions:
Specifically the building's edge condition facing the main boulevard is explored as this is an important urban edge that needs to draw people onto the site. In response to Gehl's (2010) book on *cities for people* the urban edge is directed at an angle which pulls the threshold of the building back, helping direct users into a central public space . The corner, where the two main streets intersect, becomes an important space as architecturally this can serve as a landmark within the context.

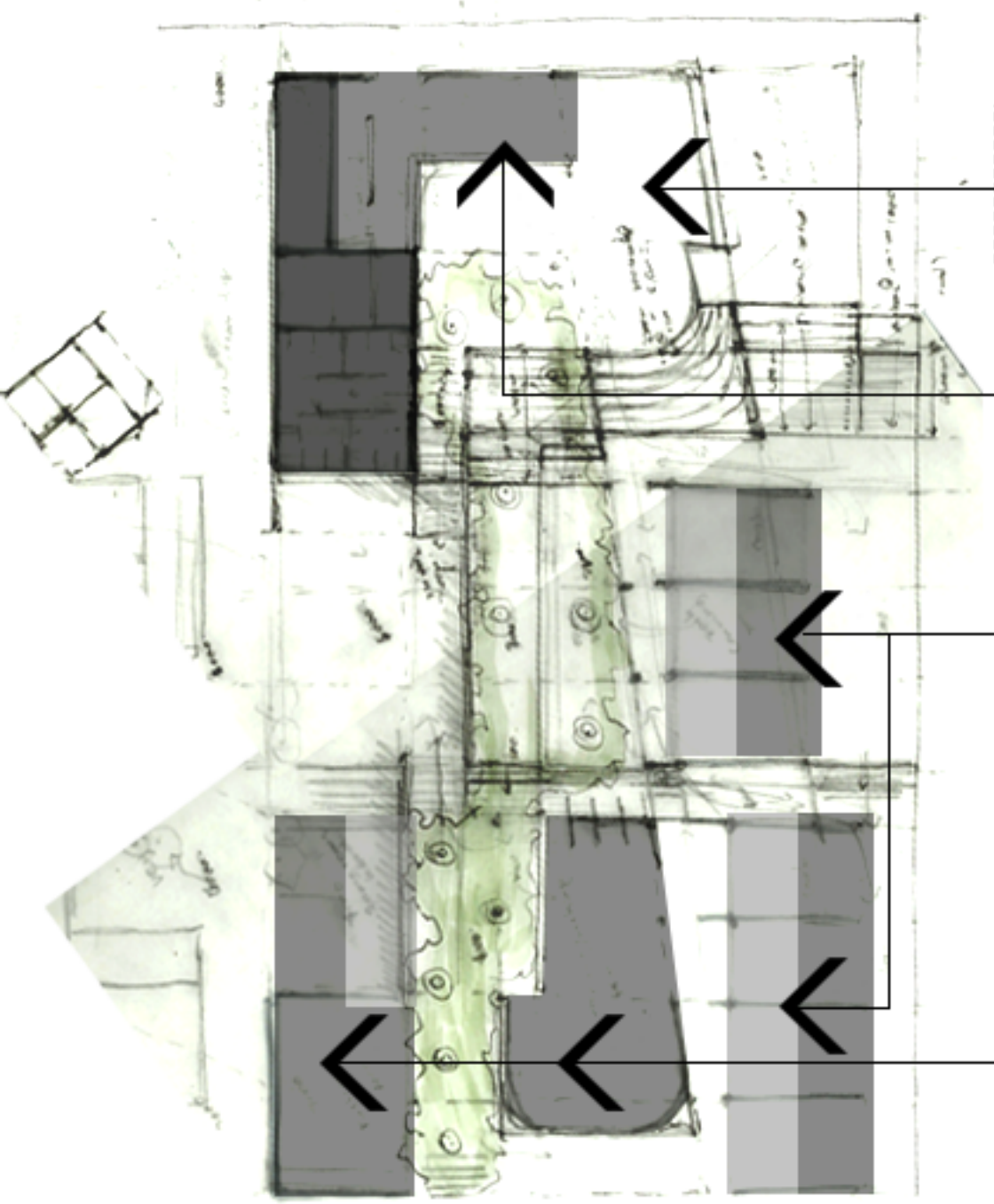
Critique:

Architectural language:
The form and language the building portrays needs to be explored further. The roof as a defining element is challenged by theory of Gehl's (2010) which highlights the potential the facade can play in activating the urban edge conditions.

Spaces of interaction:
The in-between conditions created are too similar in form and shape. There is no hierarchy or elements that successfully define the spaces differently.

Urban conditions:
The facade of the edge condition facing the main road is harsh and uncomfortable as the pergola structure meets the facade.

Multifunctionality:
Spatially the programmes result in creating spaces which aren't used for various functions causing the spaces to become less active. The street is isolated and acts purely as a form of circulation from which the programm



Central communal gathering space

Community vocational Facility: A resource centre is propsed offering access to a library, meeting rooms, study spaces and a computer lab

Public local amenities: hospitality training and food business

Storage and service cores

Local businesses/ workshops and accommodation:
Live/ work units are proposed along the main boulevard. The businesses can be used as workshop areas allowing the spaces to be easlity adapted.

Community vocational Facility:
An artisans industry and training space which consist of theoretical and practical training space

Fig 6.8 Programmatic layout 3, Author (June 2016)

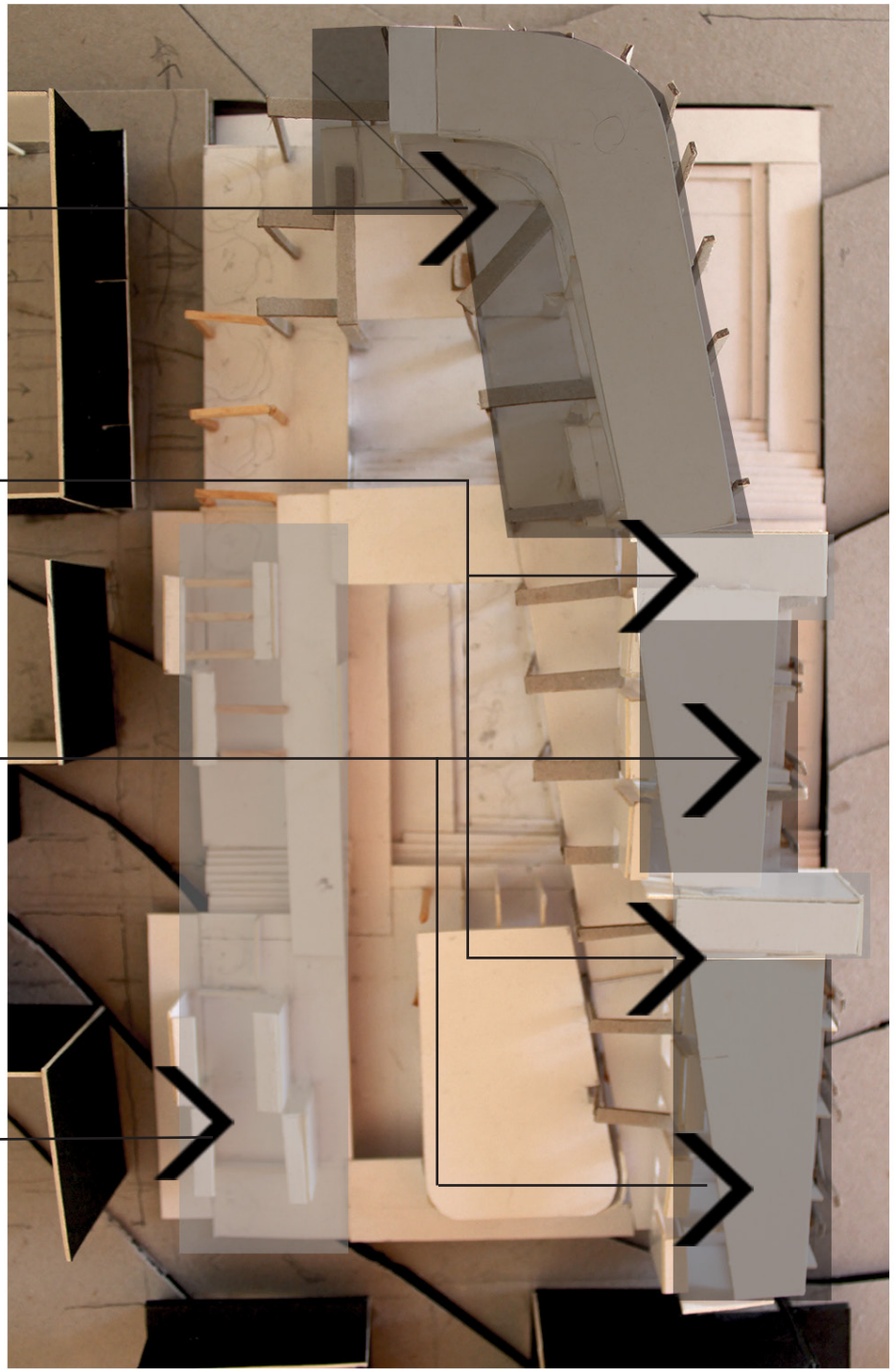
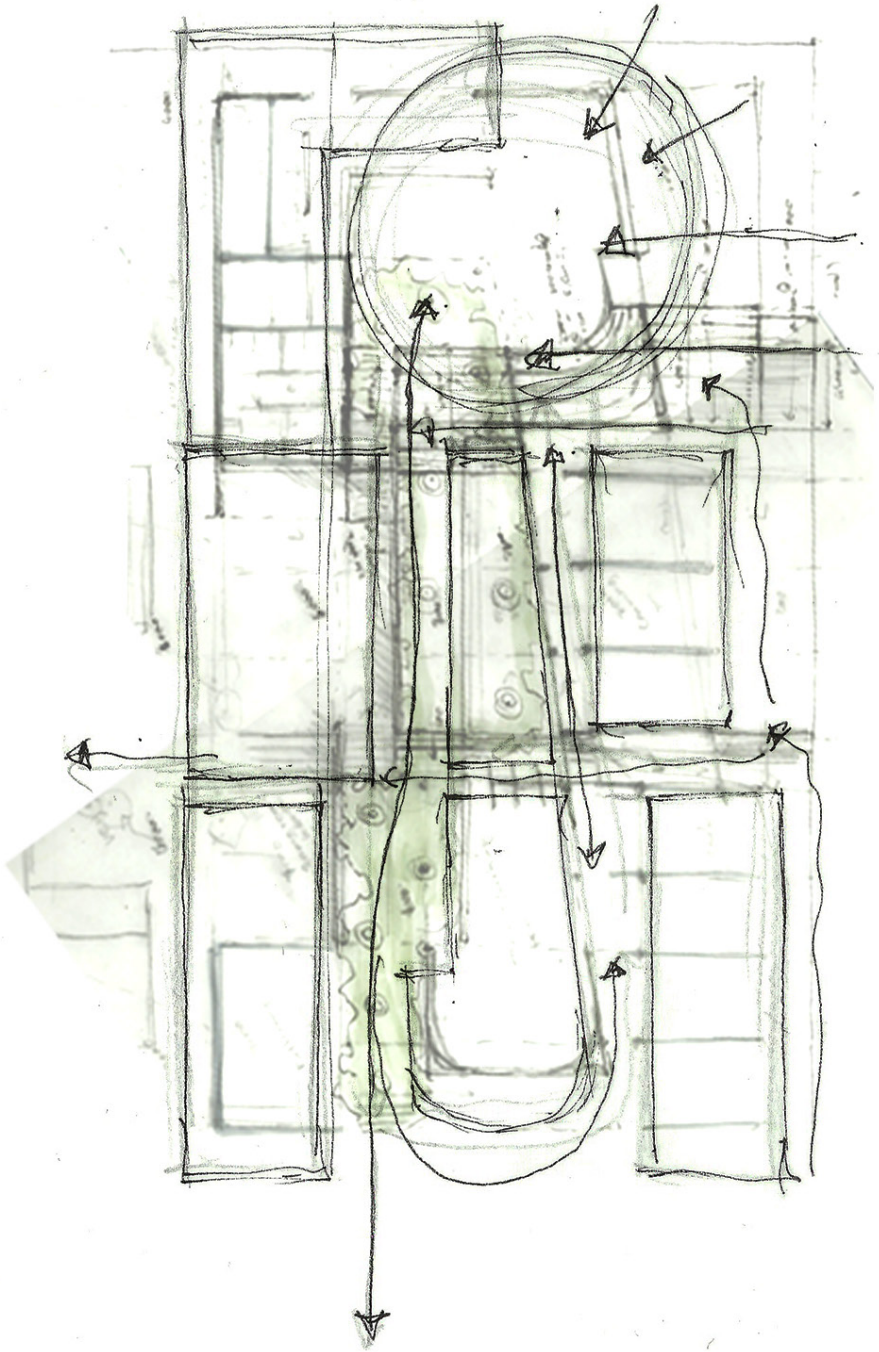


