# Gentle Densities

A report on the potential of sustainable gentle density, mixed use, mixed tenure

and public participation in future housing in Belfast

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**Images produced for this report are not to scale**

# Contents

## Executive Summary

The Gentle Densities report aims to investigate the potential of delivering mixed use and mixed tenure housing in Belfast through mid density interventions.

**In this report we explore the unsustainable nature of private high rise/high density proposals and public low rise current and future sprawl. We therefore propose an alternative model of mid density that could be more environmentally and socially sustainable by reducing travel distances and concentrating services close to housing areas through mixed use.**

Firstly, this short report defines the concepts of gentle density, mixed use, mixed tenure and public participation that can inform local housing policy. Secondly, it investigates a series of international models of gentle density housing that includes mixed tenure and mixed use, designed and delivered with some level of participatory processes. We explore precedents in the form of three European urban plot and block models and 14 case studies of current mixed use and mixed tenure housing with gentle density. These examples are models of the potential density that could be reached in Belfast City centre and inner city, while maintaining a socio-economic mix and fostering an inclusive and accessible urban development. Finally, the report proposes a series of public land locations in which these models could be developed in Belfast.

This project is funded by the Department for Communities Housing and Regeneration divisions and by the Queen's Engaged Research seed fund. This report was conducted by Dr Agustina Martire, principal investigator and Anna Skoura, research assistant. It was developed with the collaboration of KOTO design and students of the StreetSpace studio in the Masters in Architecture (MArch) at Queen's University Belfast. The StreetSpace studio works in collaboration with Participation and the Practice of Rights (PPR) and other local non government organisations who advocate for inclusive and just urban development.

This report is meant to start a conversation about density in Northern Ireland. To properly test these models in Northern Irish cities, significant partnerships and funding must follow up as a pathway for a sustainable future of housing in NI.

### GENTLE DENSITY



**Figure 1 :** Gentle Density diagram
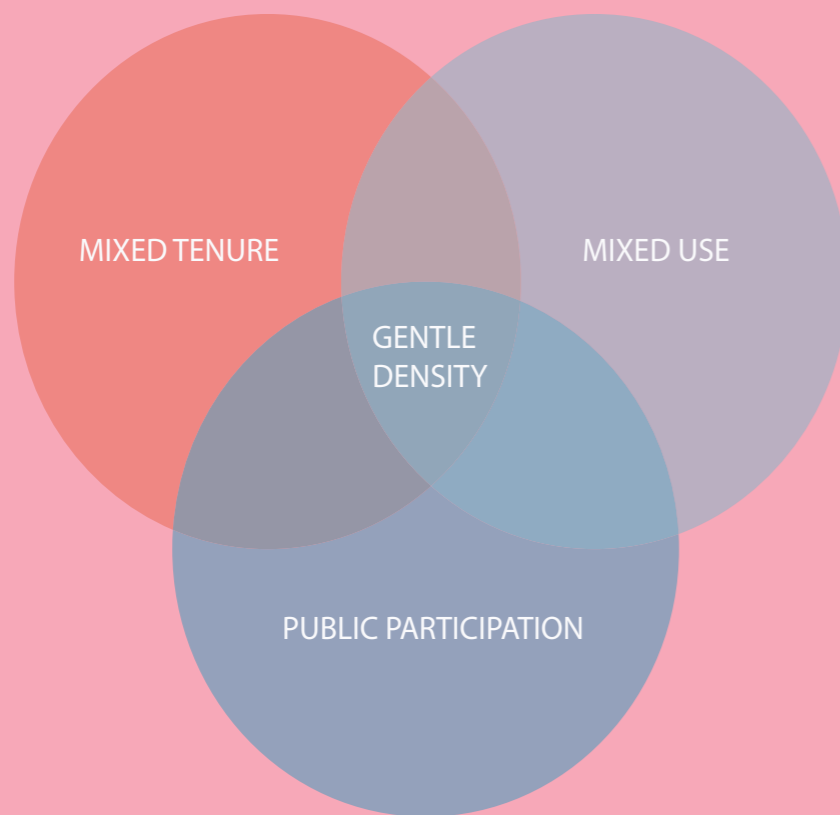
# 0.  Introduction

*'The right to adequate housing is more than having a roof over one's head; it is the right to live in safety and dignity in a decent home.'* UN human rights officer of the High Commissioner.

Housing is a human right that needs to be delivered as a basic provision to those who need it most, and should be prioritised as a first need. Lack of adequate housing has been a problem in Northern Ireland for decades. Exacerbated by segregation between socio-economic classes, religion and ethnicity, existing housing strategies are struggling to provide shelter to an increasingly diverse population (Muir 2013, Gray at al 2009, Murtagh 2001, Brett 1986, NIHE 2017). The inadequate public transport infrastructure, extensive car-dependency and a predominance of low-density suburban development have also contributed to the lack of adequate housing and a disconnection between neighbourhoods (Sterrett et al 2012, Bollens 1998, Gaffikin et al 2016). On the other hand, public participation in planning processes has not managed to get communities properly involved in shaping the places they live in (Wiener 1980, O'Brien 2019, Murtagh 1999, Till 2016, Michael et al 2016).
While much has been investigated and written about each one of these subjects, a more holistic approach is needed to address the housing need in Northern Ireland, and particularly in Belfast. The Belfast Agenda and Local Development Plan are ambitious in trying to change the status quo, but little change has happened so far. Building a sustainable future that includes good quality and sustainable social and public housing is a hard task and a long-term goal.

**We argue that a collaborative approach between the different stakeholders should replace the silo culture of planning powers.**

A closer collaboration between the Housing Executive, the Department for Communities, the Department for Infrastructure (especially Roads) and the councils could help tackle housing needs and the quality of both private and social housing. With this in mind, the Gentle Densities project explores a different way of understanding urban density and possible housing models in Belfast.
The privatisation of public land and the low quality and density housing provision has dominated the urban and suburban landscape of Belfast and other Northern Irish cities. We propose here that Gentle Density is a potential tool to improve housing quality for a more inclusive, accessible and fair housing development in Belfast and Northern Ireland. Belfast could be at the forefront of sustainable housing by adopting this model of urban development.



MIXED TENURE

MIXED USE

GENTLE DENSITY

PUBLIC PARTICIPATION

**0** Introduction

# 1. The context : public land and quality housing
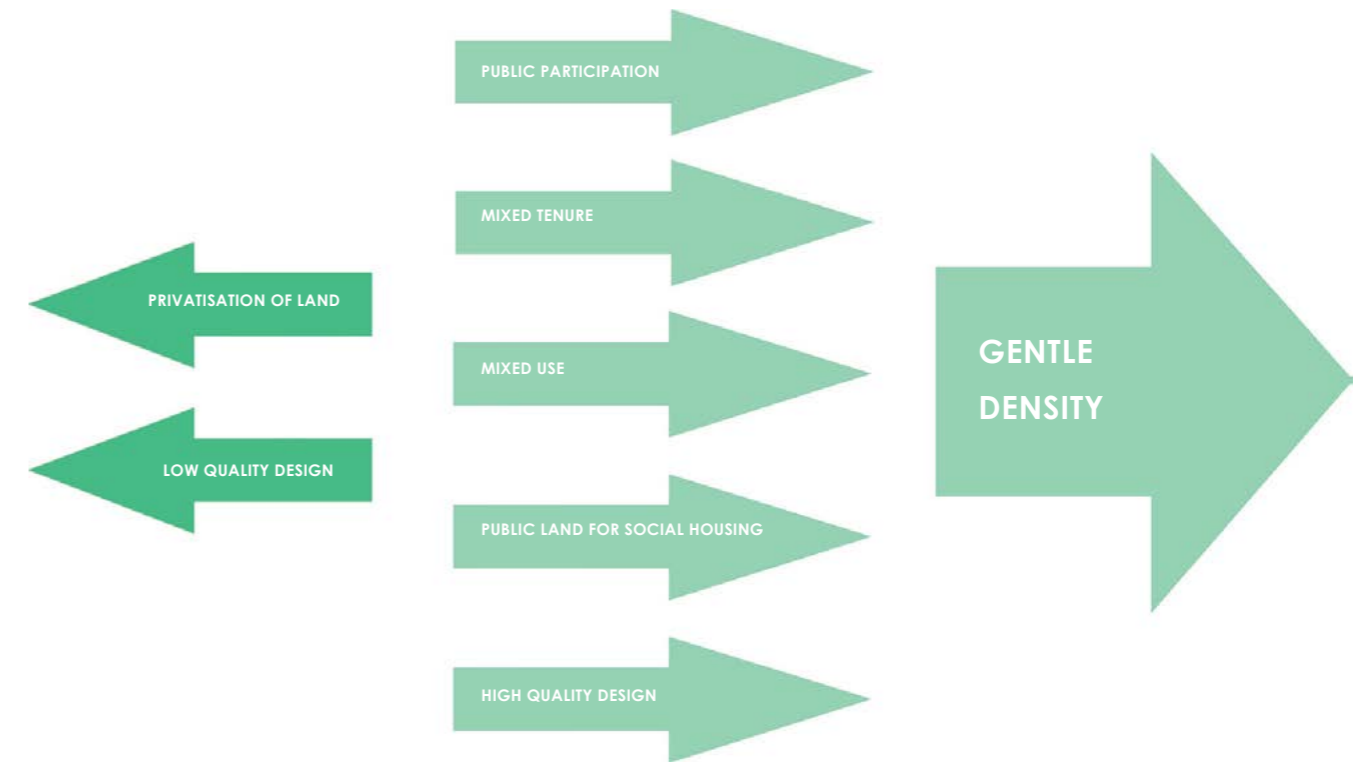


**Figure 3 :** Contributing factors of Gentle Density diagram

# 1a Public land for public housing

# 1a.   Public land for public housing

While recent strategic planning documents (such as the LDP, Belfast Agenda and the Housing Strategy) set out ambitious goals for housing, their implementation through the planning system does not meet their own high standards.

Housing in Northern Ireland benefited from the existence of the Housing Executive, who built social housing for decades until the 2000s. Since 2000, Housing Associations have delivered social housing and the Housing Executive stopped building homes. The plan is currently for the NIHE to start building houses again, but this should consider not only the current housing need, but also that of the future, and its potential climate and social sustainability.

The market has been one of the barriers to delivering good quality, sustainable and affordable housing. If the market leads housing development, the land and house prices can rise and this eventually pushes affordable housing further from central  urban places. In Sweden for example, where subsidised housing was the norm (Magnusson and Turner 2008), the system has changed. According to Grunstrom and Molina (2016) the shift of municipal housing companies from a non-profit to for-profit now 'hinders the access of low-income people to affordable housing'. These processes exclude those most in need from good quality and sustainable places. As Manuel Aaalbers (2017) explains: 'Housing has entered a post-Fordist, neoliberal and financialized regime.'

We offer a few examples in Belfast to demonstrate how public land risks falling into private ownership, thus preventing the building of social housing in it.

1.   Little Donegall Street - Land that was supposed to be used for social housing in Little Donegall Street had  a planning application submitted to council by a property developer for student accommodation. While the council committee initially rejected it, the project was granted approval after an appeal.

2.   Ormeau Road - Land that belonged to PSNI on Ormeau Road was earmarked for social housing, but instead was developed as a BUild-to-rent apartment building. This type of tenure is the least likely to create a sense of community, as it is based only on temporary residents.

3.   Mackies site - The Mackies site in North West Belfast, a stretch of land of 13 hectares that belongs to the Department for Communities, was handed to Belfast City Council for the development of a greenway. While the greenway only occupies about 8 hectares, the purpose of the remaining 5 hectares is not being discussed. These pieces of land could be very well suited for mixed tenure housing and mixed use ground floors.

The latest private housing developments in Belfast also ignore issues of mixed use, mixed tenure and public participation, and are a reflection of what the market dictates.

1.   Obel tower - a large majority of apartments are rented to temporary residents, run by investors or work as airBnB rooms, is far from the aspirations of this strategy.
2.   Tribeca Belfast – Proposed by Castlebrooke -  development of high rise 1 and 2 bedroom private apartments (social housing 10% outside the red line)
3.   Titanic Quarter – proposed by Turley and Lacuna -  high rise apartment tower blocks with majority of 1 and 2 bed apartments with separate block of social housing
4.   Sirocco Waterside - proposed by Osborne+Co - high rise apartment tower blocks with majority of 1 and 2 bed apartments with separate block of social housing

These projects promise to deliver profits for the developers but they do not align with the Belfast Agenda, LDP, or the call for evidence for the Housing Strategy, as they do not provide genuine mixed use, mixed tenure or a public participation plan. The developments are all too large, too tall (there is no tall buildings policy in Belfast) and do not guarantee to provide the network of services needed by people moving into a new area. Even though these projects promise to deliver 20% affordable housing including 10% social housing it is not clear how this will be delivered, and the risk is that this will be following definitions of affordability of the market and that social housing will be relegated to an easily identifiable and isolated building within or outside the red line. Sprawl of low density housing can be seen in private and public projects such as:

1.   Castlereagh - by Turley's for 322 homes
2.   Gainsborough Drive – by TSA planning for 28 homes
3.   Mill Race -  by Eglinton developments  for 150 social homes
4.   Visteon – by Radius housing for 196 social and 48 affordable homes
5.   Fort Green – by Radius Housing for 20 affordable homes within larger social housing scheme

All these projects are exclusively housing without any services included, and no guarantee that others will supply them nearby. Public land should not be exclusively granted or sold to private developers in areas of housing need or deprivation. This trumps the possibility of a genuinely inclusive housing strategy. To avoid this process of full privatisation, collaboration between different parties needs to form the foundation to a fresh approach to urban housing. These parties are:

1.   The communities who need housing;
2.   The government;
3.   NGOs involved in housing as a human right;
4.   Academia as a contributor;
5.   Private Developers

# Fortgreen Rathgill Parade

## Bangor, County Down NI 2017

### Spatial
City : Bangor
Site : Southern edge of Bangor, County Down
Size : 65041 m² [363 m² per unit]
Homes : 179 social housing homes
Height : 3 storeys
Density homes/ Ha : 27 homes per hectare
Green and public space : The site is sandwiched between existing housing on all sides except the east which features the Balloo Bog area, a small walkable nature park

Location : Belfast City airport and Belfast port just a 20min drive

### Housing model
Architect : JNP Architects
Tenancy: built under the 'affordable housing scheme' ran by the Fold Housing Association, which operates under the larger Radius Housing association
Cost : 'affordable housing' homes priced at roughly £135,000
Type : mixture of flats, detached and semi-detached homes including 20 homes being developed for those with complex housing needs

### Priorities
Mixed use : No.
Mixed tenure: Yes. Social Housing and affordable housing
Public participation : No



**Figure 4.1 :** Exterior perspective of *Fortgreen Rahtgill Parade* development



**Figure 4.2 :** Exterior perspective of *Fortgreen Rahtgill Parade* development



**Figure 4.3 :** Exterior perspective of *Fortgreen Rahtgill Parade* development



**Figure 4.4 :** Ground floor plan of *Fortgreen Rahtgill Parade* housing



**Figure 4.5 :** First floor plan of *Fortgreen Rahtgill Parade* housing unit



**Figure 4.6 :** Figure ground plan of *Fortgreen Rahtgill Parade* development

# Visteon Estate

## Blacks Road, Belfast 2009

### Spatial

City : Belfast
Site : Blacks Road, Heart of West Belfast
Size : 21 acre
Homes : 244 mixed tenure homes
Height : 3 storeys
Density homes/ Ha : 29 unites per hectare
Green and public space : nearby local amenities and a linear park
Location : site is hemmed in by the M1 to the East and existing
housing projects on all other sides

### Housing model

Architect : early work from JNP Architects
Tenancy: social and affordable housing
Developer : Kevin Watson Group
Cost : Unavailable. ca. £199.000 in the area.
Type : Suburban cul-de sac semidetached

### Priorities

Mixed use :  Yes, partial. The site incorporates commerical space, a
purpose built community centre, 3 recreational and amenity spaces.
Mixed tenure : Yes. Social and Affordable housing

Public Participation: No



**Figure 5.1 :**  Exterior perspective of *Visteon Estate*



**Figure 5.2 :**  Ariel view of former Visteon factory on site



**Figure 5.3 :**  Ariel view of proposed Visteon Estate and surrounding context



**Figure 5.4 :**  Exterior perspective of *Visteon Estate*



**Figure 5.5 :**  Road layouts map surrounding the *Visteon Estate* site

## 1b.   Good quality designed spaces for living

A study by the UK collaborative centre for housing evidence (White et al 2020) found that the 'design of housing in the UK remains stubbornly low', pointing out that 'placelessness' is one of the characteristics of this poor housing quality. Placelessness is 'the condition of an environment lacking significant places and the associated attitude of a lack of attachment to place' (Oxford Dictionary of Human Geography). White's study highlighted a series of values provided by well-designed spaces: 'sense of place', 'variety', 'curiosity', 'identity', 'character', 'connectivity' and 'mix'. Beyond the values presented in White's report, there is consensus among urban designers (Jacobs, Cullen, Lynch, Moughtin, Duany, Gehl, Carmona, Tonkiss, Zukin, Toderian, et al.) that the qualities that contribute to the sense of place and character of a neighbourhood include:

1.  **Durability** - 'the greenest building is the one that is already built' (Elefante, 2007). Construction should be durable enough to last at least a century without major reconstruction; it should need little or no effort to heat and cool using existing technologies for the building to adapt to temperatures naturally.

