

CHAPTER 06
PRECEDENTS

I am still learning.

- Michelangelo, age 87 -



Figure 6.1 Completed housing unit before occupant alterations (Elemental, 2008)

Figure 6.2 Quinta Monroy after occupant alterations (Aravena, 2013)



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THEORY OF OPEN BUILDING PRECEDENT

Alternative Open Building precedents studied



Figure 6.3 Songpa Micro-Housing, Seoul, Korea with flexible floorplans which can accommodate for the changing needs of residents (Park & Hong, 2014)



Figure 6.4 Next 21, Osaka, Japan with a permanent infrastructure with the infill having a shorter lifespan is designed to be easily replaced (Kendell & Teicher, 2000)



Figure 6.5 Elangeni Gardens, Marshall Town, Johannesburg, a local precedent of open building (CSIR, 2011)



Figure 6.6 K206 in Alexandra, Johannesburg, a second local example of open building (CSIR, 2011)

EXTENDIBLE HOMES

QUINTA MONROY II ELEMENTAL 2003-2004

The half-finished home, which has become a signature for ELEMENTAL, began as an idea to deal with extremely low budgets that should satisfy residents' immediate needs. The approach was that the housing should gain value over time (Stott 2013).

The project set out to house 93 families from Quinta Monroy who illegally occupied a 5 000 m² site. The aim was to accommodate these families in the new units on the same site. The goal was to provide housing that could double the initial built area when the household becomes financially capable. A number of schemes were explored before the design team settled on the duplex solution that allowed for the expansion of the homes without compromising ventilation or lighting (Stott 2013). Three main design issues were addressed, namely density, physical space for the community and the freedom of expansion that needs to be contained within the structure.

The project was funded through the Housing Policy, and received a US\$7 500 subsidy. This included the land, the architecture and the infrastructure. ELEMENTAL's remark on social housing is that it should be seen as an investment and not an expense (ELEMENTAL 2008) and that the value of the house should increase over time (ELEMENTAL 2008).

A communal courtyard space acts as the collective space that is surveyed by the surrounding 20 family homes. This communal space represents the larger social context of the community (Stott 2013). The provided structure is a concrete and cement brick structure, and includes the staircase and the void that can be filled by the occupant. This provision for the house to evolve with the extensive family has proven to be a contributor to the economic improvement of the occupants (Quinta Monroy/ELEMENTAL 2008).

After five years, the houses have been expanded and have been valued over US\$18 200. This just proves the point that ELEMENTAL wanted to make on social housing: that it should be seen as an investment.

The project principles of the half-finished home and the funding mechanism are significant to this dissertation, which uses the principle of providing the basic unit that the occupant can immediately occupy. This unit structure allows the users to expand their homes when they are capable of doing so, and by investing money in the expansion, they increase the value of their units.



Figure 6.7 Plans, section and elevations of Quinta Monroy (Aravena, 2013)

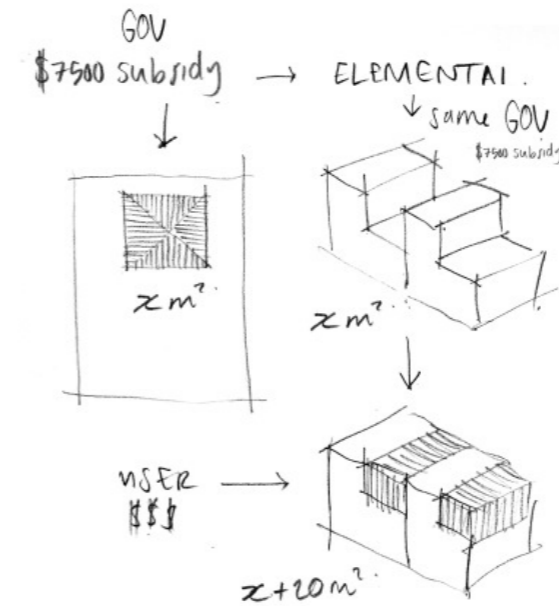


Figure 6.8 Quinta Monroy analytical sketch of funding opportunities (Author)