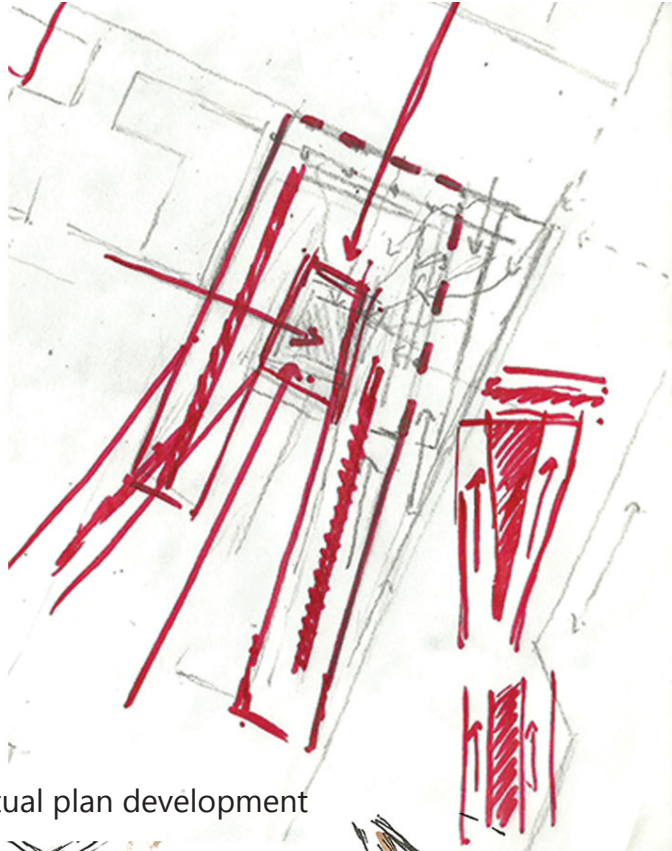
Fig 6.9 Photo of model, proposal 3, Author (June 2016)

Second Iteration

Programmatic intent:

Multifunctionality:
As identified in the second iteration the programme needs to become more adaptable in function. This need for adaptable space is supported by theory and precedents discussed and analysed in chapter 2 which suggests that the constant use of the spaces for different purposes will help ensure that the space is kept alive with activity.





Conceptual plan development

Romania School section showing level change

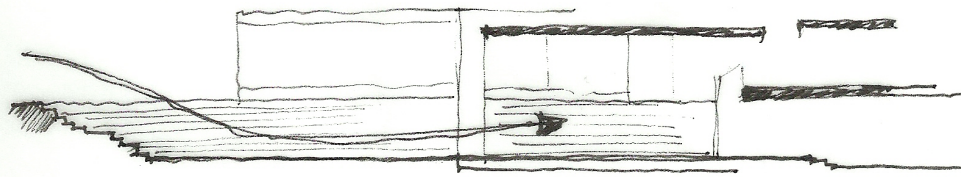
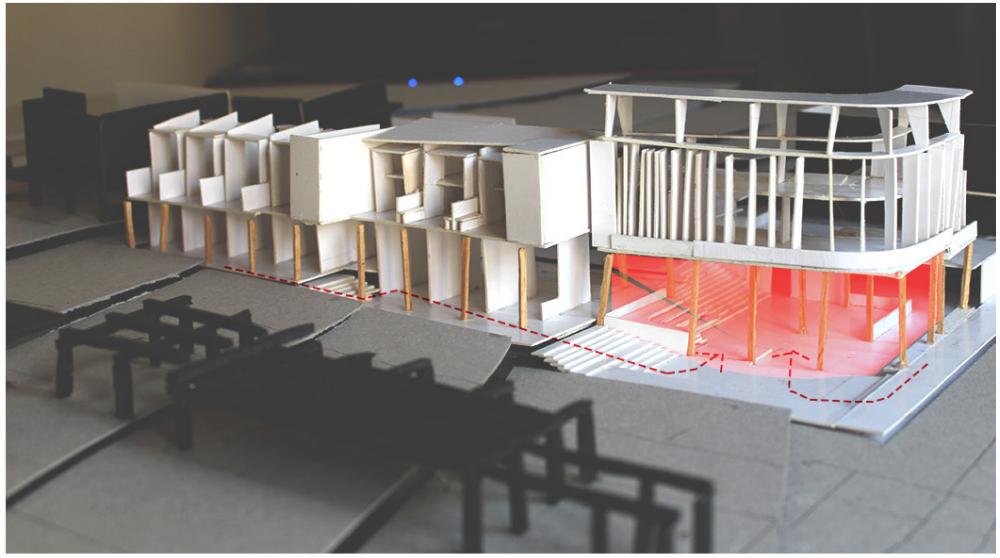


Fig 6.10 Parti diagram 3, Author (June 2016)



Edge conditions, facade as defining element

Fig 6.11 Sketches and photos of model, proposal 3, Author (June 2016)

Architectural language:
In support of considering the facade of the building as a defining element, a relation is drawn to Lefebvre's (1987) theory on the production of space. Lefebvre (1987) suggests that people shape space naturally, socially and simply by how they use it every day. It is then intended that the architectural form explored defines space and programme well not limiting the extent to which the structure can be inhabited, changed and appropriated by the users. Lefebvre's (1987) theory of how space can be perceived supports the notion of the facility as a microcosm of society where people are able to socially interact with one another in society.

Spaces of interaction:
The second iteration is an amalgamation of the lessons learnt from the previous iterations. The in-between space both defines and is defined by the built form. This strikes a good balance between the formally programmed spaces and the in-between space where informal everyday activities and interactions between the users take place. This approach to form and space is influenced by the architectural intent and precedents analysed in chapter 3, specifically the Romania school by Herman Herzberger who uses form and the in-between space to successfully create areas where interaction can take place.

Urban conditions:
The floor level of the main public gathering space is influenced by the Romania school's use of public space, by dropping the public gathering space below natural ground level. This helps define the in-between space better by incorporating seating while still directing users into the main public gathering space.