2.  **Space** - Good quality spaces should have enough space for carrying out all essential activities as well as most optional activities.

3.  **Adaptability** - They should be adaptable so they can accommodate changes in the circumstances of those who live in them without major changes to the building's structure.

4.  **Connectivity** - Good quality spaces should be part of a well-connected network - connected to walking and cycling networks as well as public transport networks, so that people who live in them are not reliant on private cars to carry out their necessary and optional everyday activities.

5.  **Social sustainability** - They should be socially sustainable - encompass mixed tenure and blind tenure that allows people from different incomes and backgrounds to share spaces and services, removing the stigma of those who do not have the means to afford location and services that others do.

The study investigates two cases in Belfast: the 'affordable' Peter Pan that and the private Portland 88. Both failed to fulfil a significant amount of the values a well-designed space needs. Even though density and mixed uses are mentioned throughout the report there is no specific guidance for a particular type of density to deal with the housing situation in the country.

This report will show how Gentle Density, mixed use, mixed tenure and public participation could deal with many of these aspects to provide healthy and sustainable housing for Belfast in the future.

**1b** Good quality designed spaces for living

## 2.  Gentle Density - mixed use, mixed tenure and public participation in housing

*In this section we will define our approach to the concepts of gentle density, mixed use, mixed tenure and public participation, which will serve as an introduction to the examples we analyse subsequently.*

## 2a.  Gentle density

Gentle density refers to the density of a mid rise compact, street facing, mixed-use series of plots and blocks. Gentle density also encompasses the process through which to gain density, by building in infill sites and avoiding demolition of any existing stock. Even though this concept is not yet embedded in the academic vocabulary, it is increasingly used by urban designers, architects and policy makers as a tool to drive mixed use infill and densification of existing neighbourhoods.

Rather than presenting well-studied areas of compact and dispersed cities, or ways to measure density (in terms of inhabitants, homes or floor space index), this report will propose gentle density as a vehicle to occupy brownfield vacant public land in Belfast with much needed housing. Therefore, we define it as:

*'Gentle density is attached, ground-oriented housing that is more dense than a detached house, but with a similar scale and character. Think duplexes, semi-detached homes, rowhouses, or even stacked townhouses.'* (Toderian, B. 2017)
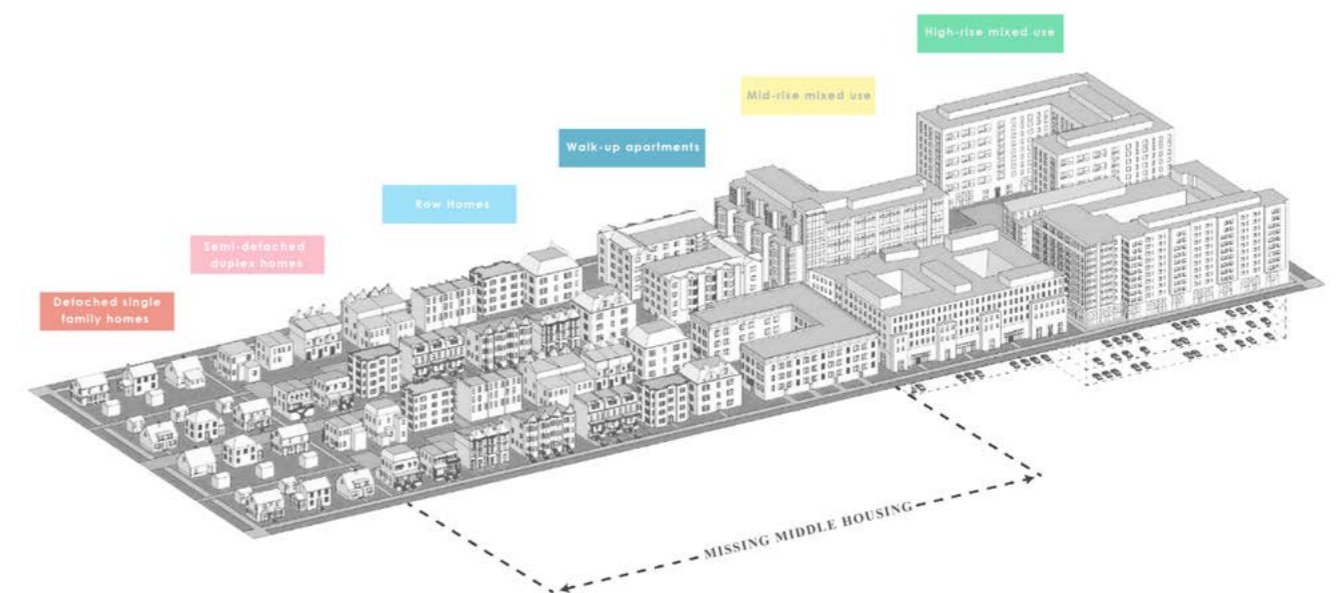


**Figure 6 :** Diagram illustrating need for middle housing in Northern Ireland . (Paroleck 2020)

2a Gentle Density

Gentle density comprises a large range of typologies, but it is decisively a middle density. It is a block-based morphology including a range of open spaces and services needed for comfortable living. Gentle density also refers to the way that the built form is delivered; rather than reconfiguring the urban landscape through demolition and rebuilding, it advocates using leftover and vacant spaces to increase the density of existing neighbourhoods without much impact on the daily life of the area.

The popular perception of low density detached housing as the most desirable type has been overstated. International studies have proven that once wealth and age variables are removed, the problems related to high-density urban living become much less evident (Halpern, 1995). Medium density typologies could therefore suit both social and private housing in the UK. This could be very beneficial to Northern Ireland, whose low density housing developments have intensified sprawl and car dependency in the last half century, rendering Belfast one of the most car dependent cities in the UK, with the average person making over 80% of journeys by car (Capener 2020). *Strong Towns* in the US and *Create Streets* in the UK promote gentle density, highlighting its ability to support a good quality of life, liveability and vibrancy.

The social and economic sustainability benefits of compact cities are well documented in academia (Gleeson 2013, Ahlfeldt, Pietrostefani 2017). The agglomeration of economies in compact cities increases productivity while allowing for shorter trips; thus encouraging smaller ecological footprints and better city health. More specifically, studies such as Birbi et al (2020, pg 1) detailed the ways the compact city can promote sustainability by:

1. reducing the amount of travel distances and shortening commute time;
2. decreasing car dependency;
3. lowering per capita rates of energy use;
4. limiting the consumption of building and infrastructure materials;
5. mitigating pollution;
6. maintaining the diversity for choice among workplaces, service facilities, and social contacts;
7. and limiting the loss of green and natural areas.

*'This is justified by the fact that the compact city emphasizes the intensification of development and activities, creates limits to urban growth, encourages land use and social mixes, and focuses on the importance of public transportation and the quality of urban design'* (Birbi et al. 2020, pg1)

A study from the Spatial Economics Research Centre in 2017, reviewing compact city cases from all over the world, found that 69% of them had *'normatively positive effects associated with compact urban form'*. Gentle Density is more specific, underlining the process of delivery as well as the resulting urban form the compact city should take, aiming at a human scale development of housing and all the surrounding services needed.
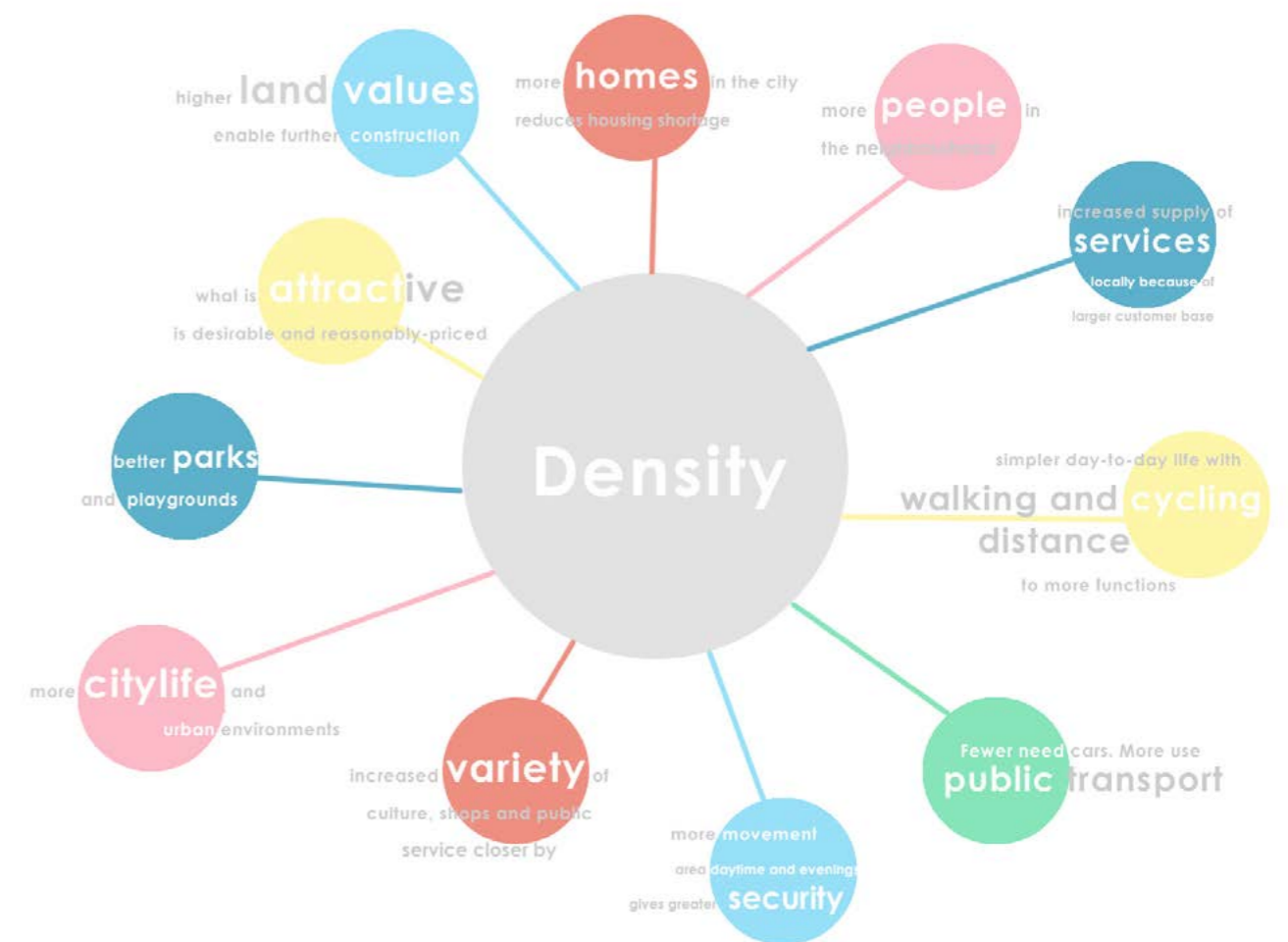
Belfast has suffered from high levels of population displacement since the 1960s. Neighbourhoods in Sailortown, the Market, Sandy Row, the Shankill and the Falls were demolished, displacing and scattering their communities, who still feel a sense of belonging to the places where they originally come from. Re-housing those communities since the 1980s was achieved through less dense and more sprawled housing developments than ever before in the history of the city, detaching them from their place and identity. A sustainable community is one that is able to adapt to change without needing to completely transform its way of life. Fostering gentle density is a way of keeping communities local, encouraging change to happen gradually, without completely disrupting people's lives.

In May 2021, 5687 households were in need of adequate housing across the city of Belfast. Meanwhile, over 57 hectares of public land (PPR 2021 ownership map) lay vacant, including large sites in North West and North Belfast, where some of the higher number of housing need is identified. We suggest that if a minimum density of 75 homes per hectare were adopted for new areas with housing provision, at least 4275 new homes could be built on public land right now. If we raise that number to 125 homes per hectare, 7125 homes could be built on public land. This density can be achieved in a number of different ways, as illustrated in the following figure.
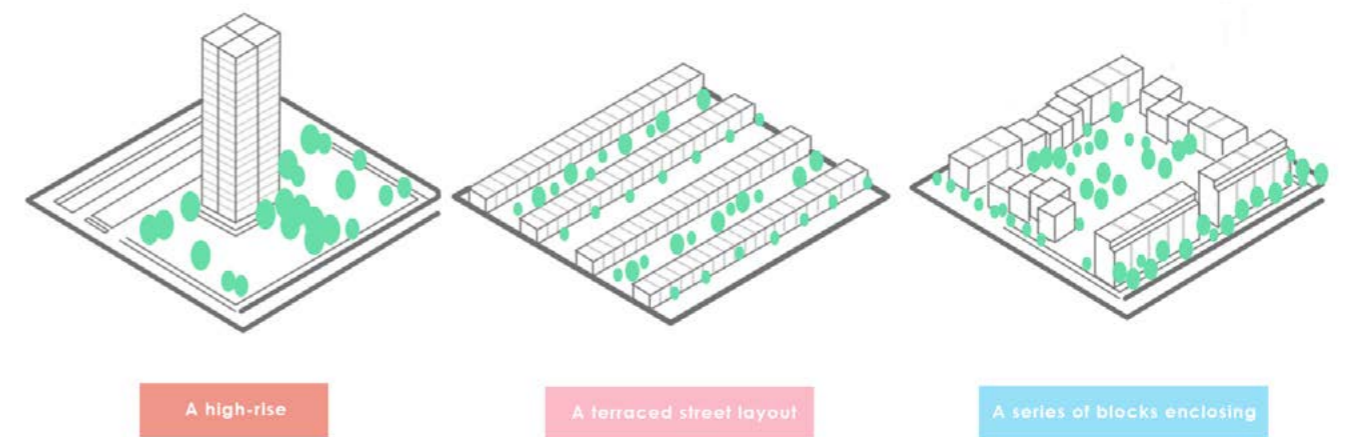
**Figure 8 :** Diagram illustrating different Architectural forms that achieve 75 homes per hectare. (Andrew Wright Associates,

The high rise example has been proven unsuccessful in supporting vibrant and safe communities. The typology could still be maintained in existing buildings, but the mid-rise examples of terraces and city blocks are more socially and environmentally sustainable.

The scale and form of housing will not solve other problems of society. In order to deal with problems of deprivation, housing led regeneration policy should be accompanied by sound policy in other areas, including physical and mental health, education, leisure, welfare and climate change. However, adequate housing provision can go a long way in supporting human rights.