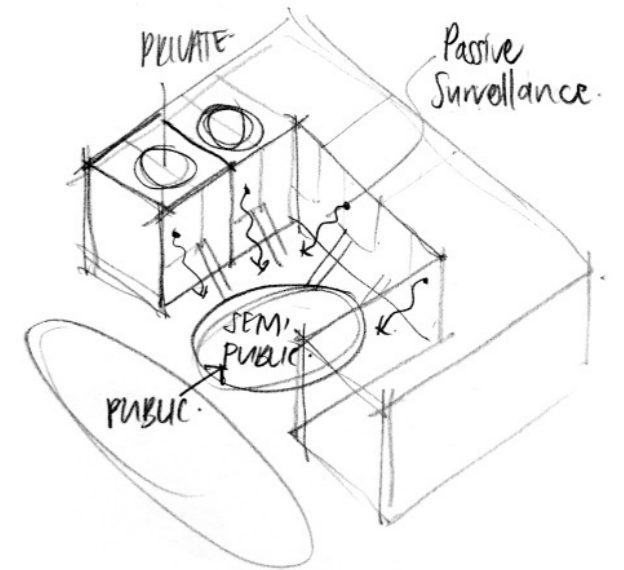


Figure 6.9 Quinta Monroy analytical sketch of defensible space principle (Author)

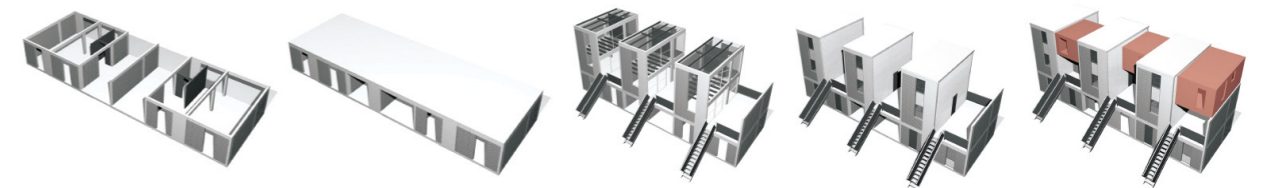


Figure 6.10 Quinta Monroy modular construction (Urban Think Tank)



Figure 6.11 Quinta Monroy unit interior before any alterations made by occupant (Aravena, 2013)



Figure 6.12 Site plan of Quinta Monroy (Elemental, 2008)

YEAST SOCIAL HOUSING PRECEDENT

THEORY OF *OPEN BUILDING* IN SOUTH AFRICA
POTTERS' HOUSE

Yeast City Housing (YCH) administers community projects in the Pretoria CBD. YCH developed Potter's House in 1993 as part of the Burgers Park Village urban renewal plan (Munting 2011:14). YCH manages and administers the rental housing facility that is focused on women in need. The building is situated in a courtyard space between existing high-rise buildings, which has some implications regarding thermal comfort in the winter (Munting 2011:16). However, these exterior spaces are cool and protected in the summer and, are perceived to be relaxed, safe and calm. The interior spaces are simple and efficient (Osman, Herthoghs & Davey 2011:8-9).

The longitudinal 24 m² units have simple layouts with ablutions in the middle and one room at each end. The window placement is well considered and allows the rooms to be passively ventilated, but the bathrooms are fairly dark. Thresholds between exterior and interior are defined by two steps and are covered by roof structures. A communal living room is located on the ground floor with a reception area to control access into the courtyard space. The upper floor units are accessed by two open, single-flight staircases that are covered with timber and corrugated steel roof structures (Munting 2011:13-15).

The structure is a hybrid system of reinforced concrete and structural masonry infill walls. The building is robust and maintenance costs are reduced by having most of the walls un-plastered. Insulation is provided in the roof structure of corrugated sheeting on timber rafters with adequate water systems to divert water to appropriate areas (Osman et al. 2011:9-11).