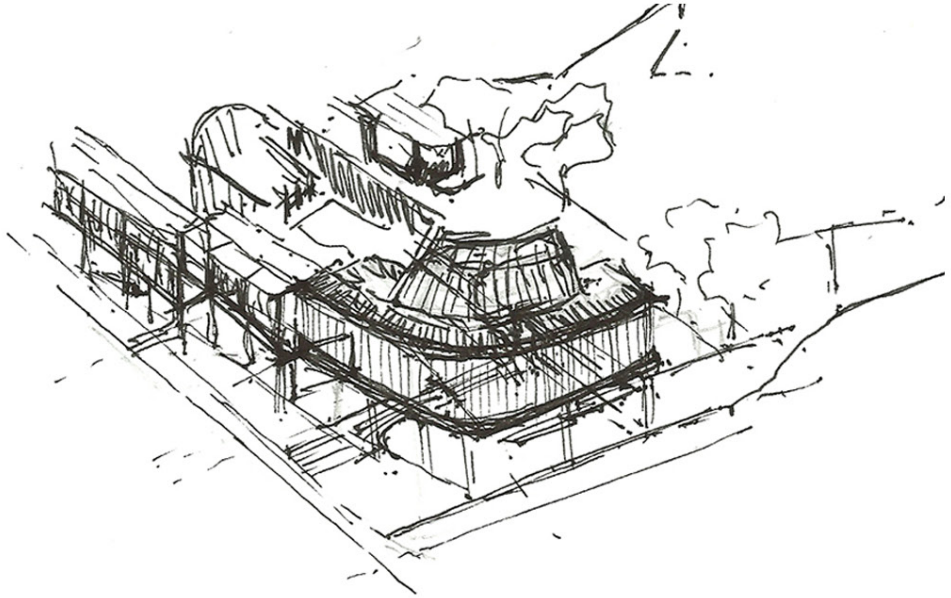
The corner of the facade is rounded at the major street intersection. This is done in order to emphasize the continuity of the form in space. This naturally directs the users into the main public gathering space.

Multifunctionality:
The main intent is to create space that can respond freely to changing programmatic requirements as previously highlighted in chapter 3 of the dissertation. With the programmes able to adapt more freely the street is activated promoting a space that can be used for multiple functions.

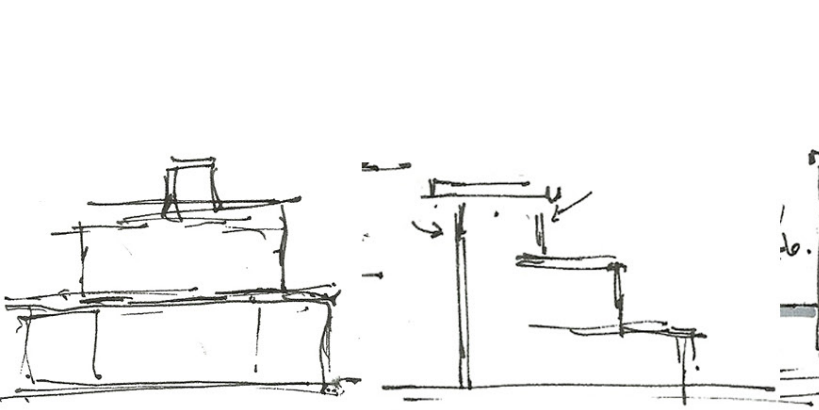
Spatially the intent of adaptability is achieved by introducing structural vertical elements which allows for the in-between space to be more easily adapted. This can be seen in the thumbnail sketches which explore raising the built form off the ground floor level allowing for the ground floor level to become a versatile and adaptable public space.

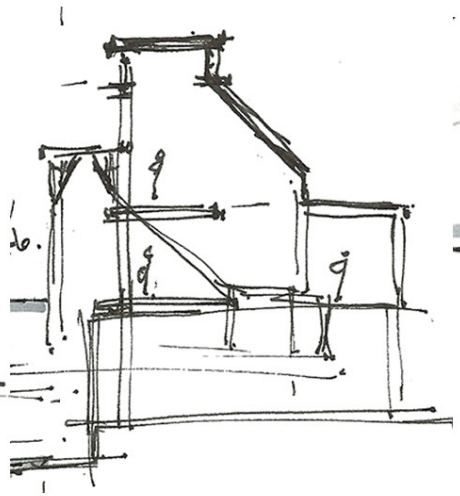
Critique:

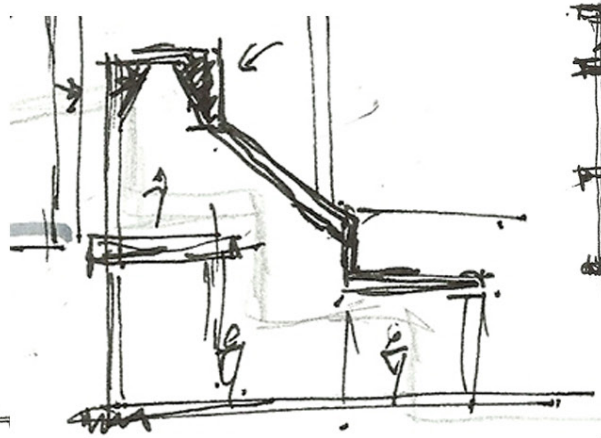
Urban conditions:
The concept of a learning street as well as the spatial intent diagrams, that were still developing at this stage of the design process, helped guide the author in defining the in-between space better. As a result the spatial ordering was positively received by the lectures.
The facades facing the main road begin to express verticality within their form where as the facades facing the courtyards express horizontality. The critique suggested that this verticality and horizontality be defined and expressed better in order to explore the architectural language these elements begin to suggested.