The current form of suburban housing developments encourage suburban sprawl and car dependency. Resonating with other international studies, according to Angie Smith's studies in Halifax (Canada) in 2015, the cost of suburban housing to the public purse is twice as much per average household than that of urban housing, counting the cost of services including infrastructure, health and education among others. Furthermore, studies by Create Streets, Strong Towns, Project for Public Spaces and many other collectives of scholars and practitioners, exposed the detrimental effects of high car dependency to public health.

A barrier to widespread application of gentle density is the lack of understanding of the efficiency and human scale of housing and its related services. We frequently come across comments in NI and the UK that 'people want their front door' or that people do not like to live in apartments. These assumptions deny two facts: one, that towns and cities of the UK and NI used to be much denser than they are today, and in areas in which this density has been kept the housing there is desirable; and that medium and gentle density are very well accepted by populations of other parts of the world, even in similar social, cultural, climatic and economic contexts.

The role of design is crucial in developing dwelling typologies that are suitable for a range of property sizes and provide homes that are desirable places to live to people of all backgrounds for both the private and social

**2a** Gentle Density

## 2b.  Mixed tenure

According to the draft thinkpiece produced by the Department for Communities and the Northern Ireland Federation of Housing Associations in 2018 'Mixed tenure is residential development which combines a range of tenure options, which can include owner-occupier housing, shared ownership housing and rental properties (social, intermediate and private). The focus of mixed-tenure development is fostering greater social, economic and community mix to support thriving and sustainable communities.' Within the framework of Gentle Density, this definition covers the tenure discussion by providing a mix of demographic groups, while fostering a range of activities combined with housing models. However, mixed tenure cannot be discussed without mentioning affordability.

> *'Housing affordability broadly refers to the cost of housing services and shelter – both for renters and owner occupiers – relative to a given individual's or household's disposable income.'* (Bieri 2014)

Affordable housing is defined in various ways. The market led approach defines affordable housing in the UK as 80% of the market value, which has been broadly questioned by advocates of affordable housing. The Affordable Housing Commission (2019) largely defines affordable housing for those at work as that which takes less than 30% of the household income, and discusses specifically struggling renters, low-income older households, struggling homeowners and frustrated first time buyers. Mark Stephens (2017) defines it clearly in the European Commission Directorate-General for Regional and Urban Policy: 'Housing is affordable when housing of an acceptable minimum standard can be obtained and retained leaving sufficient income to meet essential non-housing expenditure.'

The Mixed Tenure thinkpiece discusses a series of learning points that we agree with such as the importance of good design and sense of place, the need to consider the local context and that a local economy needs to support housing. It is also valuable to point out that the report favours pepper potted mixed tenure against segregated or clustered tenure. However, when it comes to the examples used from both Northern Ireland and Yorkshire to show the potential of mixed tenure in Northern Ireland, these fall short in many aspects. The fact of only looking into tenure and not into mixed uses, density or public participation misses the point for a housing type that should be sustainable and future proof. Many of the images shown in the report depict mixed use and medium density neighbourhoods, but the cases studied are all low-rise, low-density, semi-detached, car dependent areas. Only studying the tenure aspect of housing can be misleading as the examples shown are neither socially, environmentally or economically sustainable.

New policy needs to be able to address these issues taking advantage of the high levels of land and building vacancy in Belfast and Northern Ireland. It also needs to be considered that Belfast has not yet fallen into the processes of housing financialisation, but is at a high risk of doing so, and only government policy will be able to control over development and development focused on profit rather than the wellbeing of the local communities.

Community Land Trusts (US, UK, Canada), Baugruppen (Germany) and Kombohus (Sweden) Public Housing (Austria) are models of land ownership and housing development that could be adapted to Northern Ireland. This report will analyse some examples of these housing models.

**2b** Mixed tenure

## 2c. Mixed use

During the last couple of decades, the value of mixed use in cities and streets has been highlighted in practice and academia. Even though there are different interpretations of what mixed use means, there is consensus on the fact that zoning of urban areas by use has been detrimental to the liveability, vibrancy and safety of cities. Since the 1960s there has been a reaction to zoning policies and the way they disproportionately damage working class communities in cities around the world. Jane Jacobs, William Whyte, Donald Appleyard and Joseph Rykwaert all highlighted the social significance of different activities in city streets. Jan Gehl, Matthew Carmona, and more recently mayors and city officials around the world such as Ada Colau in Barcelona, Anne Hidalgo in Paris and Jennete Sadik-Kahn in New York are advocating for more diverse and accessible streets, which naturally encompass mixed uses.

UN Habitat recently indicated that: '. . . *cities have a natural advantage when it comes to promoting low-carbon mobility. Their density and mixed use ensure that many destinations can easily be reached on foot, by bike or using public transport.'* (UN Habitat 2016). Birgit Hausleitner devices a series of characteristics that define efficient mixed use in cities:

1. Accessibility at City level - the position of an urban block in the urban street network
2. Plot and Built density of the block
3. Plot density
4. Floor Space Index
5. Ground Space Index
6. The openness of the urban block's perimeter

These characteristics can help understand the current configuration of both density and mixed use and Hausleitner concludes that 'We need to pay more attention to designing the structure of the city to afford mixed use with different needs. My appeal is therefore to design blocks, streets and fabric configurations that result in a more complex organization of space, and thus better afford mixed use.'

Evidence shows (Aurand 2010) that neighbourhoods with a greater variety of housing types and residential density have a greater quality of homes that are affordable to low income renters. Meanwhile, Korthals Altes (2008) explains how old industrial estates can benefit from a mix of new uses such as housing and other uses, and Bramley et al (2009) state that mixed use dense areas can provide much better access to services than less dense areas. Cervero and Duncan's study found that 'placing shops and services near workplaces and at neighbourhood gateways could induce trip-chaining and more efficient travel.' Plot-based urbanism (Porta and Romice 2017) also investigates this type of medium density and mixed use as an effective way to deal with the growth of cities.

Mixed use, especially the combination of housing, retail, health, education and light industry has proven to do well in terms of both climate and social sustainability, encouraging social mix, less car journeys and more resilient communities.

**2c** Mixed use

# 2d. Public Participation

Public participation has been part of planning agendas for more than half a century, with discussions around it since the Town and Country planning act of 1968. However, even though the inclusion of the public in planning decisions is essential to more positive outcomes in urban development, these processes are complicated and can lead to increased complexity.  Co-design is mentioned in the Summary Housing Strategy Document as a preferred way forward, but this needs to be looked at in detail. There are many different ways of having the public participate in planning processes, but some of them work better than others.

> *'Enhanced public participation is viewed as capable of improving the quality and legitimacy of decisions in government, health services, local government and other public bodies, as well as having the potential to address the 'democratic deficit' and building community capacity and social capital.'*
> (Barnes et al 2003 pg 379)

Some authors criticise the bureaucratic dimension of public participation and the importance in differentiating the levels of participation from token participation to full control (Till 2005), while new methods of participation like GIS models (Barton et al 2005) bring another dimension to participatory processes. Regarding participation in affordable housing models it is worth mentioning the work of Thige (2015) who discusses the agency of different actors in the provision of social housing considering the opposition of NIMBYs and other groups and the stigmatisation of social housing.

More innovative participatory processes have been developed in recent years by groups such as Human Cities, Make Space for Girls, Play the City and innumerable other local groups trying to engage with the public beyond the well-trodden statutory public 'consultation' processes. One of these is the StreetSpace Project, which focuses on the use of oral history, ethnography and graphic anthropology to develop a relationship with the community that the project works with. The project investigates the histories and everyday life of local residents, and explores what their values are so that it can inform how the built environment can respond to their needs.

Engagement with communities early on in the design process can provide design professionals with a deeper understanding of the more subtle issues that may impact the design. Each large scale development has a large capital investment into design fees, therefore enegaging before designs are set is key to an integrated process.

Public participation is just one of the concepts that needs to be considered in the idea of Gentle Density.
In the next section we will analyse a series of case studies that address all the ideas mentioned here.

# 2d Public participation

# 3. Case studies

## 3a. European blocks and plots

The following cases show a density that largely surpasses the one proposed in the report. What we attempt to show is that 19th and early 20th century housing provided a solid, sustainable, mixed use, liveable fabric of blocks and plots that is still desirable today in cities in Europe. The proportions of apartments, common areas, staircases and thresholds all encompass a built fabric that could be easily replicated in many places around the world. Paris, Barcelona and Vienna's blocks traditionally hold mixed uses, mixed tenures and a medium density that fosters populated streets, low car use, communal spaces and flexibility in ownership and tenure

**3a** European Blocks and Plots

# Haussmann Block

## Paris, France 1830 - 1841

**Housing model**

Designer : Baron Georges Eugene Haussmann

Model : The neo-classical apartment blocks were faced in cream coloured Lutetian limestone that was locally sourced. Although the apartment heights range from 12m to 20m tall, each building is proportional to the boulevard and does not exceed six storeys. They have steeply sloped, four sided mansard roofs angled at 45 degrees to allow dalight to reach the sidewalks.

- Ground floor : high ceilings and thick walls to accomodate shops offices and other businesses

- First Floor: "mezzanine," has low ceilings and used by the businesses for storage.

-Second Floor: "noble floor," is the most desirable flat as it requires the shortest climb. Has long, running balcony and beautifully crafted window frames.

-Third to Fifth Floors: have smaller balconies and less elaborate windows. Not as desirable as the "noble floor".

- Roof: typical mansard roof used as an attic (originally to house servants) with dormer windows.



**Figure 10.1 :** Ariel view of Paris Housing blocks



**Figure 10.2 :** Exterior perspective of the Paris housing block
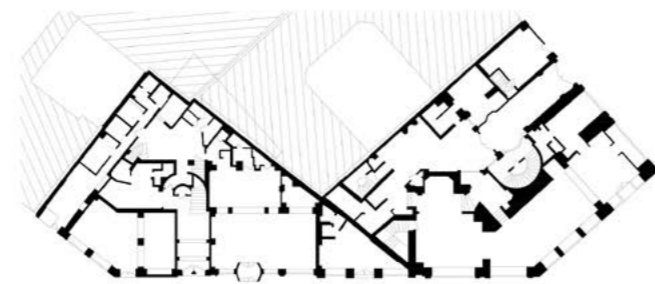


**Figure 10.3 :** Ground floor plan of the Paris housing Block



**Figure 10.4 :** Section of Malesherbes building located within the Paris housing block



**Figure 10.5 :** Street elevations of Madeleine building located within the Paris housing block
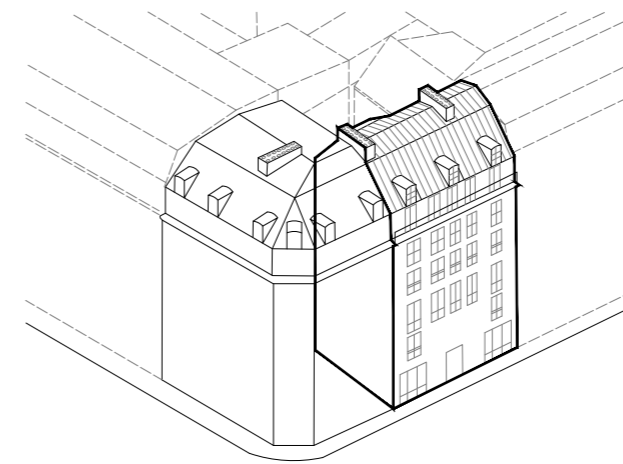


**Figure 10.6 :** Axonometric of *Housing Building* (1851-1914) located within the Paris housing block
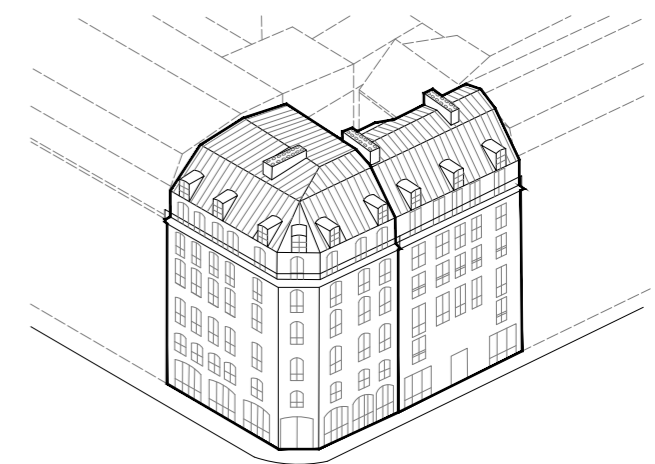


**Figure 10.7 :** Axonometric of *Rehabilitation as a Hotel* (2013) located within the Paris housing block
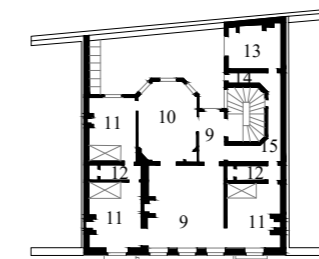


Upper Floor

8 - Anteroom
9 - Living Room
10 - Bedroom
12 - Toilets
13 - Kitchen
14 - Bathroom
15 - Corridor
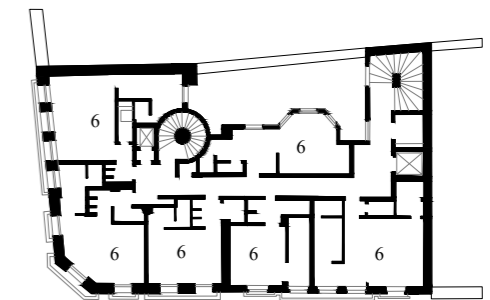


Typical Floor

6 - Bedroom
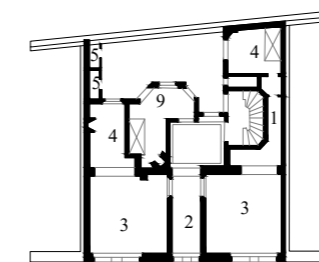


Ground Floor

1 - Corridor
2 - Hall
3 - Shop
4 - Back Shop
5 - Storeroom
6 - Bathroom
7 - Toilets
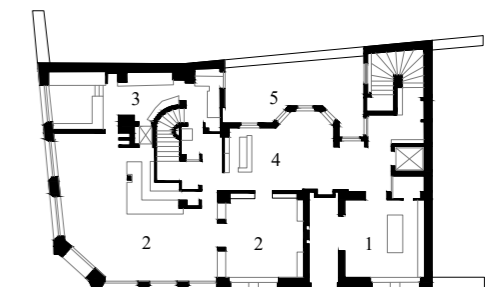


Ground Floor

1 - Reception Desk
2 - Restaurant
3 - Kitchen
4 - Living Room
5 - Patio

**Figure 10.8 :** Floor plans of *Housing Building* (1851-1914) located within the Paris housing block

**Figure 10.9 :** Floor plans of *Rehabilitation as a Hotel* (2013) located within the Paris housing block

# IIDefons Cerda L'Eixample

## Barcelona, Spain 1855

### Spatial

City : Barcelona
Site : Eixample, central district of Barcelona
Size : 7.48km²
Height : 5-10 Storeys
Density homes/ Ha : 150 homes per hectare
Aspiration : Cerda's aspirations were to build up the blocks at 113x113m on only 2 or 3 sides, at a depth of 20m and no higher than 20m. However the majority of the blocks were soon built up on all four sides far exceeding their originally planned height.