Figure 6.13 Street photograph (Author)

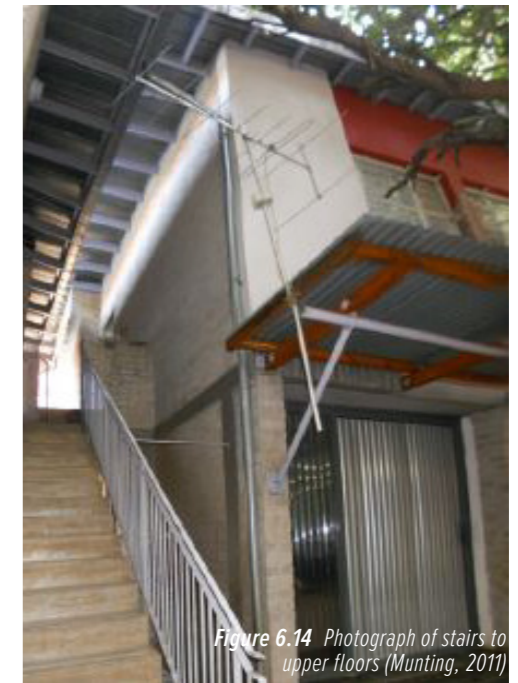


Figure 6.14 Photograph of stairs to upper floors (Munting, 2011)

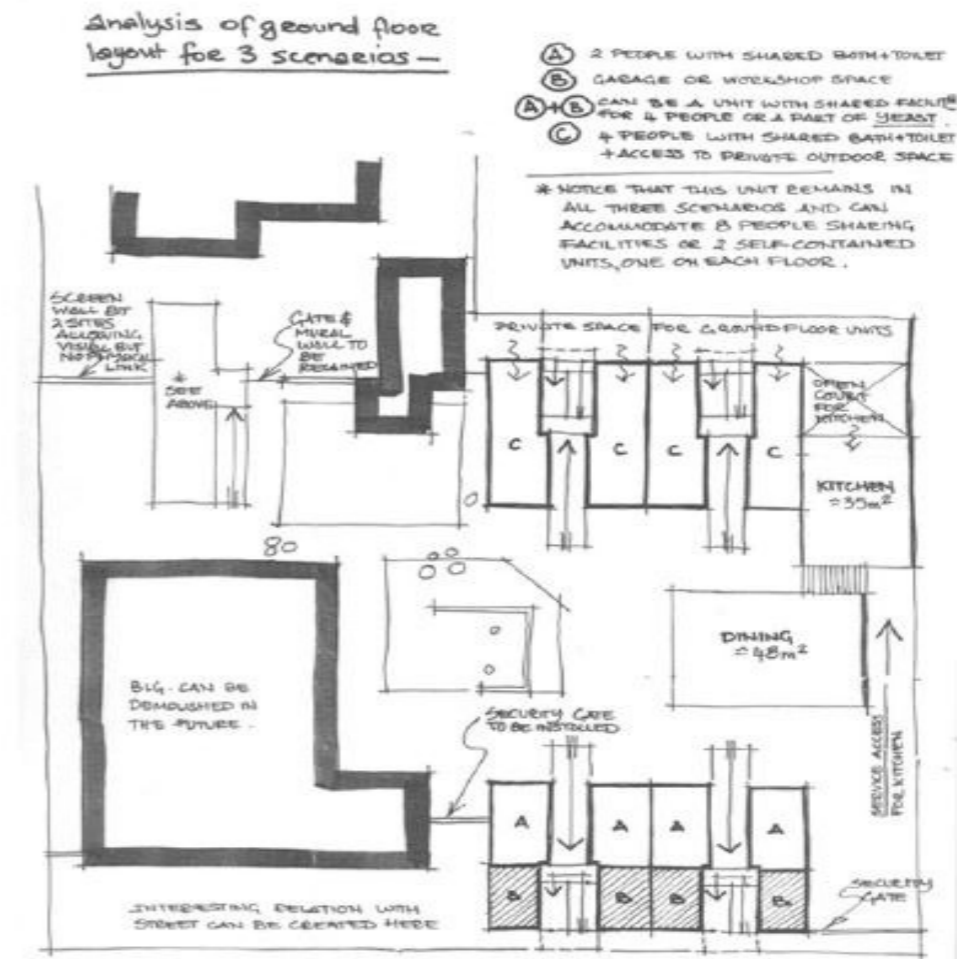


Figure 6.15 Site plan of Jubilee Centre with all buildings on site, including Potters' House (Munting, 2011)

Potter's House is based on *Open Building* principles with the concept of adaptable space. The structural system shows high potential for adaptability, but due to the nature of the rental tenure, it does not allow the occupants to personalise their space (Munting 2011:15-16). The outdoor garden spaces area are not well maintained. This could be because of the rental nature of the building (Munting 2011: 14).