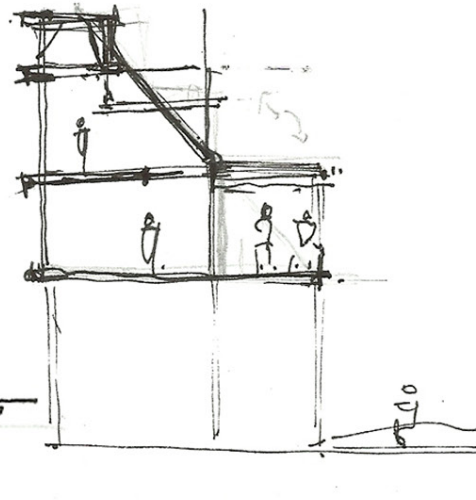


Thumbnail sketches exploring edge conditions









Exploration of resource centre roof and form

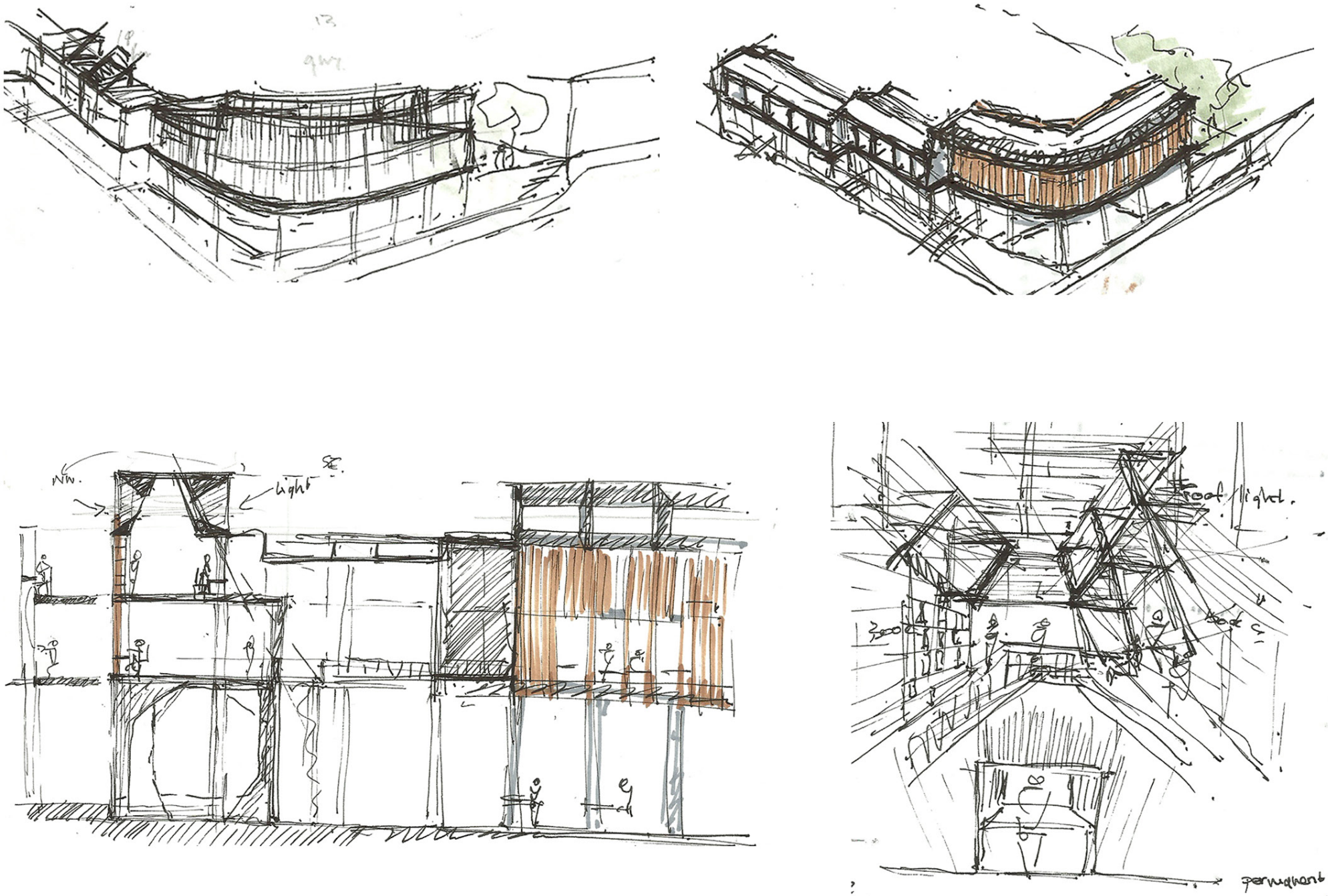
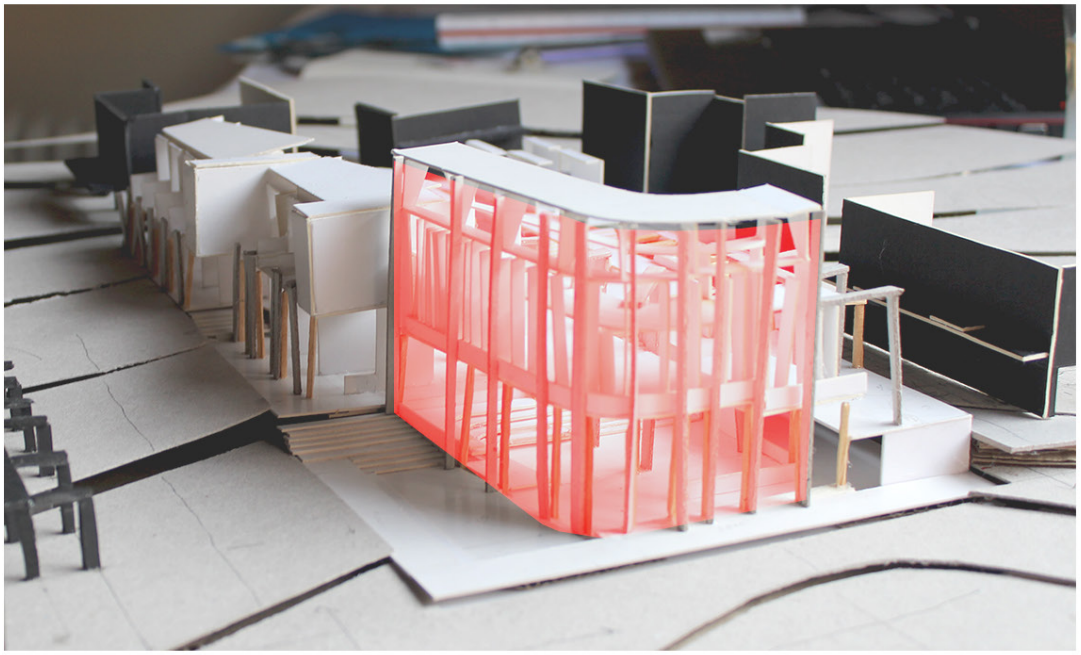
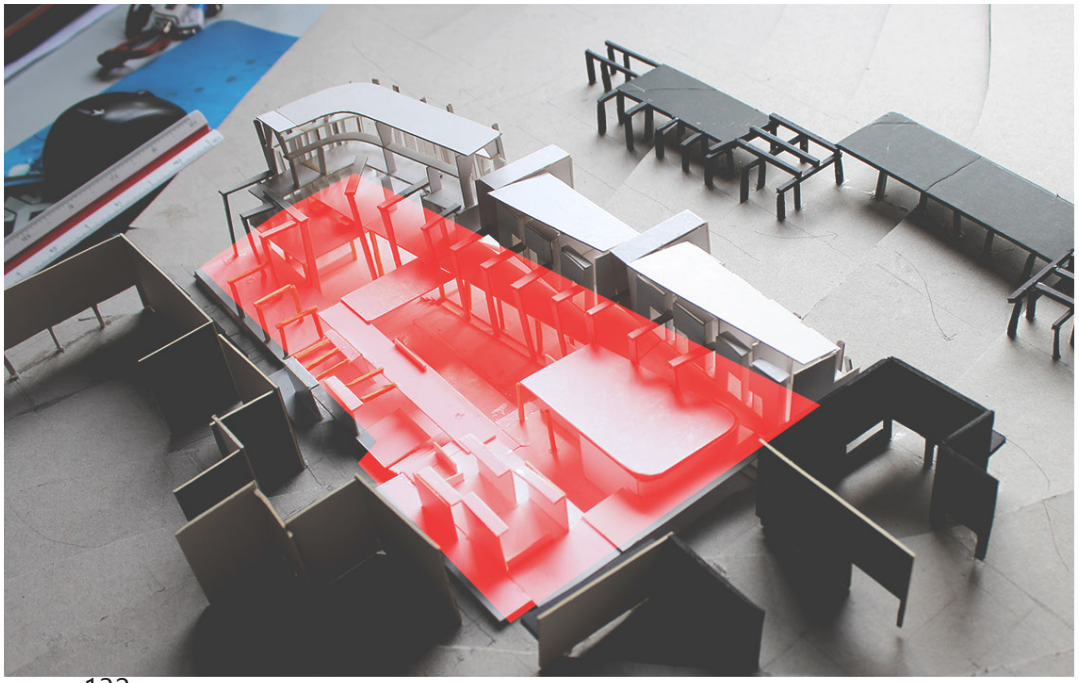


Fig 6.12 Design development sketches proposal 3, Author (June 2016)



Iteration 3.1



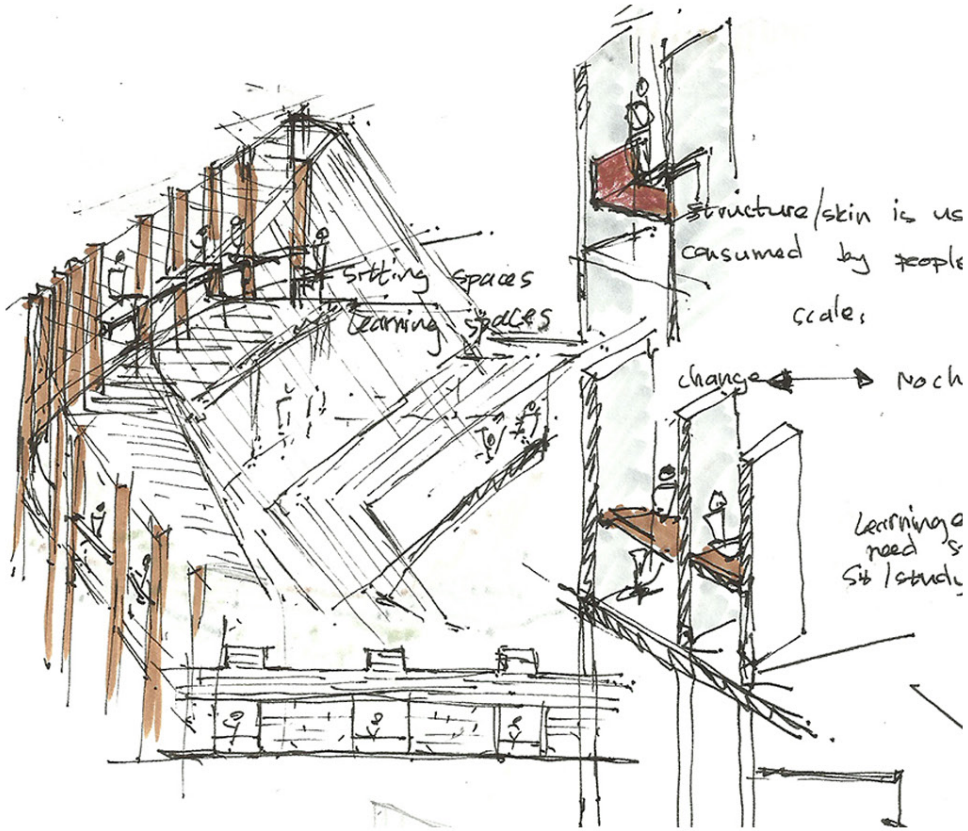
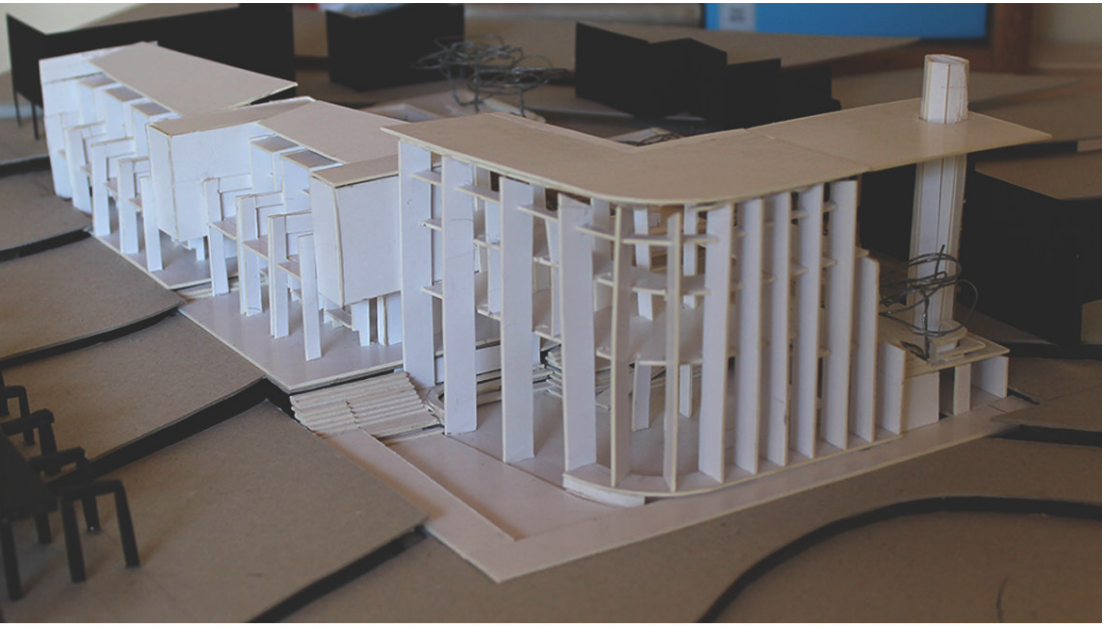
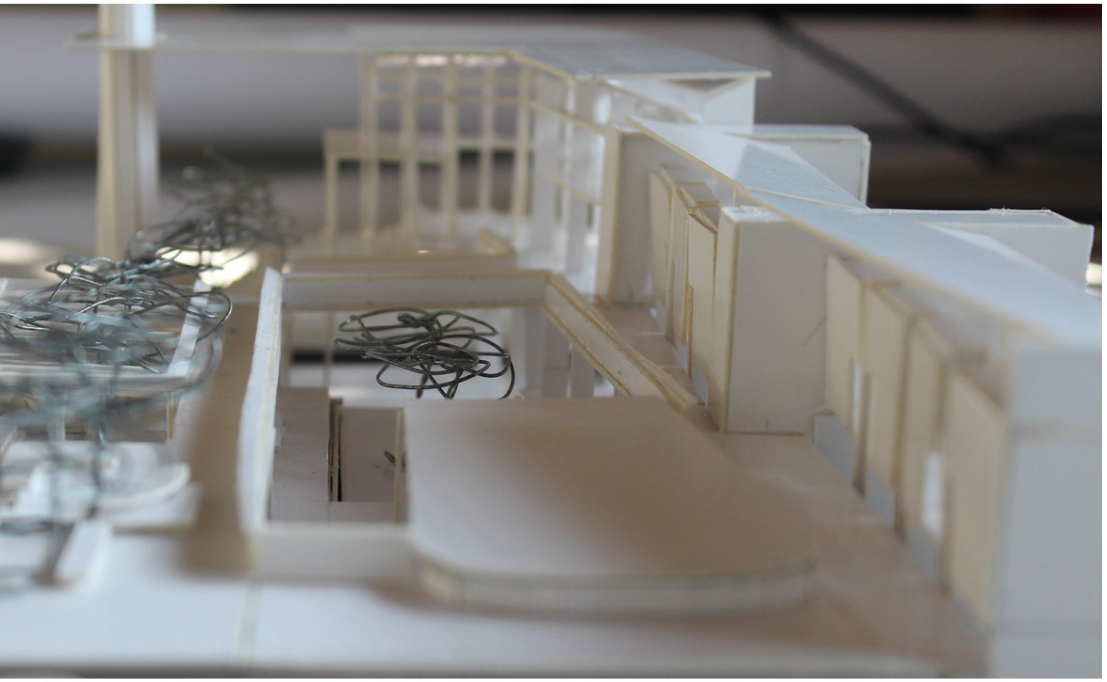