### Housing model

Model : 7 storeys - mixed used and self sustaining with shops, services markets and schools. In the bigger block zones, larger services would be present such as hospitals. The block were origi-nally planned as public facilities were instead mostly developed as private space. The mixed use development includes:
- education services - primary secondary and tertiary
- health services - from GPs to hospitals
- retail spaces - independent and franchised
- hotels
- restaurants
- many others



**Figure 11.2 :** Diagrams illustrating the progression of the Barcelona housing block



**Figure 11.1 :** Ariel view of Barcelona housing



**Figure 11.3 :** Axonometric and plan of the Barcelona housing block
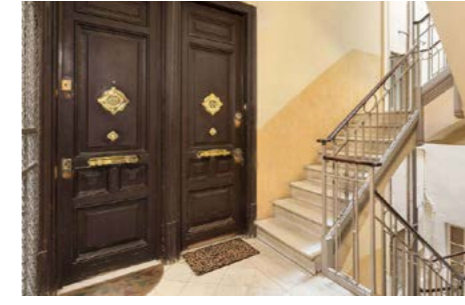


**Figure 11.4 :** Interior and exterior perspectives of the Barcelona housing block
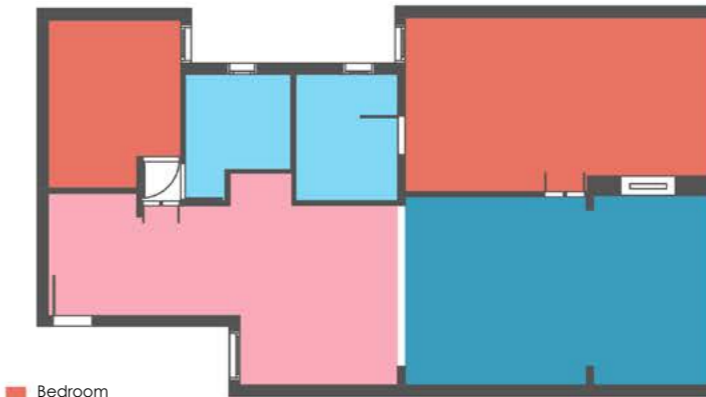


- Bedroom
- Kitchen
- Living room
- Bathroom

**Figure 11.5 :** Ground floor plan of typical two bed apartment
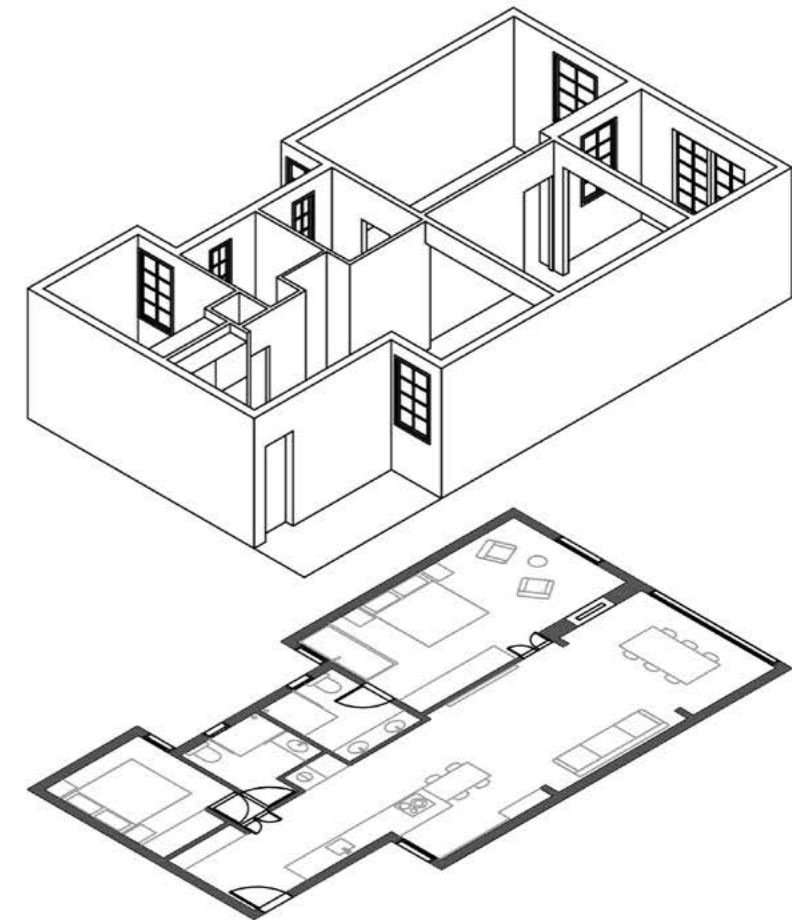


**Figure 11.6 :** Axonometric of typical two bed apartment located within the Barcelona housing block

# Karl Marx Hof

## Red Vienna, Austria 1930

### Spatial

City : Vienna
Site : Red Vienna Doubling district
Size : 134,306m²
Height : 8 storeys
Density homes/ Ha : 86 homes per hectare
Green and public space : 70 % dedicated to
public courtyard and outdoor space

### Housing model

Architect : Karl Ehn
Model : mixed used development including ; 2 x nurseries, laundry
facilities, communal showers, meeting rooms, small business and
exhibition space - 1,382 Apartments
Affordability : Low private demand for building land and low
building costs proved favourable for the city administrations
extensive public housing plan



**Figure 12.1 :** Exterior perspective of the Vienna housing block



**Figure 12.2 :** Ariel view of Vienna housing blocks





**Figure 12.5 :** Interior perspectives of the Vienna housing block
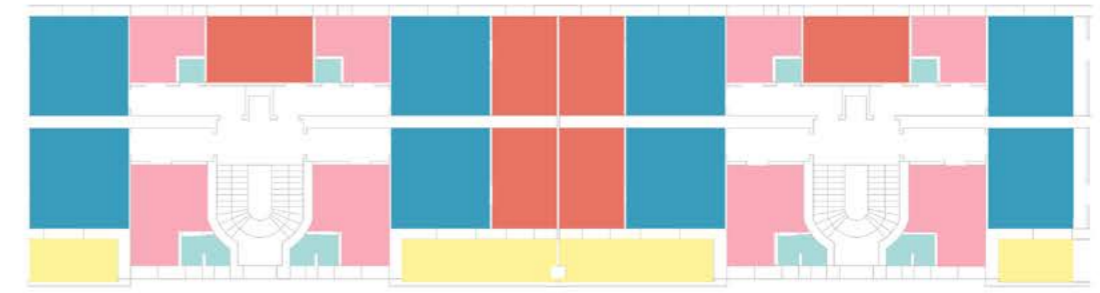


- Bedroom
- Kitchen
- Living room
- Bathroom
- Balcony

**Figure 12.6 :** Ground floor plan of typical apartment



**Figure 12.3 :** Axonomentric and plan of the Vienna housing block

**Figure 12.4 :** Diagram illustrating permeability of overall plan
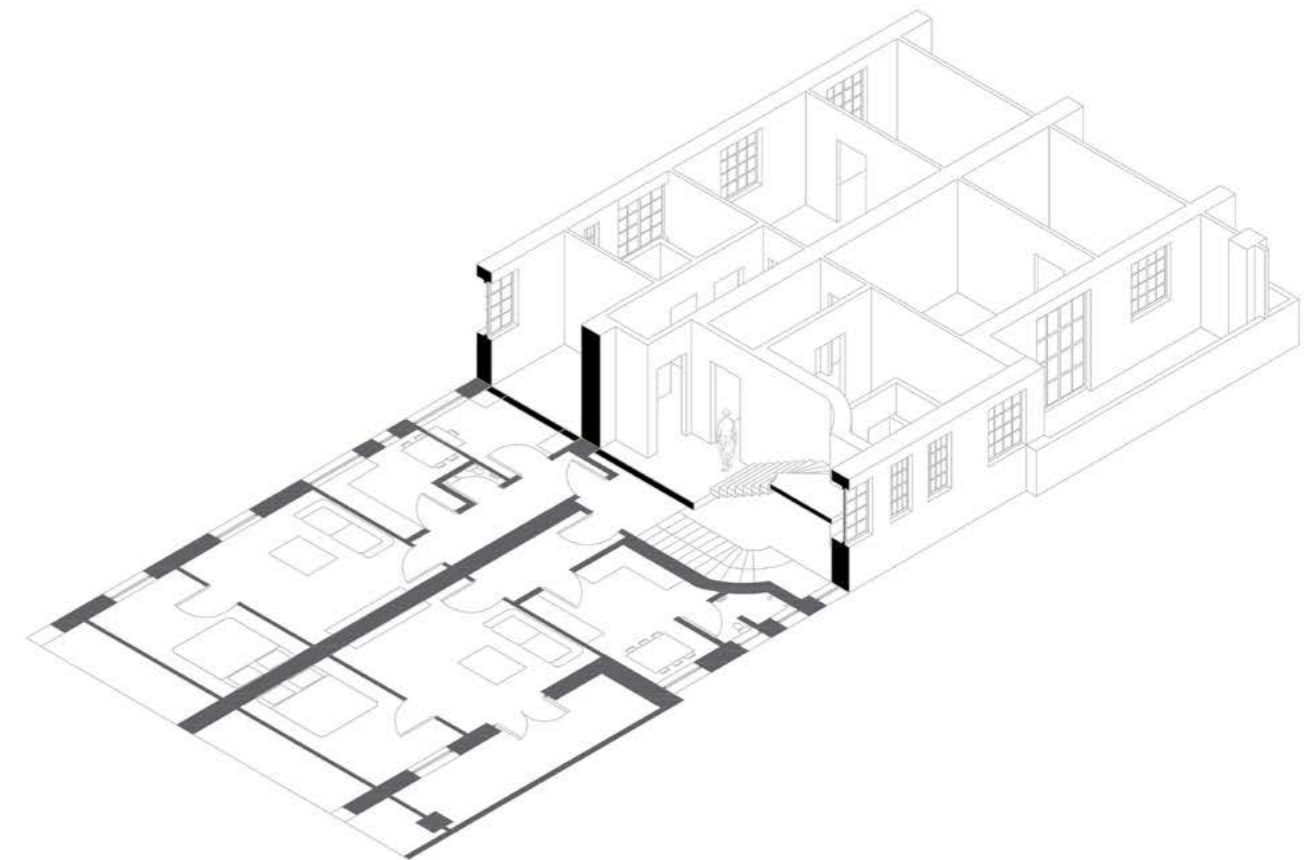


**Figure 12.7 :** Axonometric of typical apartment located within the Vienna housing block

# 3. Case studies

## 3b. Best practice international cases

The 14 cases we show in this section are all relatively recent housing schemes from around the world that at least comply with having some of the essential qualities discussed in this report. They are all examples of gentle density, from 2 to 5 stories high. They all have a combination of mixed tenure, mixed use or public participation. Essentially, all these examples foster proximity of services and functions, low car dependency, liveable streets and sustainable futures.

**3b**  Best practice international cases

# Aranya

## Indore, India 1989

### Spatial

City : Indore
Site : Indore, Madhyapradesh
Homes : 6500 dwellings
Height : 8 m approx
Density homes/ Ha : 100 homes/hectare
Green and public space :  open linkage area with main activities
held in front of housing

### Housing model

Architect : Vatsu-Shilpa Foundation bv Doshi
Model : mixed-use development 7kms from main city and 1.2km
from main market
Affordability : low income groups
Tenancy : self-owned
Land ownership : government - public
Type : Low rise