Potter's House is one of a few *Open Building* projects in South Africa. However, the nature of the tenure has to allow the occupants to adapt and personalise their space. Potter's House is located in the city and has managed to create safe, comfortable and well-defined spaces. The proposal strives to incorporate these principles.

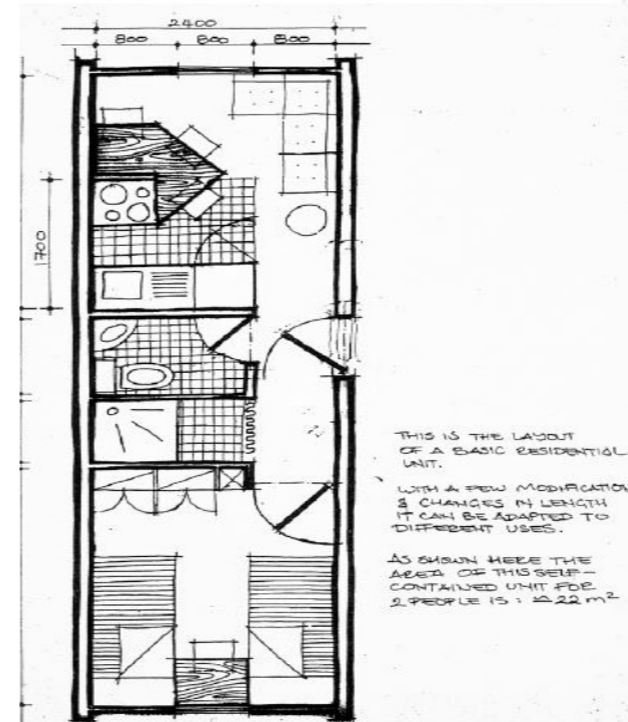


Figure 6.17 Unit plan (Munting, 2011)

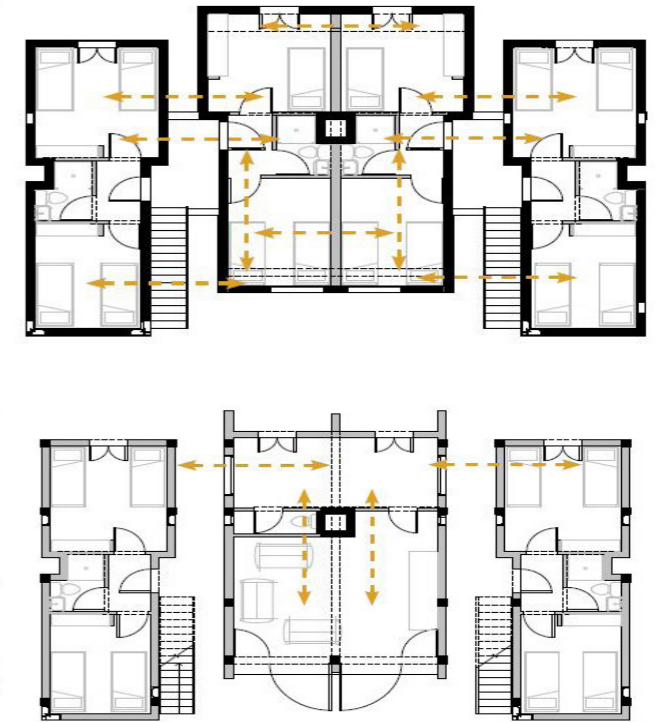


Figure 6.18 Ground floor plan (bottom) and first floor plan(top) with possible flexibility in plan as per Open Building theory (Munting, 2011)



Figure 6.16 Courtyard space (Munting, 2011)



Figure 6.19 Photographs of architectural elements: stairs and roof overhangs, steps defining threshold between inside and outside and different finishing material to contributing to aesthetics of building (Munting, 2011)

HOUSING DIVERSITY PRECEDENT

Alternative precedents studied for housing diversity



Figure 6.20 Walmer Link, a housing scheme divided into two developments: Social Rental and Affordable Housing to also provide for the gap market. The project is financed by the Finance Linked Individual Subsidy Projects (FILPS) (GM South Africa Foundation).