Fig 6.13 Sketches and photos of model, proposal 3, Author (July 2016)



Iteration 3.2



Third Iteration

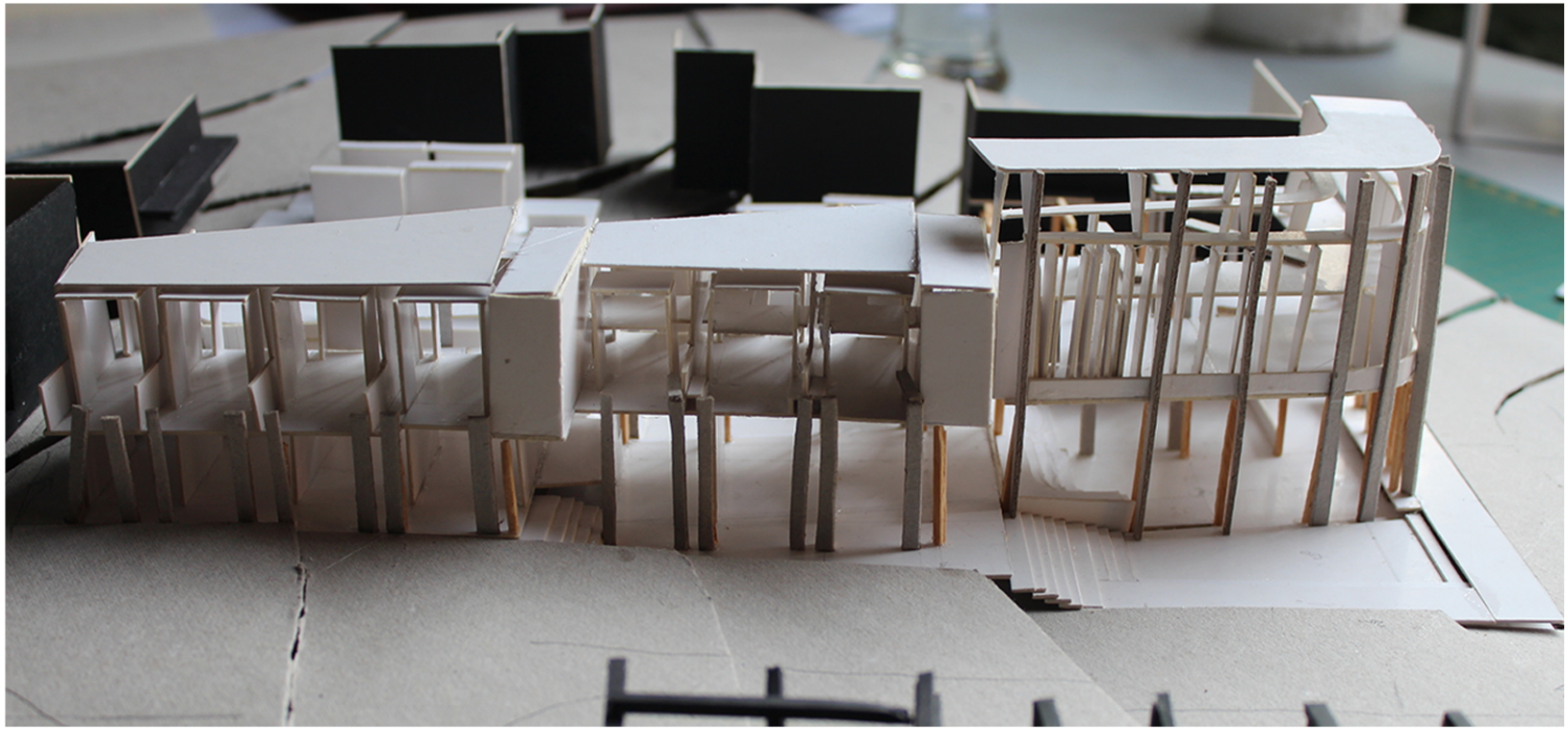
Architectural intent:

Verticality and horizontality:
Based on principles laid out in Chapter 3 and with specific reference to Hertzberger's (2008) theory that envisions educational facilities as a micro-city, the form's response to its urban environment becomes important. This is achieved by expressing the verticality of the facade which in turn symbolizes and suggests the movement of people into the central communal space while the horizontality of the inner space is expressed and symbolises the idea of holding and containing people which spatially encourages social exchange between people.

Live/ work units:
The facade as a layered component which offers various forms of thresholds and gathering spaces, as discussed in chapter 3, is spatially explored in the layout and form of the live/work units. As can be seen on the following page, horizontal and vertical plains protrude out and sink back in which allows for a layering of space and threshold to occur.

Theoretical training and study spaces:
The main intent was to explore how space can be adapted and changed in order to be used for various functions. This area can be used as another movement route through the site. The learning spaces then form nooks on the path where one can pause and reflect. This idea of learning and movement directly relates back to the concept of learning streets which is discussed in Chapter 5. The seating was influenced by the robust nature of the service centre pay points, designed by Piet Louw, as the learning spaces should be made of robust forms that can be interpreted freely by the user. Spatially the idea then is that the learning pods are scattered along a main axis which consists of a line of trees. This edge condition, as opposed to the edge condition along the main road, is more open to be changed and adapted by the users and community who neighbour the facility, therefore the intent was for this edge to be integrated into the urban condition surrounding it. This spatially supports *extended school* theory (Hertzberger 2008) as well as citizenship education policy that encourages educational facilities to become more integrated within their surroundings.