### Priorities

Mixed use : Yes
Mixed tenure : No. Only social
Public participation :  Yes



**Figure 13.1 :**  Exterior perspectives of *Aranya* housing development
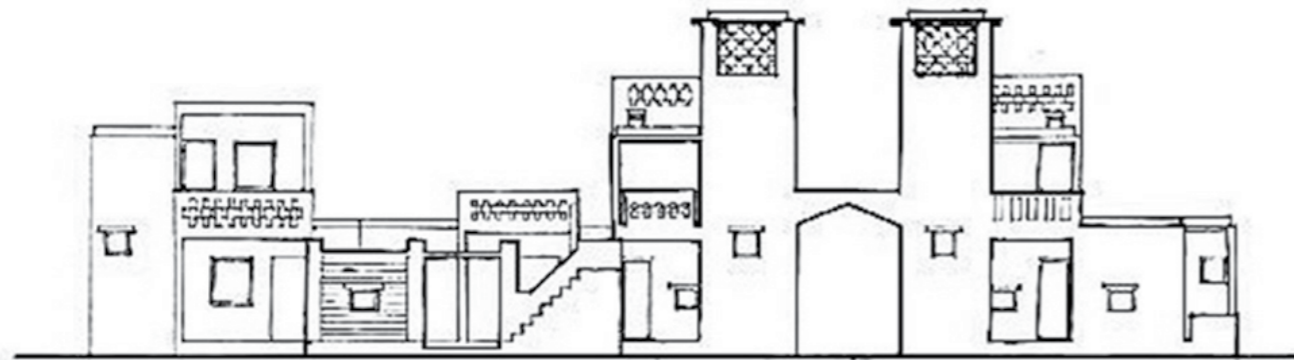


**Figure 13.2 :**  Street elevation of *Aranya* housing development



**Figure 13.3 :**  Street elevation of *Aranya* housing development
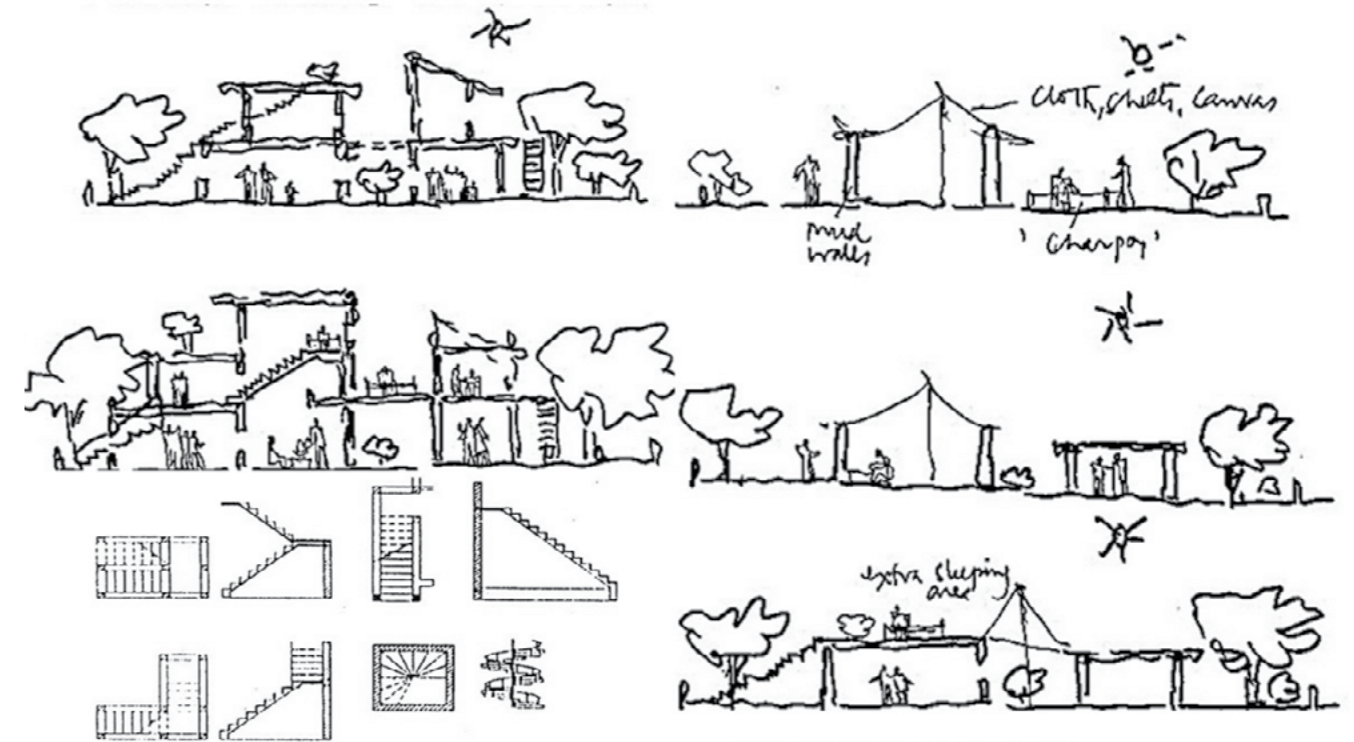


**Figure 13.4 :**  Diagrams illustrating sectional planning and staircase typology of *Aranya* housing development
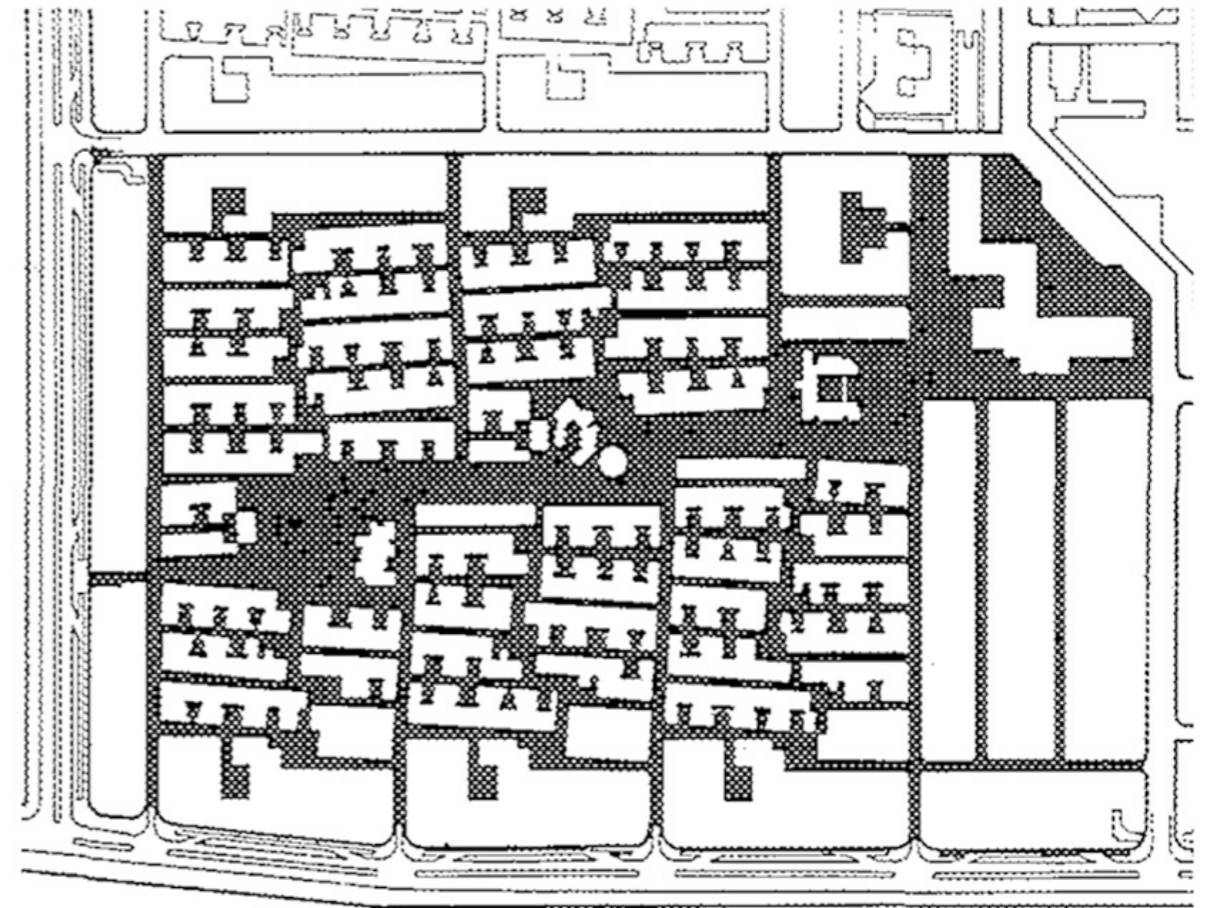


**Figure 13.5 :**  Site plan in context of *Aranya* housing development

# Shustar New town

## Khuzestan province, Iran 1977

### Spatial
City : Shustar
Site : Khuzestan province, Iran
Homes : 4000 dwellings
Height : 8 - 15m
Density homes/ Ha : 150 homes/ha
Green and public space : open garden area type
Distance from BDC : 3.6 km

### Housing model
Architect : Kamran Diba (Daz Architects planners and engineers)
Model : mixed-use, public participation
Affordability : mixed income groups
Tenancy : self-owned
Land ownership : government
Type : Low rise and high rise
Developer : Karoun agro-industries corporation and iran housing corporation

### Priorities
Mixed use : Yes
Mixed tenure : No. Only Social
Public participation :  Yes
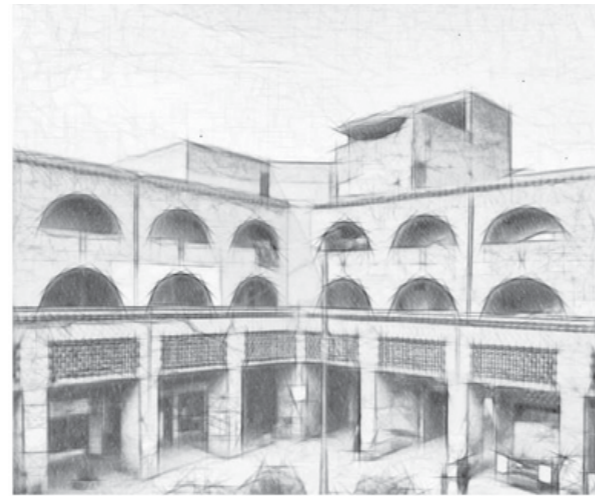


**Figure 14.1 :**  Exterior perspectives of *Shustar new town* development



Type 1          Type 2          Type 3          Type 4

**Figure 14.3 :**  The four types of housing homes within the *Shustar new town* development



**Figure 14.2 :**  Figure ground plan of *Shustar new town* development
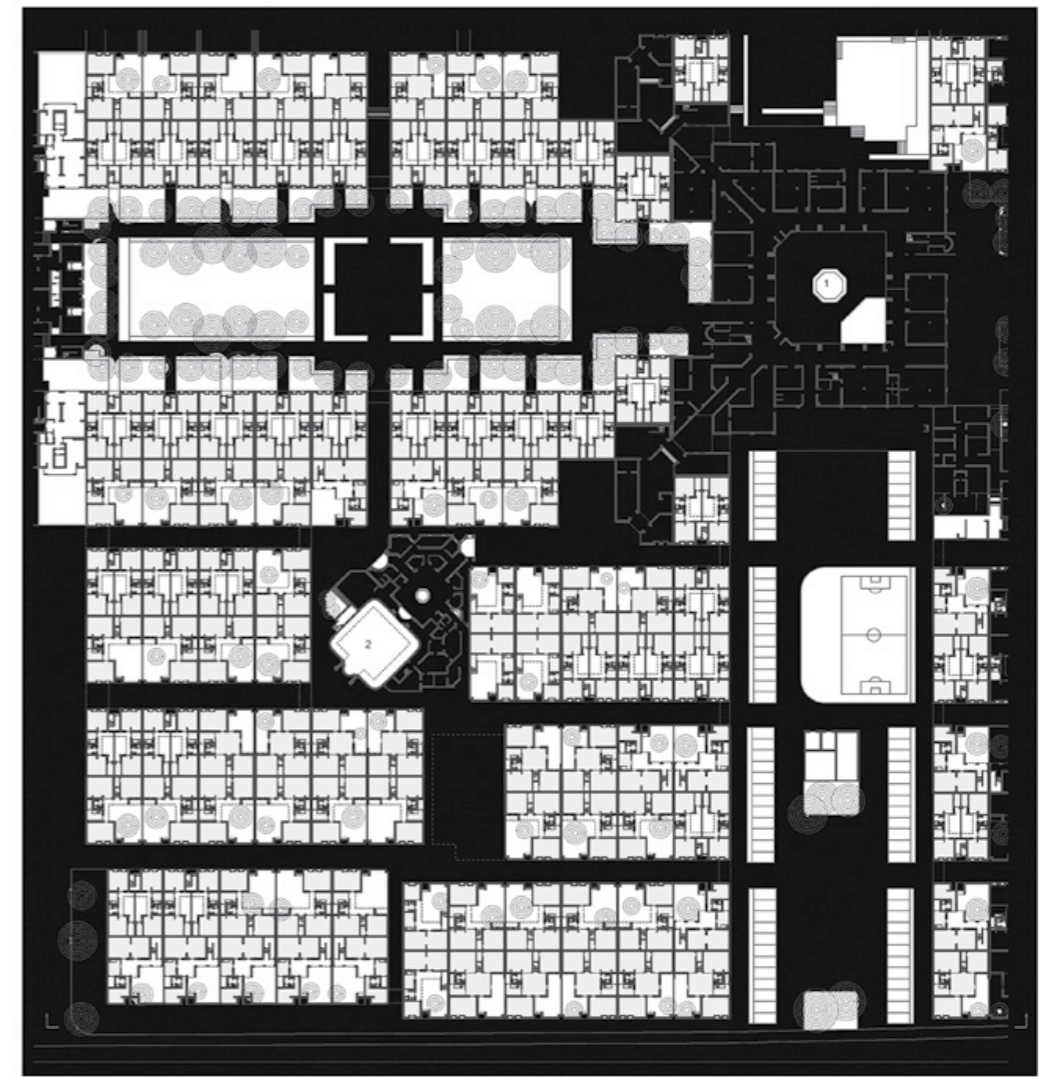


**Figure 14.4 :**  Nolli map of *Shustar new town* development

# Quinta Monroy

## Iquique, Chile 2003

### Spatial
City : Iquique
Site : Av. Pedro Prado
Size : 5,205 m²
Homes : 93 families
Height : 7.5m
Density homes/ Ha : 46 homes/hectare
Green and public space :  10 minute walk from small local park
and playground
Location : 2 minute walk to bus stop

### Housing model
Architect : Elemental
Model : social housing
Price per SqM : 330 UF/family subsidy + 10 UF/family saving
[ 1 UF = US$35 ]
Affordability : scheme conceived with affordability in mind
Tenancy : some owned, mostly rented
Land ownership : residents of quinta monroy