Figure 6.21 N2 Gateway Project is located in Joe Slovo (Langa, Cape Town) demonstrating new ways of developing human settlements with social and economic amenities along with housing units (Tonkin, 2008)



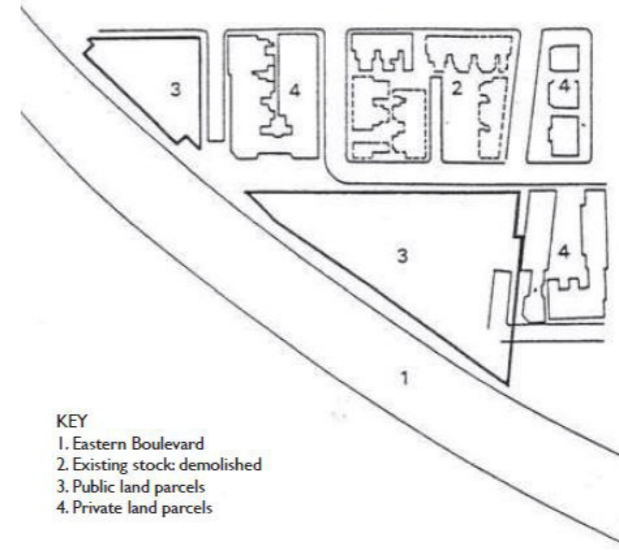
Figure 6.22 Pelip Housing, Red Location, Port Elizabeth. Despite the political situation and initial conflict with local communities against the unconventional housing project, the project set out to challenge the government approach - that is to provide a free-standing house for every family in South Africa (Noero 1999:29)

SPATIAL INVESTIGATION SPRINGFIELD TERRACE

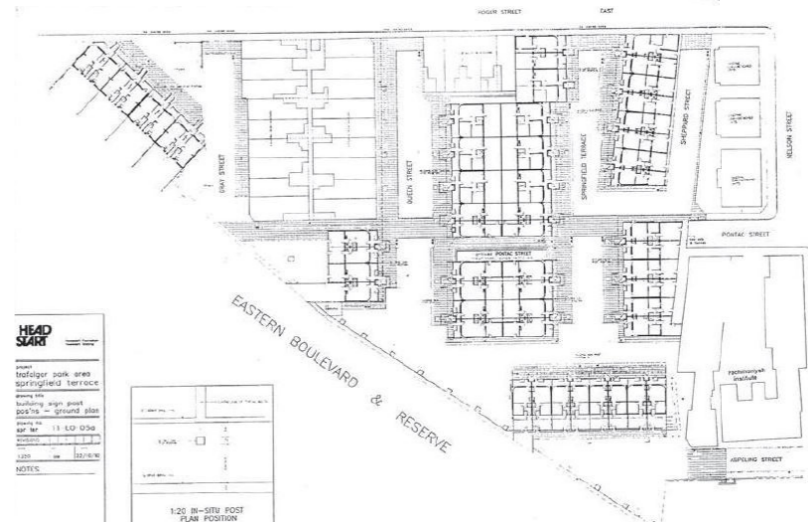
This inner city housing project is located in District Six in Woodstock, Cape Town. The project was completed in 1992. It represents an innovative attempt at housing and is seen as the first non-racial inner city infill project in South Africa (Tonkin 2008:192).

Headstart was a not-for-profit housing company that was part of a national corporation that challenged the Group Areas Act of the apartheid era. Its mission was to innovate, experiment and challenge the housing developments of the time. The project was initiated together with the community of the area and the Cape Town City Council.

The project's objectives were to create high-density, low-rise buildings, with a range of unit sizes, prices, social space and community facilities. The units, varying from duplex to simplex, created a social mix (Awe 2001:122-125).



KEY
1. Eastern Boulevard
2. Existing stock: demolished
3. Public land parcels
4. Private land parcels