Iteration 3.1



Iteration 3.2

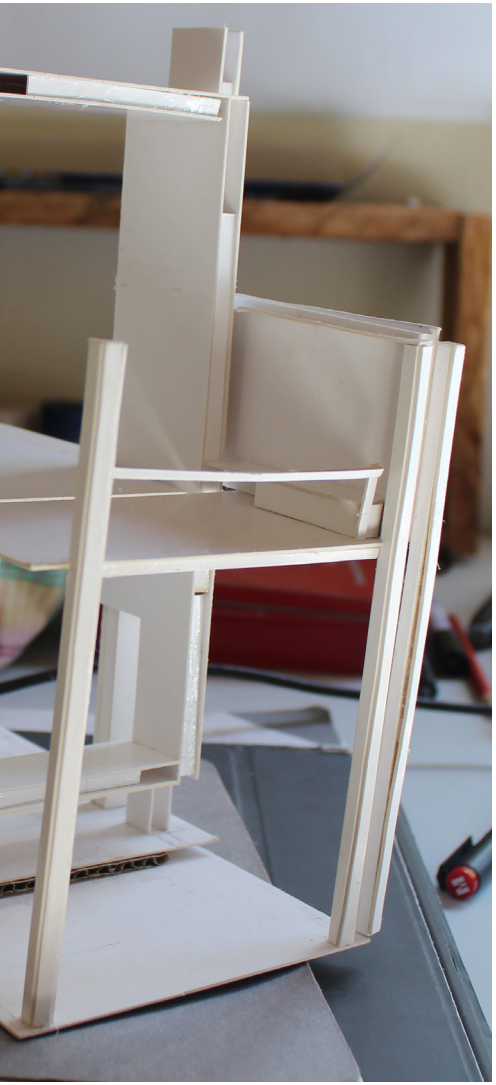
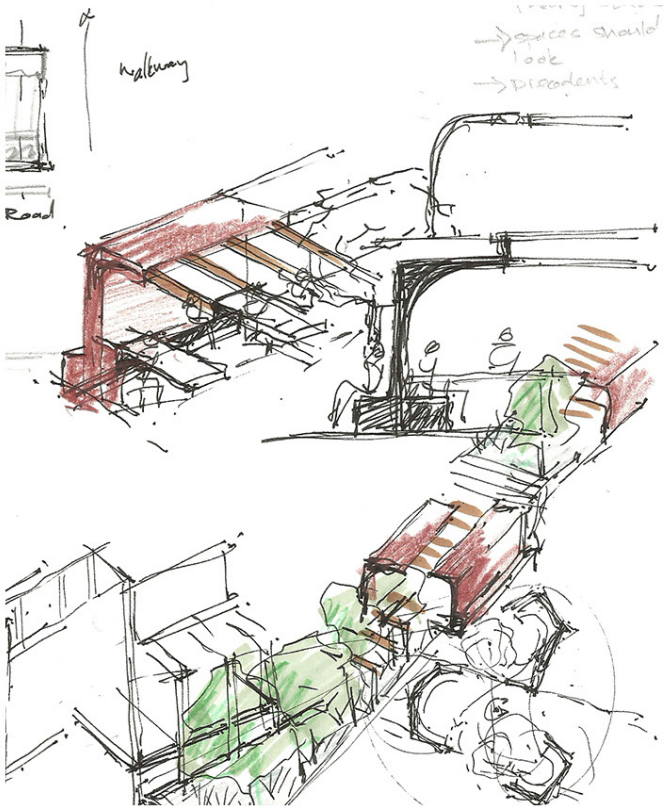
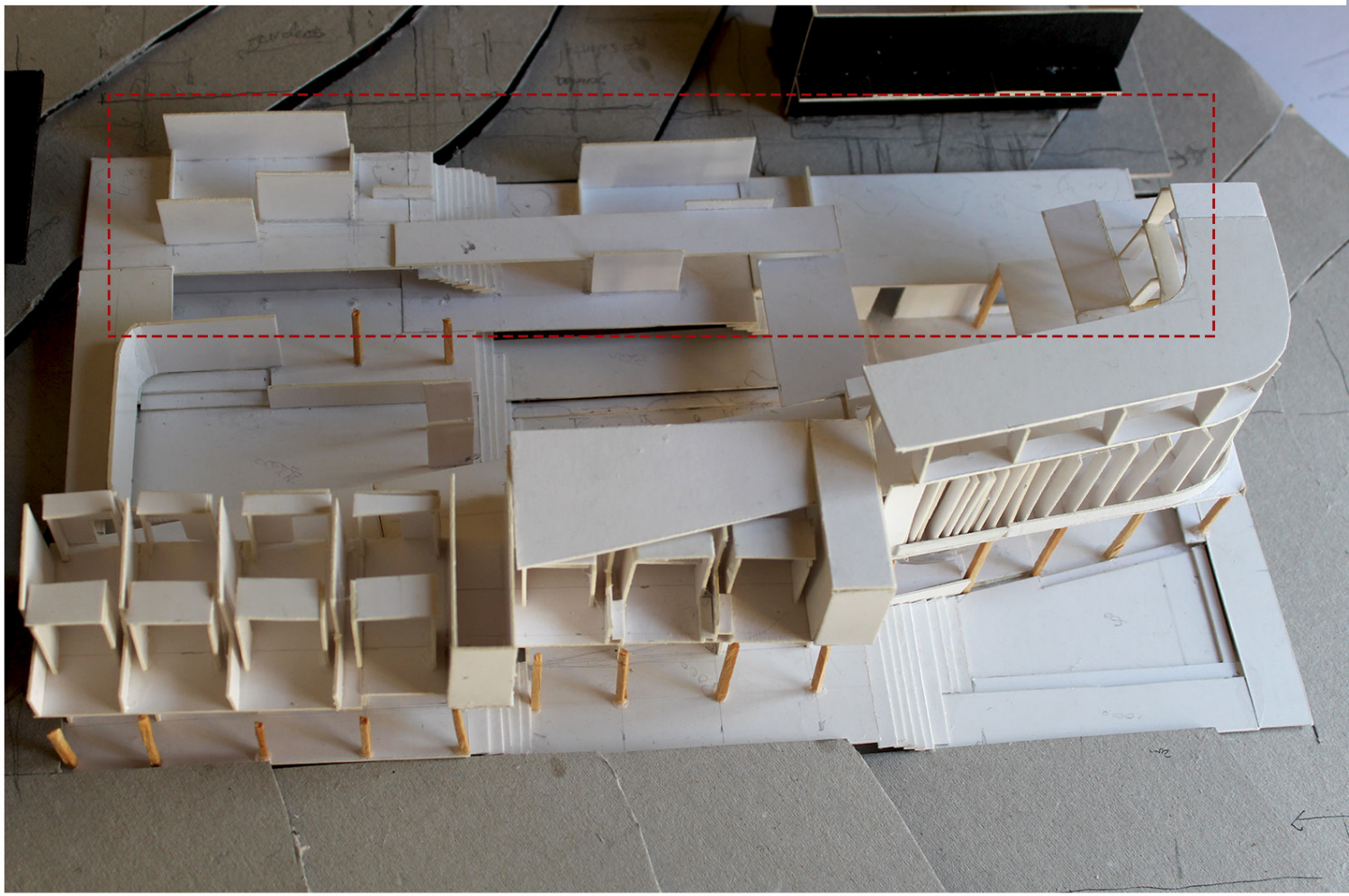


Fig 6.14 model and sketch exploration of live/ work units, proposal 3, Author (July 2016)