### Priorities
Mixed use : No
Mixed tenure : Yes
Public participation :  Yes



**Figure 15.2 :** Exterior perspective of *Quinta Monroy* develop-



**Figure 15.3 :** Diagram illustrating additive housing block system



**Figure 15.1 :** Exterior perspective of *Quinta Monroy* development



**Figure 15.4 :** Housing unit floor plans of *Quinta Monroy* development
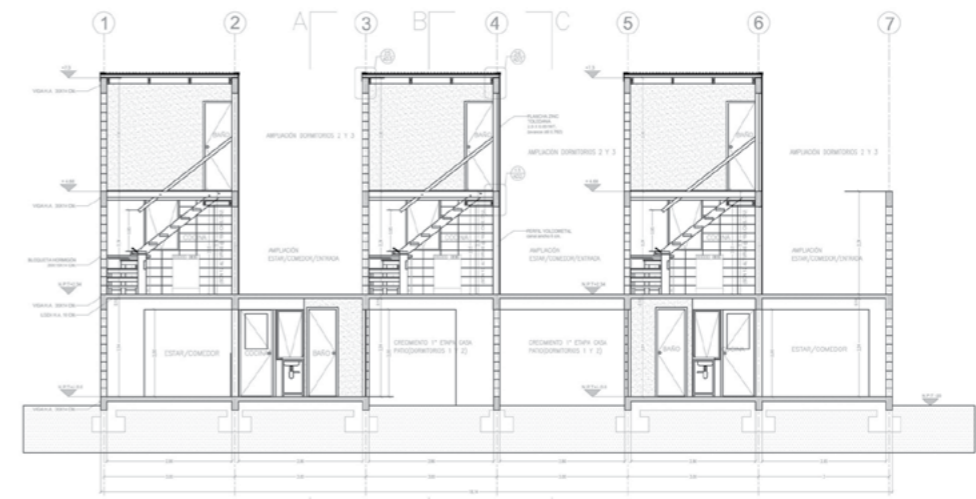


**Figure 15.5 :** Section of *Quinta Monroy* social housing homes
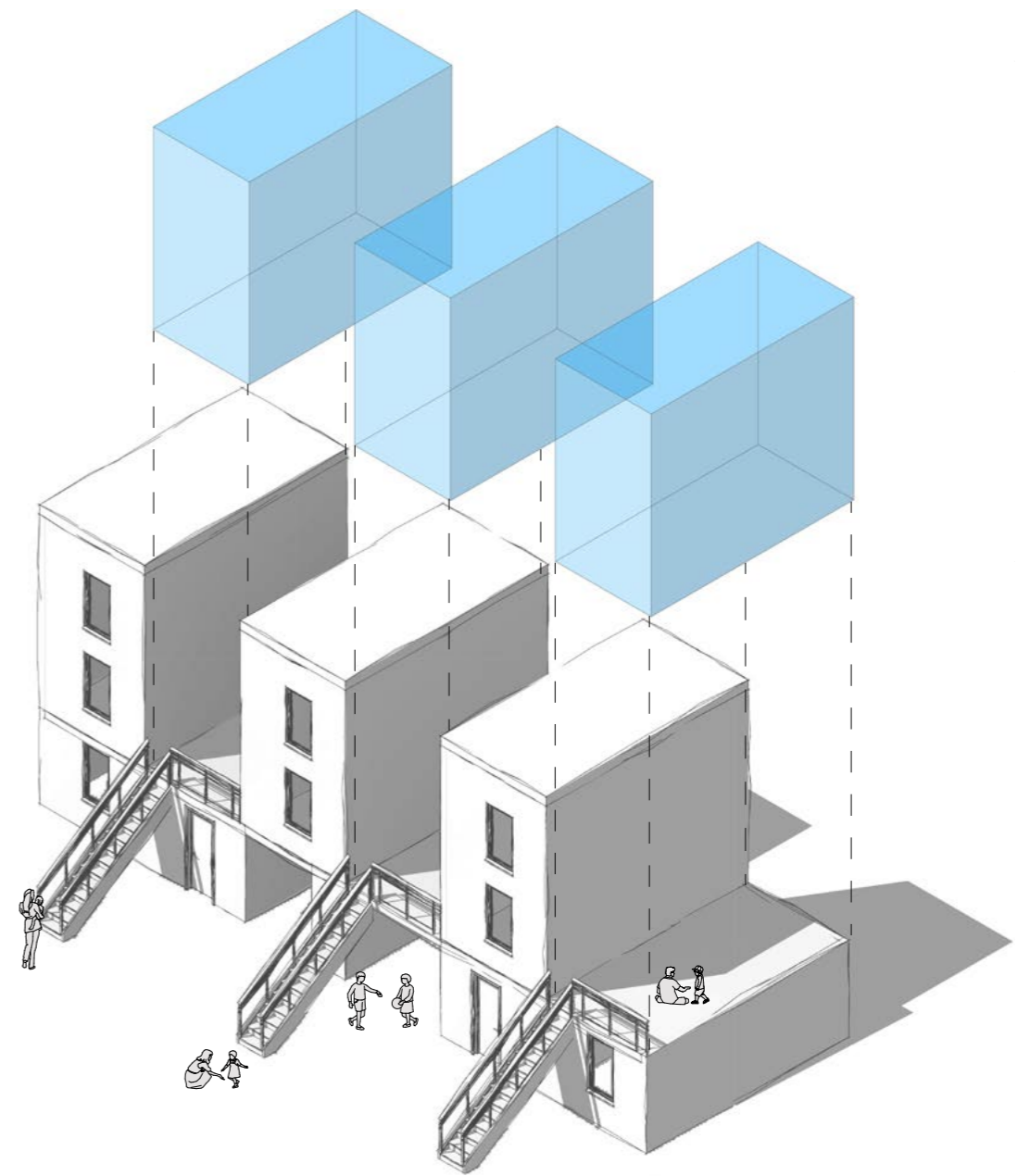


**Figure 15.6 :** Exploded Axonometric illustrating additive housing block system of *Quinta Monroy* development

# BedZed Eco Village

## London, England 2001

**Figure 16.1 :**  Exterior perspective of *BedZed Eco Village development*



**Figure 16.2 :**  Interior perspective of *BedZed Eco Village* private gardens



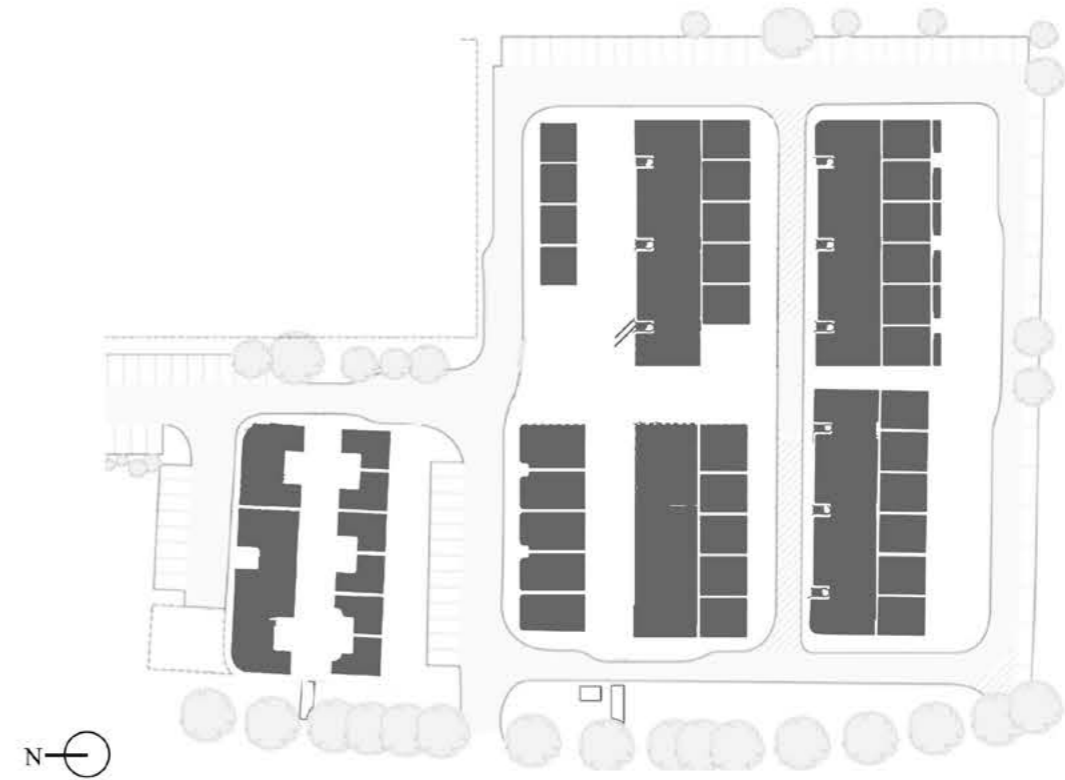**Figure 16.3 :**  Ariel view of *BedZed Eco Village* site and surrounding context



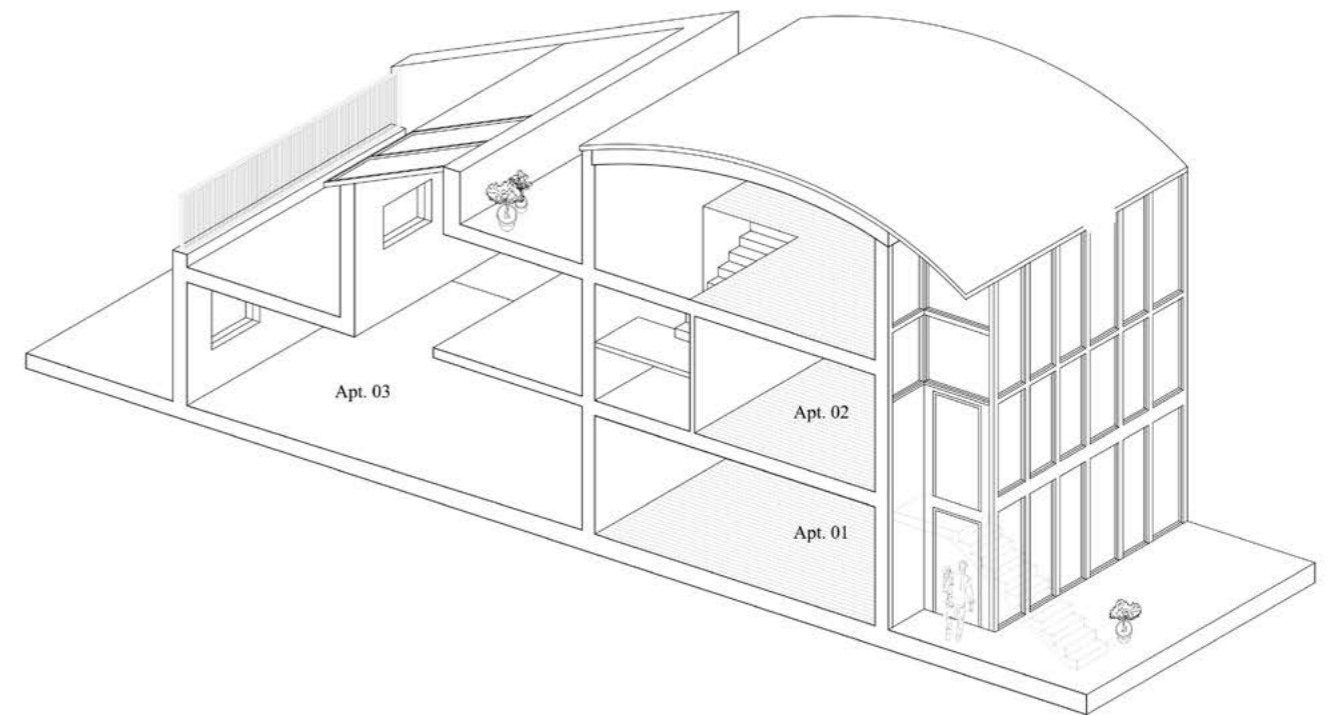**Figure 16.4 :**  Figure ground plan of *BedZed Eco Village* development



**Figure 16.5 :**  Axonometric of *BedZed Eco Village* development

# Mildmay

## London, England 2017

### Spatial

City : London

Site : London Borough of Tower Hamlets

Size : 16,285 m² (residential dwellings) 72 m² (commercial homes)

2,795 m² (mildmay mission hospital) 423 m² (The tab church)

Height :   4 - 9 storeys

Density homes/ Ha : 38 unites per hectare

Green and public space : public space and integration with surrounding streets

Location : distance from central train station 300m

### Housing model

Architect : Feilden Clegg Bradley studios + Matthew Lloyd Arch

Model :  mixed tenure, private and social housing

Construction value : £30,000,000

Land ownership : shared ownership

Type : made up from 6 individual blocks which are designed to respond to the surrounding landscape of the buildings, streets and open spaces. The blocks include a new church, 35 residential homes;

### Priorities

Mixed use : Yes

Mixed tenure : Yes

Public participation :  Yes


**Figure 17.1 :**  Ariel view of *Mildmay* housing development


**Figure 17.2 :**  Exterior perspective of *Mildmay* housing development


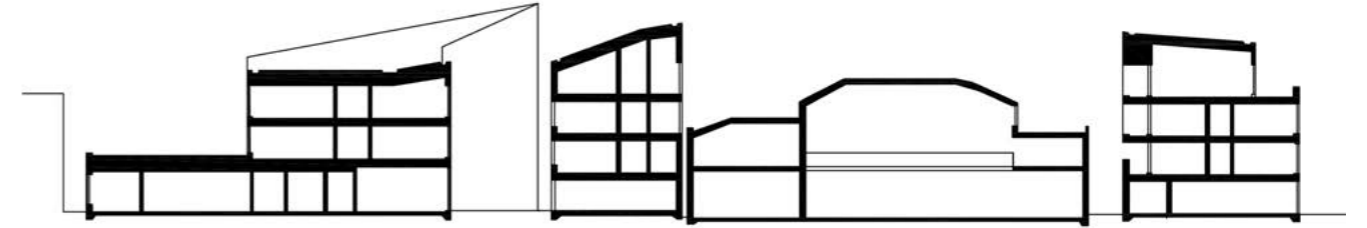**Figure 17.3 :**  Exterior perspective of *Mildmay* housing development


**Figure 17.5 :**  Section through *Mildmay* housing development
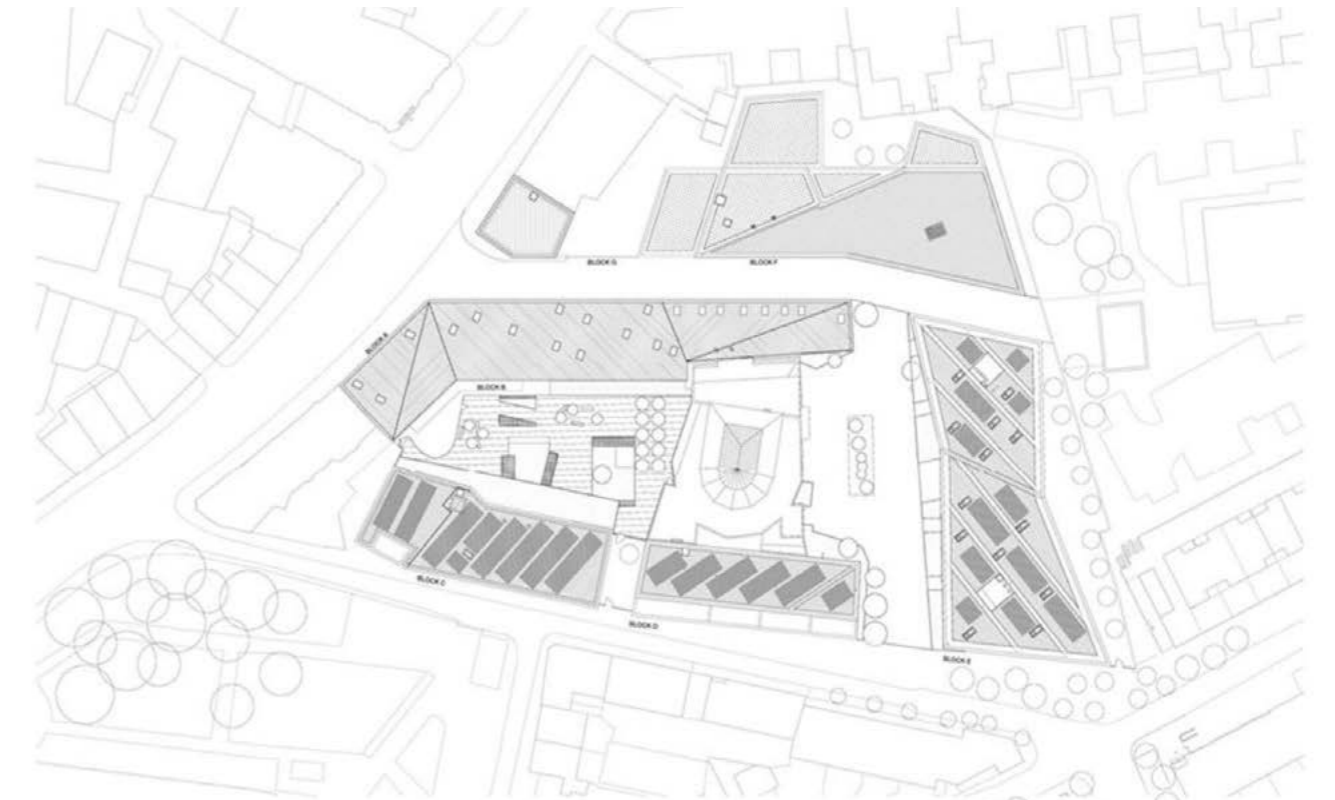

**Figure 17.6 :**  Figure ground plan of *Mildmay* housing development

**Figure 17.7 :**  https://fcbstudios.com/work/view/mild-

**Figure X :**  https://fcbstudios.com/work/view/mildmay





**Figure 17.7 :**  Exterior perspectives of *Mildmay* housing development


**Figure 17.4 :**  Street Elevation of *Mildmay* housing development

# Granby Four Streets

## Liverpool, England 2015

### Spatial
City : Liverpool
Site : Toxteth, Liverpool
Homes : 13
Height : 2-3 storeys
Density homes/ Ha : 100 homes/hectare
Green and public space : short walk from Grade II listed Princes park
Location : 1.6 miles, 30 minute walk

### Housing model
Architect : Assemble
Model : Community Land Trust
Affordability : emphasis placed on those on waiting lists, afforable rent. All refurbishment of houses used as much recycled/waste materials as possible with help from local community.
Tenancy : 46% first time buyers, 38 % affordable rent, 15% community amenities
Land ownership : 54% CLT owned and 46% privately owned
Type : terraced housing
Developer : CLT

### Priorities
Mixed use : Yes
Mixed tenure : Yes
Public participation : Yes, movement began from community activists, interventions design in conjunction with locals.



**Figure 18.1 :** Exterior perspective of *initial site conditions prior to construc-*



**Figure 18.2 :** Exterior perspective of *Granby Four Streets* development



**Figure 18.3 :** Street activity outside *Granby Four Streets* development



**Figure 18.4 :** Ground floor plan of *Granby Four Streets development*



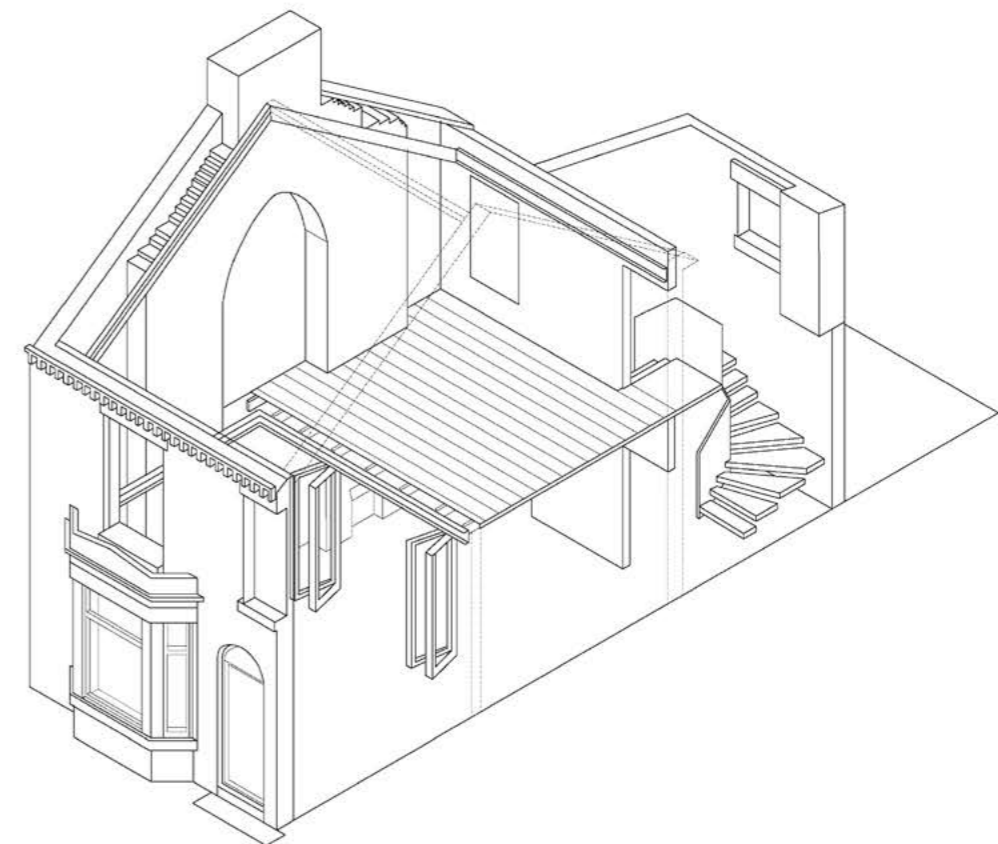**Figure 18.5 :** Axonometric of *Granby Four streets* housing unit and relevant context