HEAD START
1:20 IN-SITU POST
PLAN POSITION

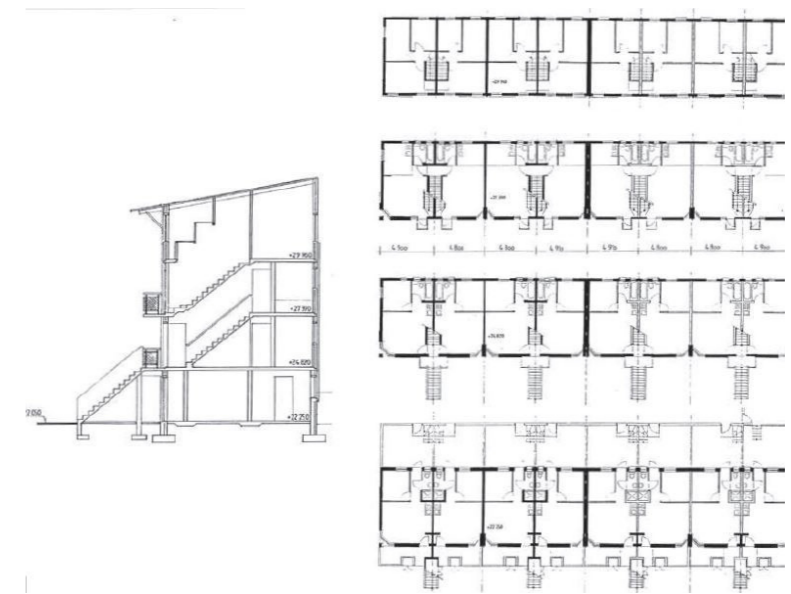


Figure 6.23 From top, Site location, Site plan, Section and Unit plan (Tonkin, 2008)

Figure 6.24 Stairway to front door (Wolff)



Figure 6.25 Combined shared space and vehicular road (Wolff)

Figure 6.26 Units with laundry space in backyard (Wolff)



Figure 6.27 resultant space between units (Wolff)



The scales of the blocks were significant in creating comfortable public spaces between buildings that are protected from the wind (Tonkin 2008:204). The vertically arranged units of three- to four-storey blocks define a number of public spaces intended as the “urban living room” and a play area for the children (Tonkin 2008:203). Thus, the design focused on public spaces that were also seen as the element that contributed to the quality of the housing environment (Tonkin 2008:198). The vehicular road was designed to accommodate both vehicular movement and the social space where children could play. Over the years, the community has reported that these communal spaces are dominated by cars. The residents emphasised that they want spatial differentiation between pedestrian and vehicular movement.

As expressed by the architects, the “staircases to the upper floors are pulled into the public social spaces to extend their social function and to express the connection to the ground level” (Tonkin 2008:204). Security and limited public access is ensured by implementing shared staircases between three family units (Awe 2001:122-125).

There are many lessons to be learned from this precedent. This dissertation uses the principles of the focus on communal space and the variety of unit sizes provided to create a diverse social mix. The design will strive to address the issue of differentiated space that is still safe and comfortable. Three- to four- storey buildings create comfortable public spaces and will be used in the design.

APPROACH TO HERITAGE PRECEDENT

Alternative precedents studied for approach to heritage



Figure 6.28 Former Rocks Police Station with a new steel and glass to accommodate its new use as a café (Acorn 2014)



Figure 6.29 Rotermann's old and new storage is an adaptive re-use project of a historically-valuable limestone building (Grossschmidt, hayashi & Azukawa 2013).



Figure 6.30 Kings Cross - Western Transit shed illustrates an extension of the existing building using vertical and horizontal rhythms (Williams 2013).

SHOREHAM STREET/ PROJECT ORANGE

The project is located on 192 Shoreham Street, England. The existing Victorian industrial brick building sits at the edge the Conservation Area of Sheffield. The brief required a mixed usage that included a restaurant/bar and studio office units on the upper floors. The approach was to rehabilitate the existing building and to capitalise on its industrial character (Morgan 2012).

The new sitting on top of the old is celebrated by the change in materiality of the black corrugated sheet metal in contrast to the red brick façade (Derschatta 2012). The volume extending upwards is in contrast to the existing building, but complementary to its form, as it replaces the original pitched roof. This is a reaction to the industrial roofscapes that dominate that part of the city. In some places, the windows “bite” into the existing building and have an entirely different elevational composition than the existing building (Sheffield 2012).

The completed development not only seeks to rehabilitate the existing structure, but becomes an iconic landmark and monument that represents “the area’s past and its aspirations for the future”.

The principle of a contrasting, yet complementary heritage approach is used in the design. This applies to material use, visual composition and the roofscapes that should respond to the original form of existing structures (Sheffield 2012).