Theoretical training and study spaces used by community and learners

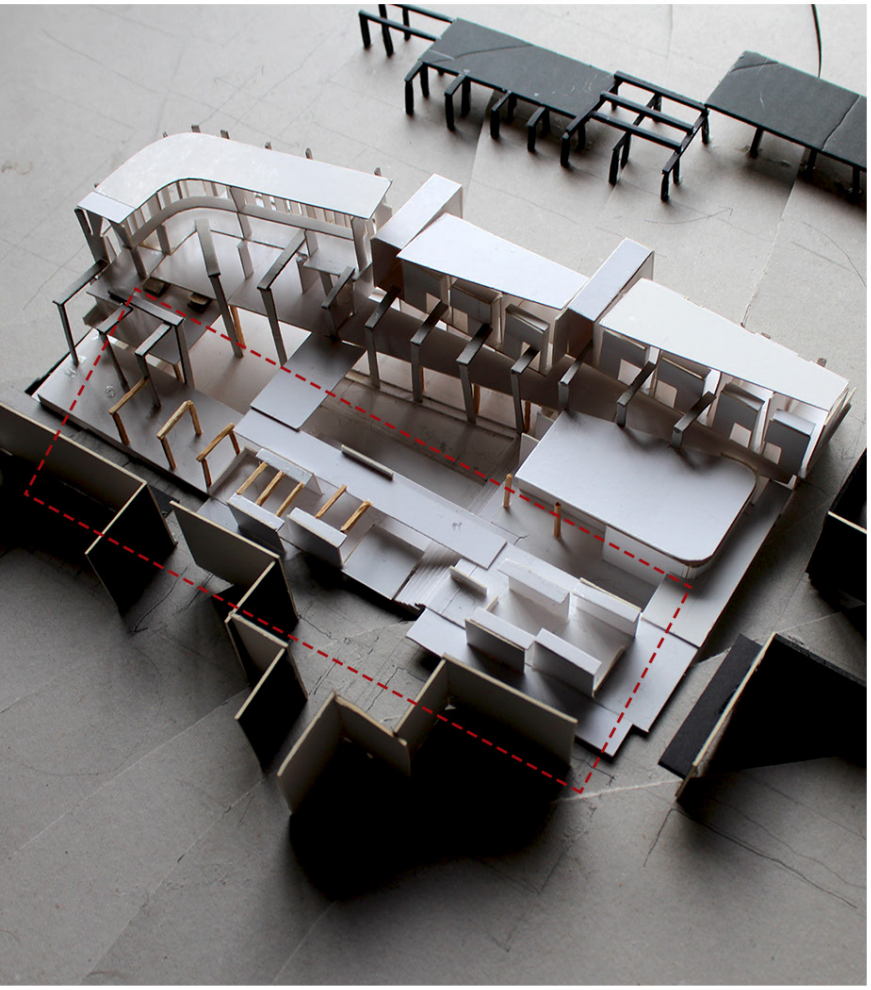


Iteration 3.1



Iteration 3.2

Iteration 3.3



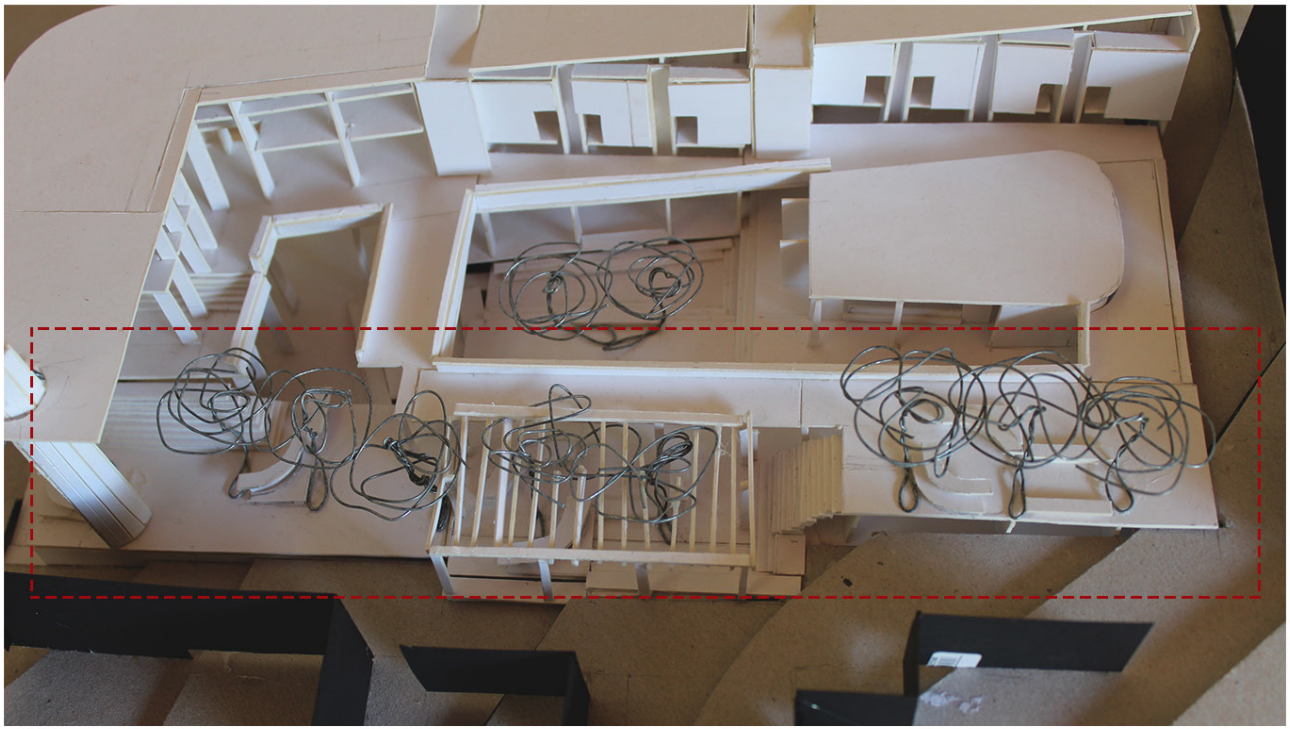
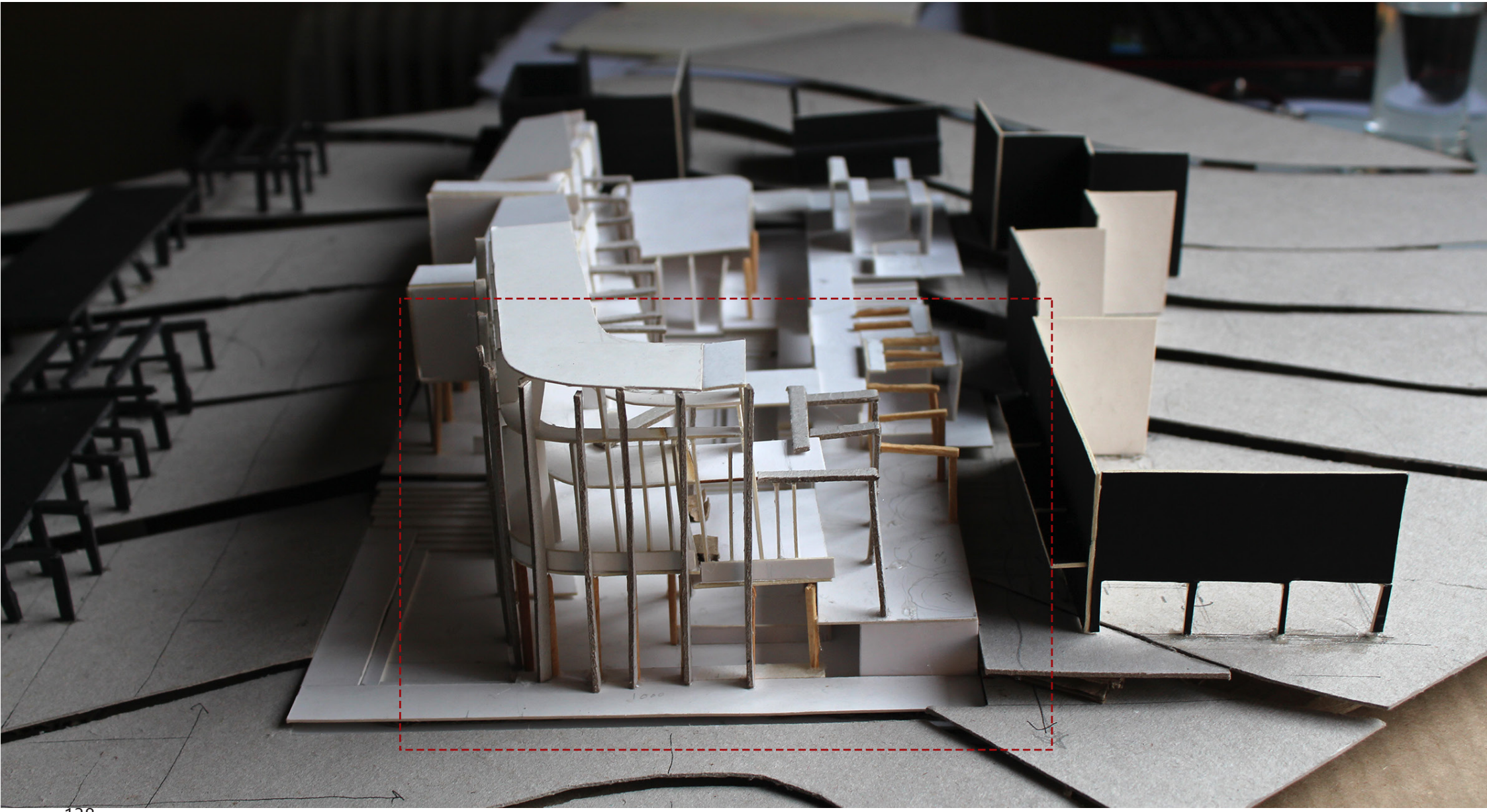


Fig 6.15 Theoretical training and study space, iterations, Author (July 2016)

Roof and furnace condition:

As can be seen below the roof condition ended uncomfortably, feeling unfinished while not benefiting the space as a whole.
The restaurant area functionally lacked an element that would draw heat from the area when cooking, like a furnace. The spatial critique identified that the restaurant area lacks an element that drawers users to the space like a fire place.

Iteration 3.1



Therefore the need to extend the roof condition and introduce a furnace offered the opportunity to do both while benefiting the space as a whole. The furnace acts as a structural component which holds the roof up and becomes a social component as a fire place and pizza oven.