**Figure 18.6 :** Cut-through axonometric of *Granby Four streets* housing unit

# Chimney pot park

## Salford, England 2007

### Spatial

City : Salford, Manchester

Site : Langworthy Park

Size : 32,9000

Homes : 349 houses

Height : 7.5m

Density homes/ Ha : 83 homes per hectare

Green and public space : External shared green space to the rear of the houses, with public parks within walking distance (5min walk)

Location : 12 min car journey from Manchester central station

### Housing model

Architect : Shed KM

Model : Mixed Tenure

Affordability : scheme was conceived with affordability in mind

Land ownership : quarter owned through governments 'first time buyer scheme', some rented

Type : converted terrace houses

### Priorities

Mixed use : No

Mixed tenure : Yes

Public participation : No



**Figure 19.1 :** Exterior perspective of *Chimney pot park* development



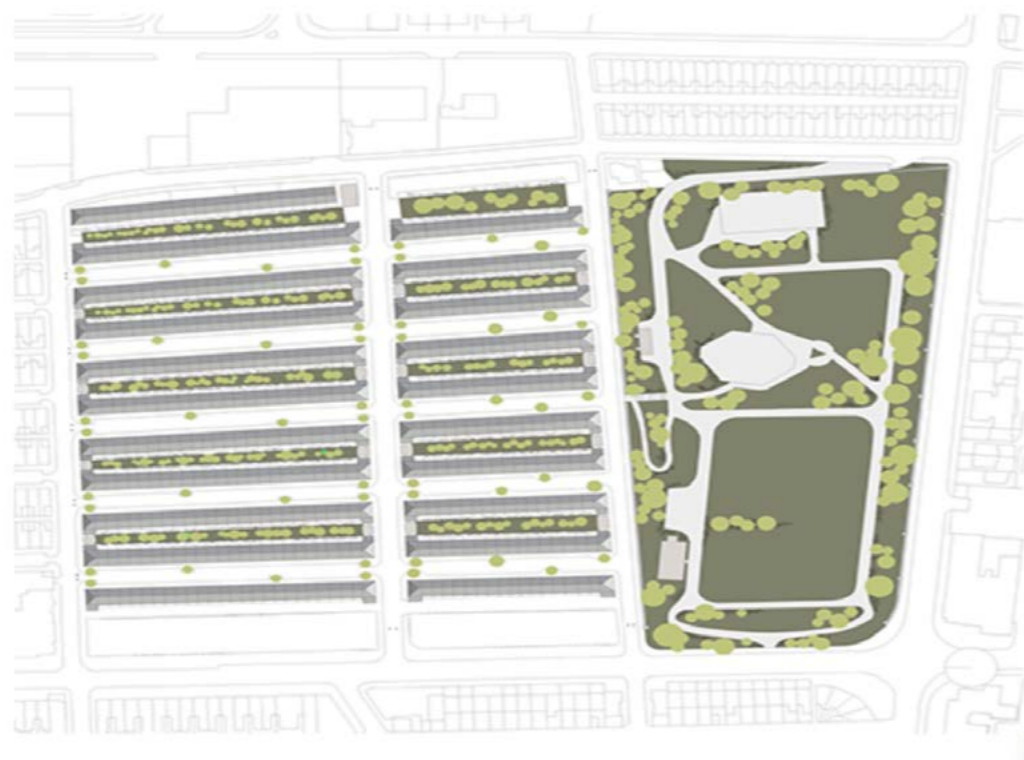**Figure 19.2 :** Shared green space wihtin *Chimney pot park* develop-



**Figure 19.4 :** Housing unit floor plans of *Chimney pot park* development



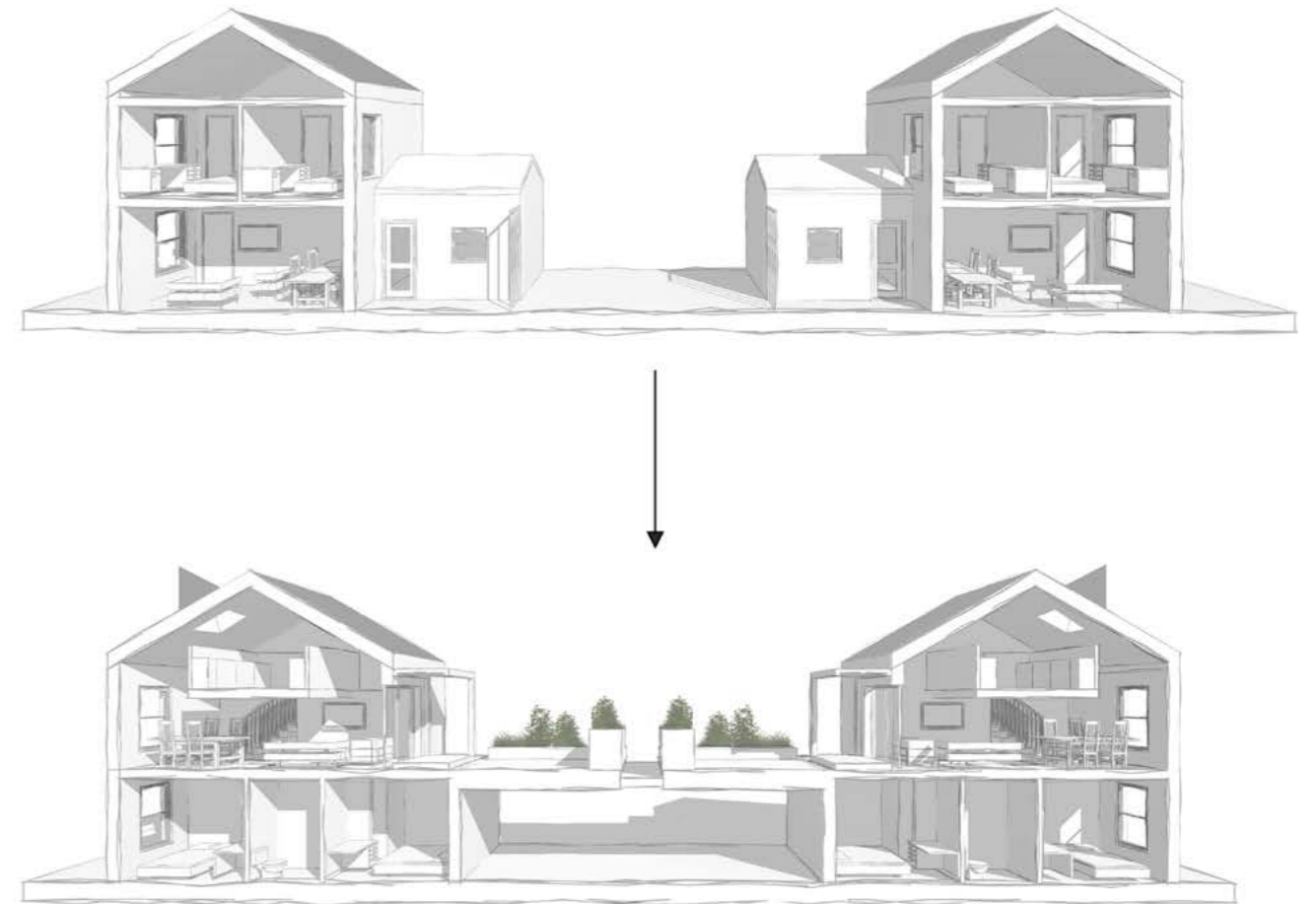**Figure 19.3 :** Figure ground plan of *Chimney pot park* development

**Figure 19.5 :** Perspective section of *Chimney pot park* development

# Goldsmith Street

## Norwich, England 2019

### Spatial

City : Norwich, England

Site : Goldsmith Street

Homes : 105 Passivhaus homes

Height : 2/3 storeys

Density homes/ Ha : 83 houses per hectare

Green and public space :  each house has its own garden along with a towpath that runs down the spine of the project, It also contains a children's playpark and a large public park faces the site.

Location : 1.6 miles from train station

### Housing model

Architect : Mikhail riches

Tenancy :  100% social housing

Price per SqM : £1,875 (excluding professional fees)

Affordability : The homes are all part of the social rent scheme and due to the Passivhaus efforts have an expected energy bill of £150 per year.

Land ownership : 100 % council owned

Type :  Terrace housing and apartments

### Priorities

Mixed use : No

Mixed tenure : No

Public participation :  Yes, there was a large demand for social housing in the area



**Figure 20.1 :**  Ariel view of *Goldsmith street* housing development



**Figure 20.2 :** Exterior perspectives of *Goldsmith street* housing development



**Figure 20.3 :**  Axonometric of *Goldsmith street* housing development



**Figure 20.4 :**  Section and floor plan of *Goldmsith Street housing* development
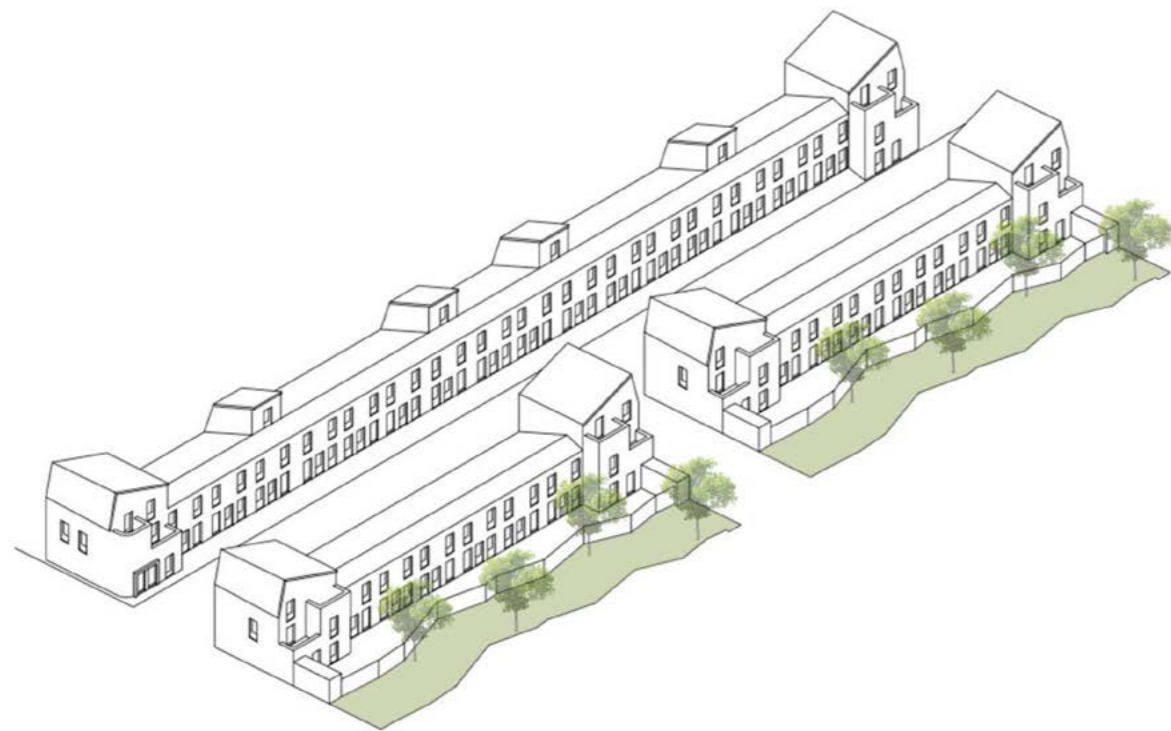


**Figure 20.5 :** Exterior perspectives of *Goldmsith Street housing* development

# Rochester way

## Greenwich, London 2020

### Spatial

City : London
Site : Greenwich, London
Homes : 29 homes
Height : 2/3 Storeys
Density homes/ Ha : 100 homes per hectare
Green and public space : each house has its own front garden and first storey terrace. The streets have also been pedestrianised and there is a public park at the end of the site
Location : 0.8 miles from train station

### Housing model

Architect : Peter Barber
Tenancy : social and affordable housing
Affordability : The homes are all part of the social rent scheme and local workers are given a discount on their rent to encourage people to stay in the area and not be pushed out by rising house prices
Land ownership : 100 % council owned
Type : terrace housing and apartments

### Priorities

Mixed use : Yes, there is a community hall, corner shop and micro-brewery located at the end of each block
Mixed tenure : Yes
Public participation : Yes, there was a large demand for social housing in the area and this development is one of 3 in the area



**Figure 21.1 :** Ariel view of *Rochester way* housing development



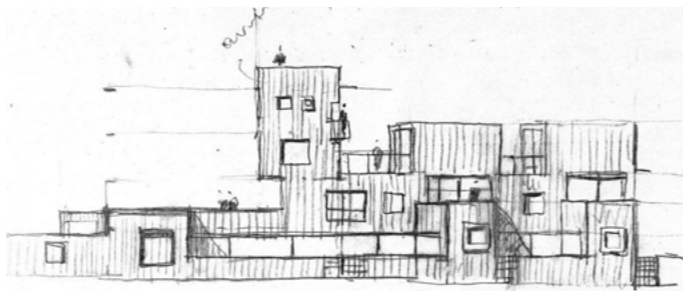**Figure 21.2 :** Exterior perspective of *Rochester way* housing development



**Figure 21.3 :** Concept sketch of *Rochester way* housing development



**Figure 21.4 :** Ground floor plan in context of *Rochester way* housing development

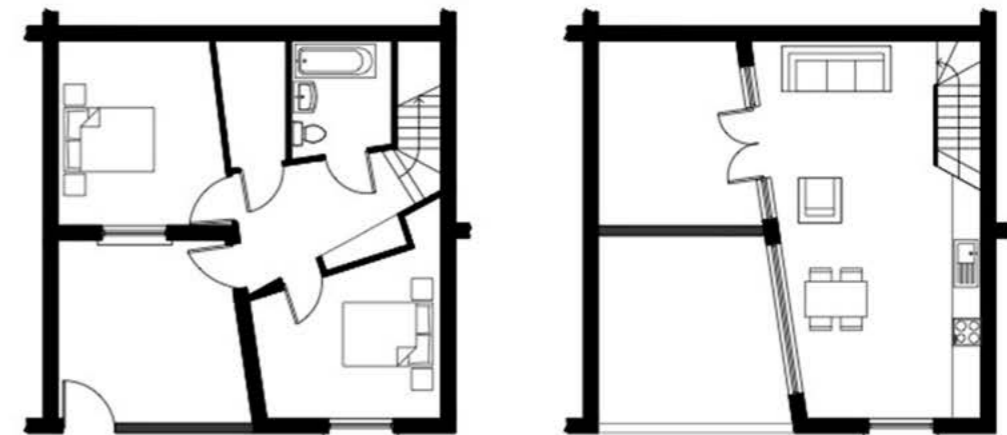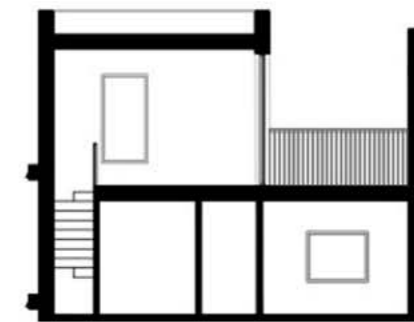**Figure 21.5 :** Perspective Elevation of *Rochester way* housing development



**Figure 21.6 :** Section and floor plans of *Rochester way* housing development



**Figure 21.7 :** Exterior perspectives of *Rochester way* housing development

# Nightingale 1

## Brunswick, Australia 2017

### Spatial

City : Brunswick, Victoria, Australia
Site : Florence Street
Size : 45,000 m²
Homes : 24 homes of 1 and 2 bedroom apartments
Height :  20 m
Density homes/ Ha : 180 homes per hectare
Green and public space : 6 minute walk to community shared gardens
Location : 2 minute walk from train station

### Housing model

Architect :  Breathe Architecture
Tenancy: 20 % given to community housing providers and 20 % to key community contributors
Model : mixed tenure
Affordability :  The Nightingale housing model is centred around five core principles of affordability, transparency, sustainability, deliberative design, and community contribution
Land ownership : the Wurundjeri people of the Kulin Nation, the Traditional custodians
Type : apartment block with commercial use on ground floor