Figure 6.31 Before intervention (Sheffield 2012)



Figure 6.32 After completion (Sheffield 2012)



Figure 6.33 Pedestrian street at the back (Derschatta 2012).

Figure 6.34 Side of building (Sheffield 2012)

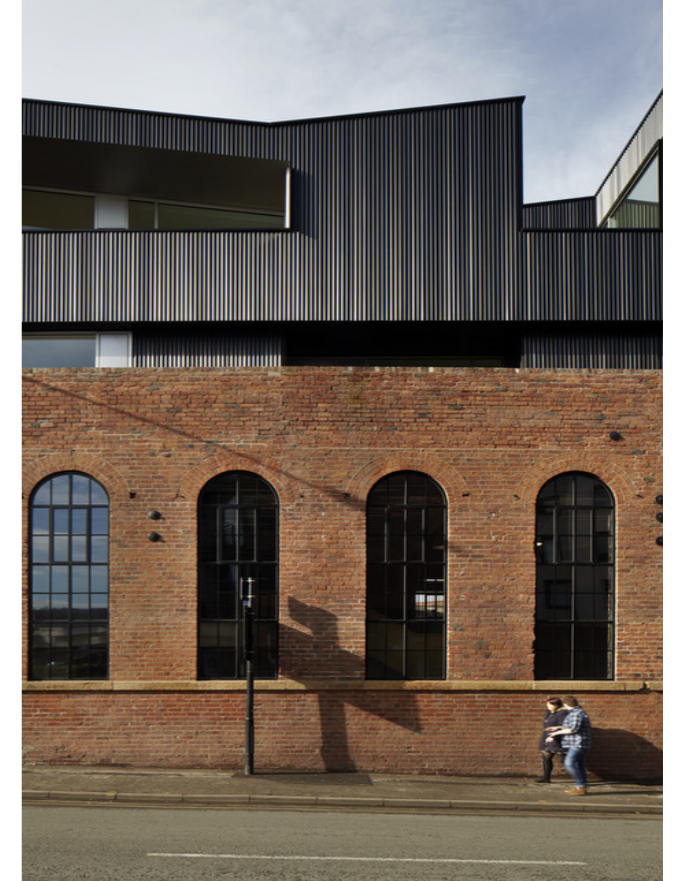
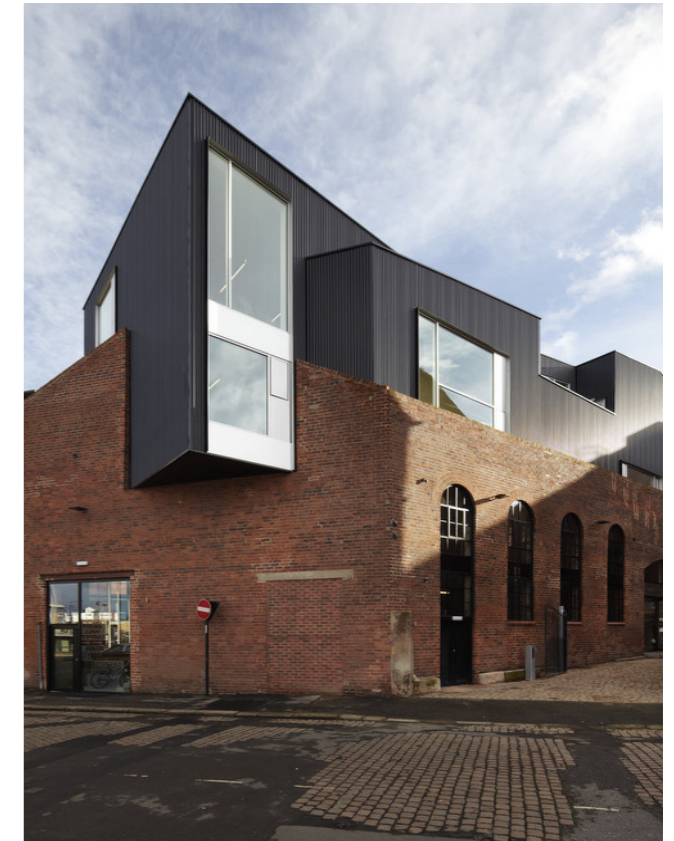


Figure 6.35 Definition between old and new (Derschatta 2012)