Iteration 3.2

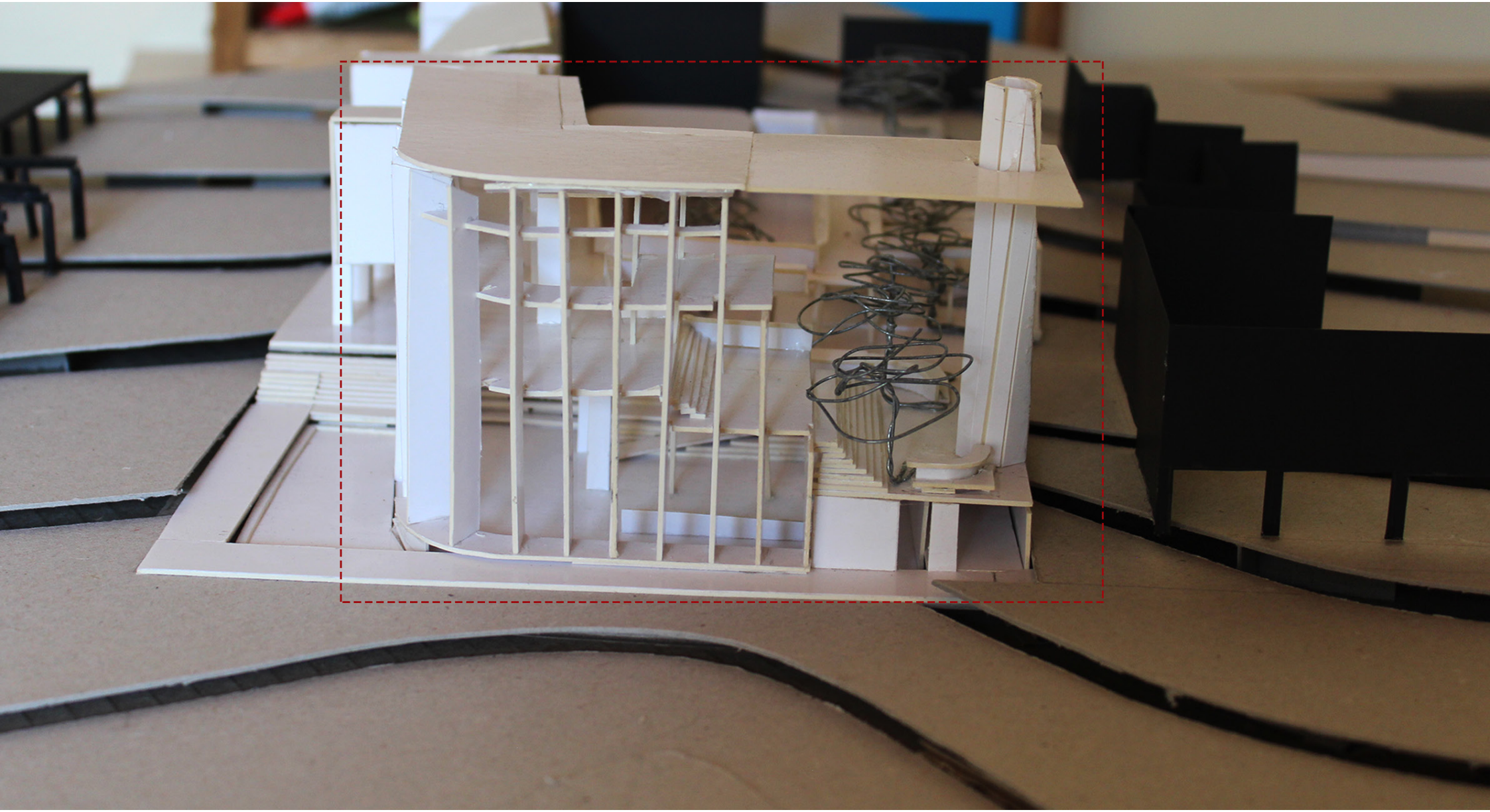
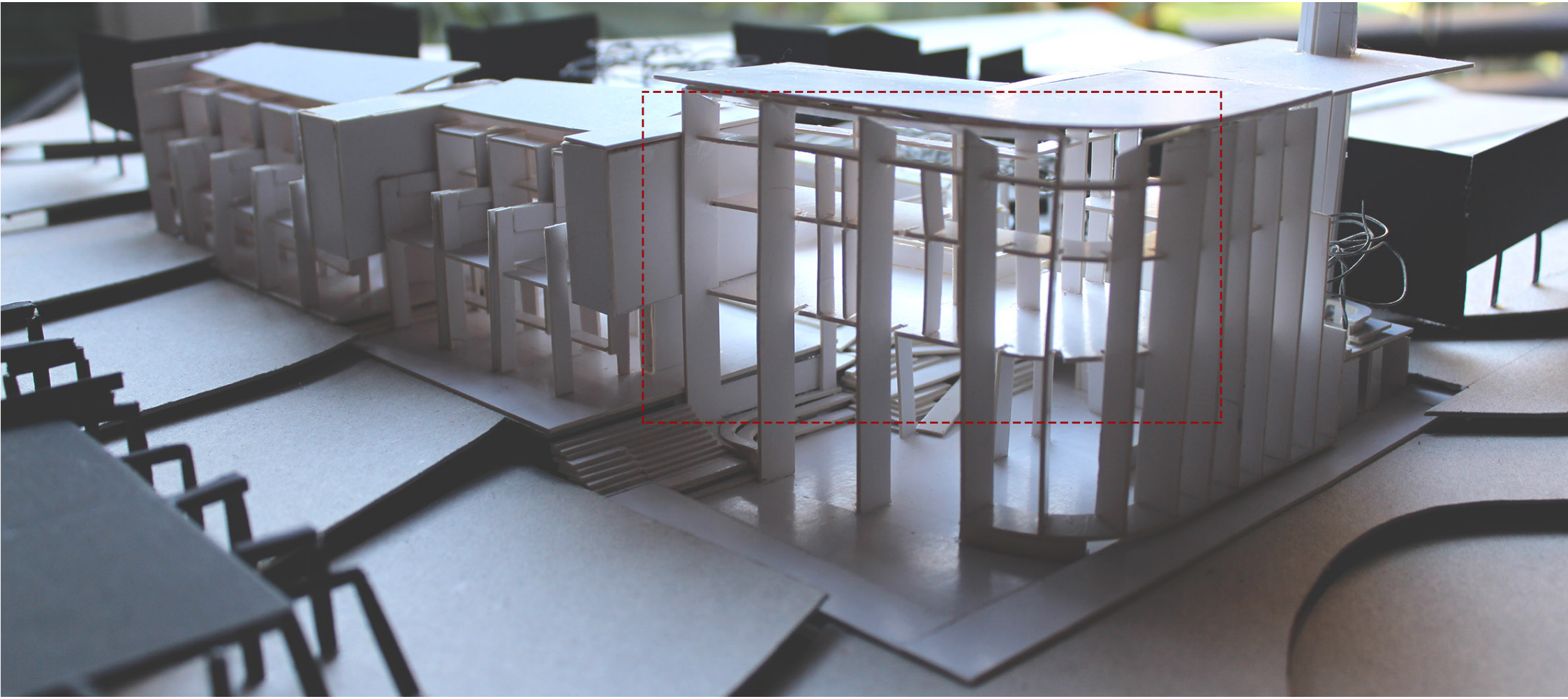


Fig 6.16 Introduction of furnace, iterations, Author (July 2016)

Elevation Development

A this stage of the design process the implication of the architectural language was further explored on elevation, particularly the South East elevation. The corner of the South East facade was found to be the point at which alternative rhythms merged. This corner is also the main entrance to the public square and needed to be better defined. This allowed for the opportunity to relate back to Gehl's (2010) book *cities for people* in which the importance in clarity of the entrance and facade, visual accessibility and transparency, is highlighted. The facade then offers a transparent and interactive facade edge, from both the interior and exterior perspective, by creating boxes in which people can sit and interact.

Iteration 1



Iteration 2

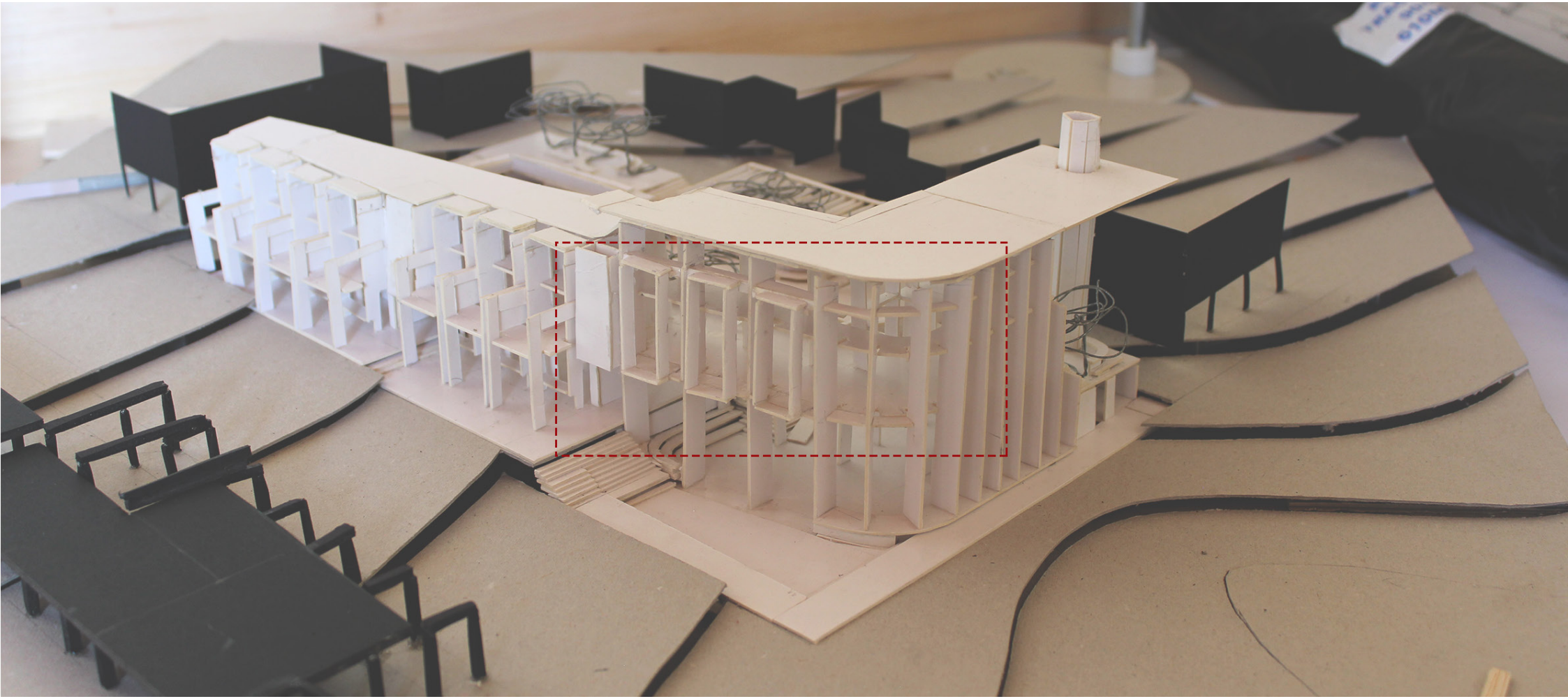


Fig 6.17 Elevation Development, iterations, Author (July 2016)