### Priorities

Mixed use : Yes, there is a community hall, corner shop and micro-brewery located at the end of each block
Mixed tenure : Yes
Public participation : Yes, there was a large demand for social housing in the area and this development is one of 3 in the area



**Figure 22.1 :** Exterior perspective of *Nightingale 1* housing development



**Figure 22.2 :** Interior perspective of *Nightingale 1* housing development
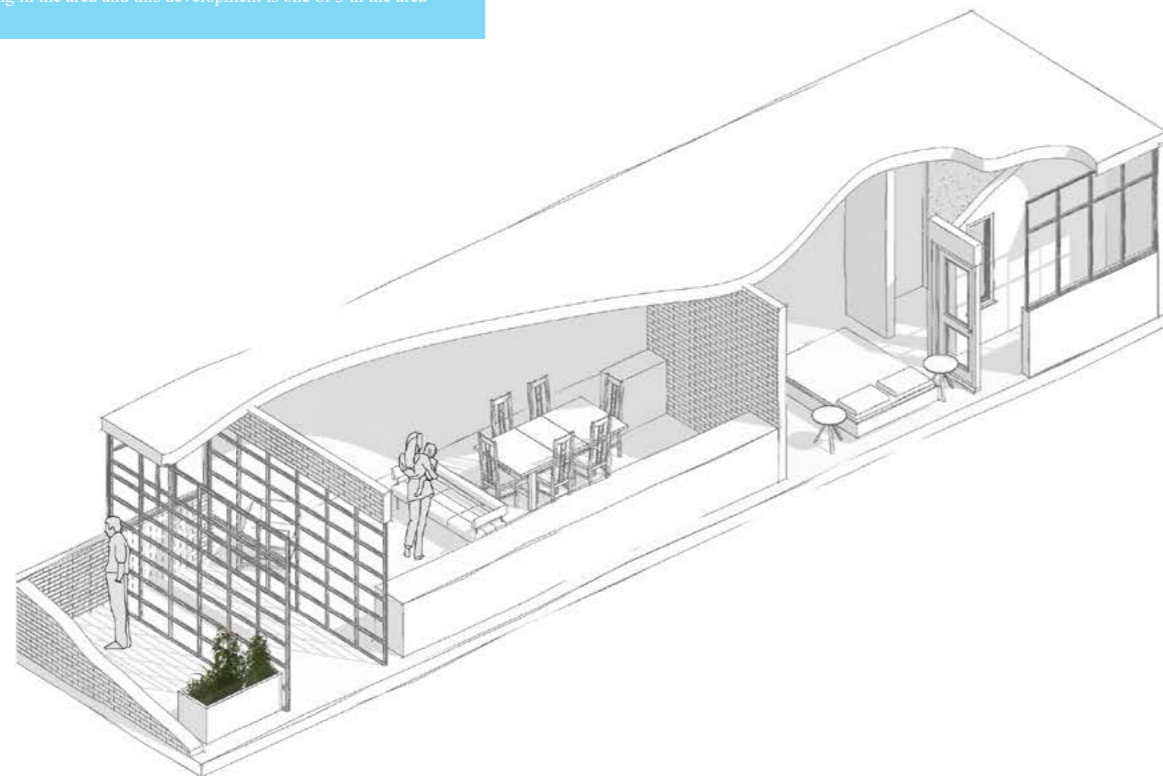


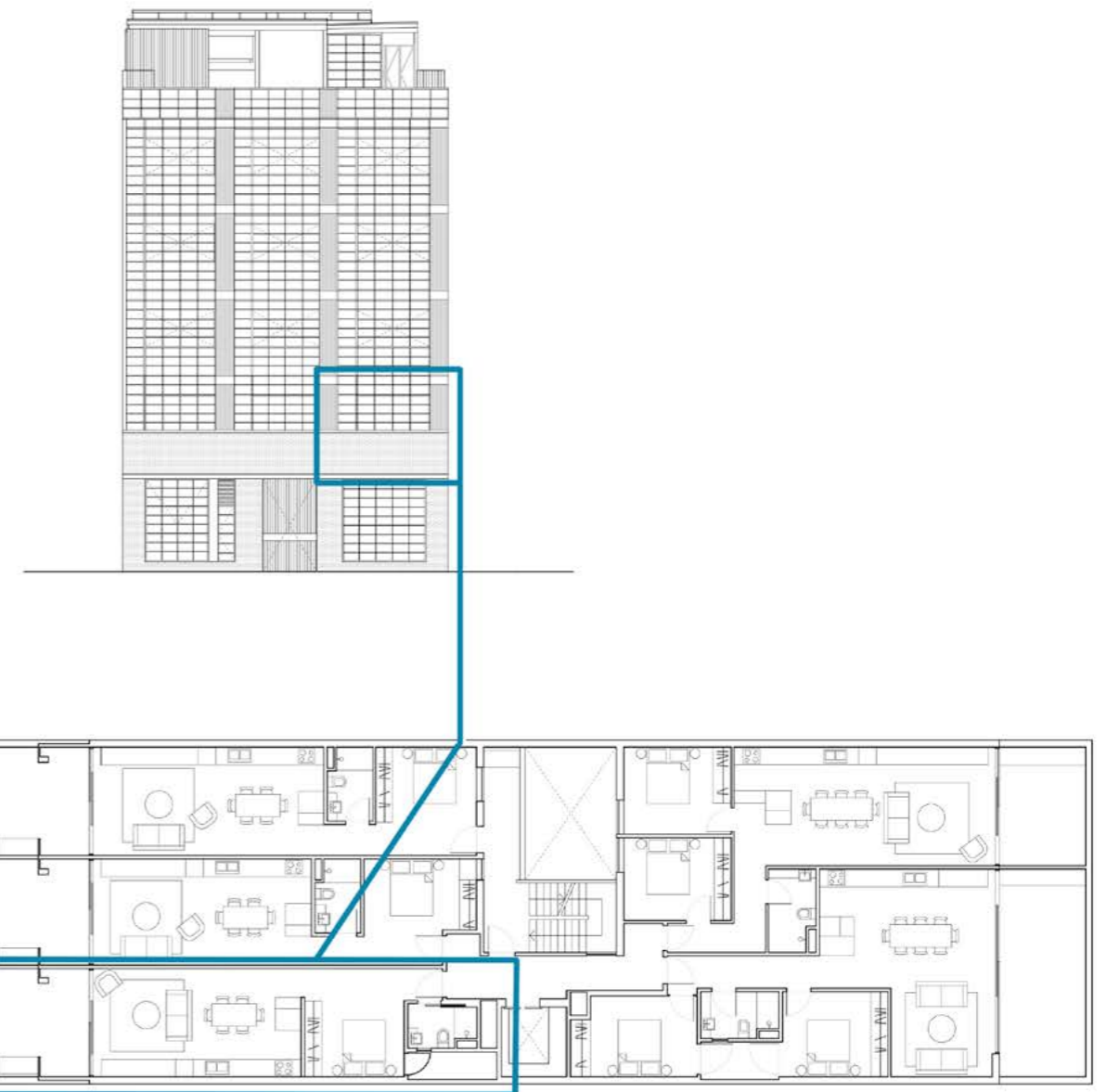**Figure 22.3 :** Axonometric of *Nightingale 1* housing development



**Figure 22.4 :** Elevation and Ground floor plan of *Nightingale 1* housing development
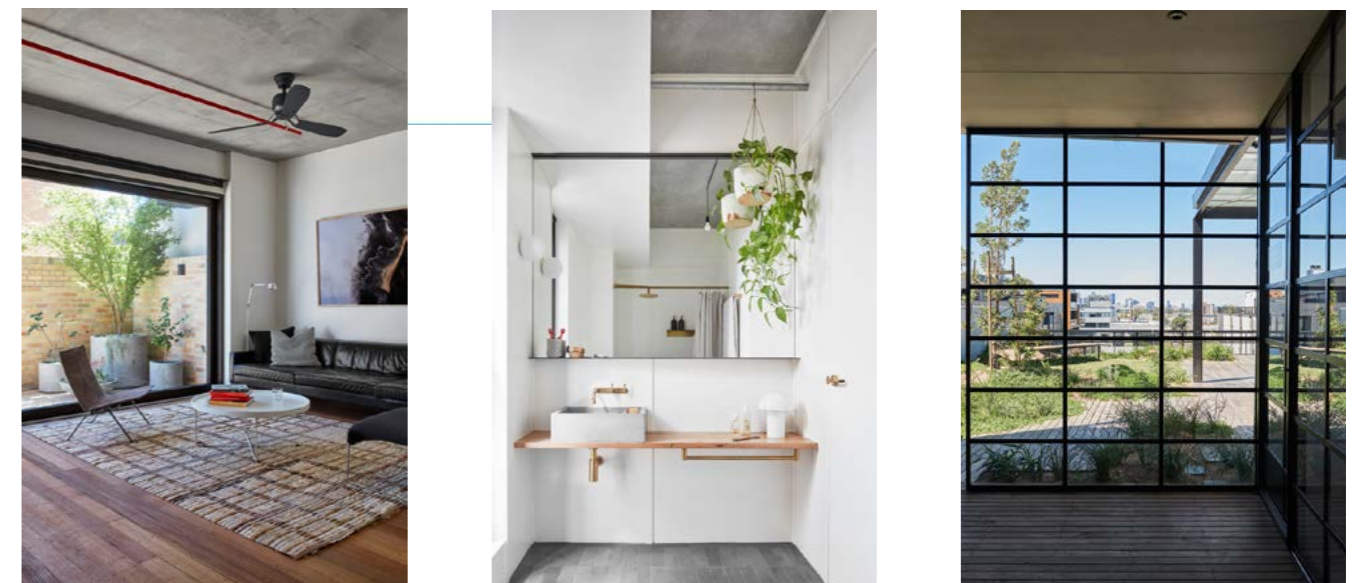


**Figure 22.5 :** Exterior perspectives of *Nightingale 1* housing development

# Savonnerie Heymans

## Brussels, Belgium 2010

### Spatial

City : Brussels
Site : Rue D'Anderlechy 135
Size : 6,500 m²
Homes : 42 accomodations
Height : 6 storeys
Density homes/ Ha : 64 u/ha
Green and public space : Extensive public space: the mini-forest garden, the 3D landscaped park and playground, alongside the main promenade

### Housing model

Architect : MDW Architecture
Tenancy: Social housing
Affordability : The Nightingale housing model is centred around five core principles of affordability, transparency, sustainability, deliberative design, and community contribution
Land ownership : Brussels Municipality
Developer : Cpas de Bruxelles
Type : 1-6 Bedroom apartments, lofts, duplexes and maisonettes

### Priorities

Mixed use : Yes, there are rooms for social meetings and events and a public Ludotheque also known as 'the game library'
Mixed tenure : No, only social
Public participation : Yes



**Figure 23.1 :** Exterior perspective of *Savonnerie Heymans* development



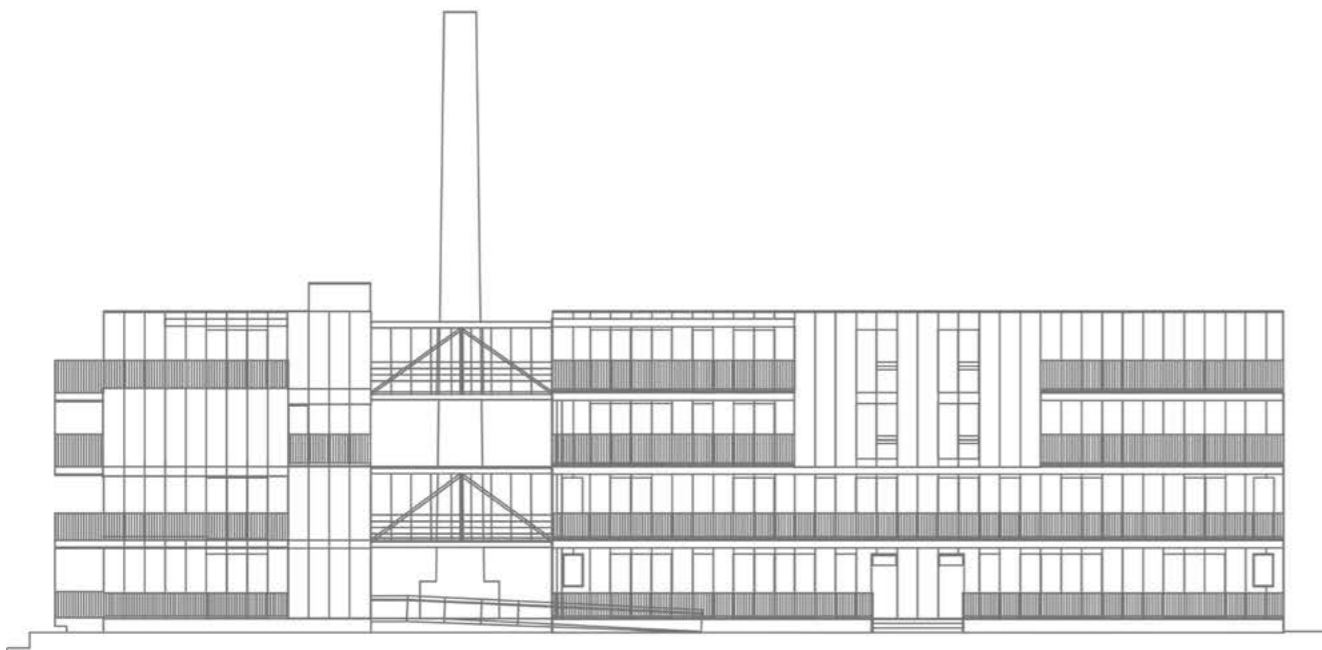**Figure 23.3 :** Ground floor plan of *Savonnerie Heymans housing* development in context



**Figure 23.2 :** Elevation of *Savonnerie Heymans* development



**Figure 23.4 :** Interior perspectives of *Savonnerie Heymans* development

# R-50 Baugruppen

## Berlin, Germany 2013

### Spatial
City : Berlin
Site : Brownfield district
Size : 1,485 73 m² (site) 2,037 m² (unit)
Homes : 19
Height : 8 storeys
Density homes/ Ha : 128 homes per hectare
Green and public space : residents communal garden + roof terrace
Location : 2miles from station - 21 minutes to city centre by tram

### Housing model
Architect : Heide + Von Beckerath, ifau and Jesko Fezer
Model : C0-habitation, co-developed, co-ownership
Price per Sqm : £1,997 (including site)
Affordability : reasonably affordable
Tenancy : private owned
Land ownership : distributed via quality of concept competition by City of Berlin
Type : Apartments
Developer : Baugruppe

### Priorities
Mixed use : Yes
Mixed tenure : No
Public participation : Yes, community led funding process and design meetings



**Figure 24.1 :** Exterior perspective of *R-50 Baugruppen* development



**Figure 24.2 :** Interior perspective of *R-50 Baugruppen* development



**Figure 24.3 :** Figure ground plan of *R-50 Baugruppen* development
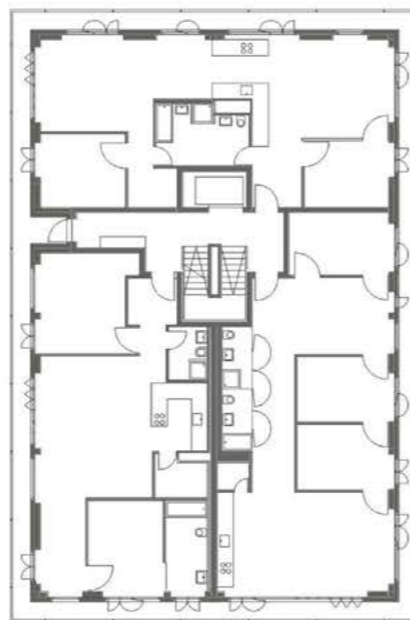


**Figure 24.4 :** Floor plan of *R-50 Baugruppen* development



**Figure 24.5 :** Front and side elevation of *R-50 Baugruppen* development

**Figure 24.6 :** Section through *R-50 Baugruppen* development
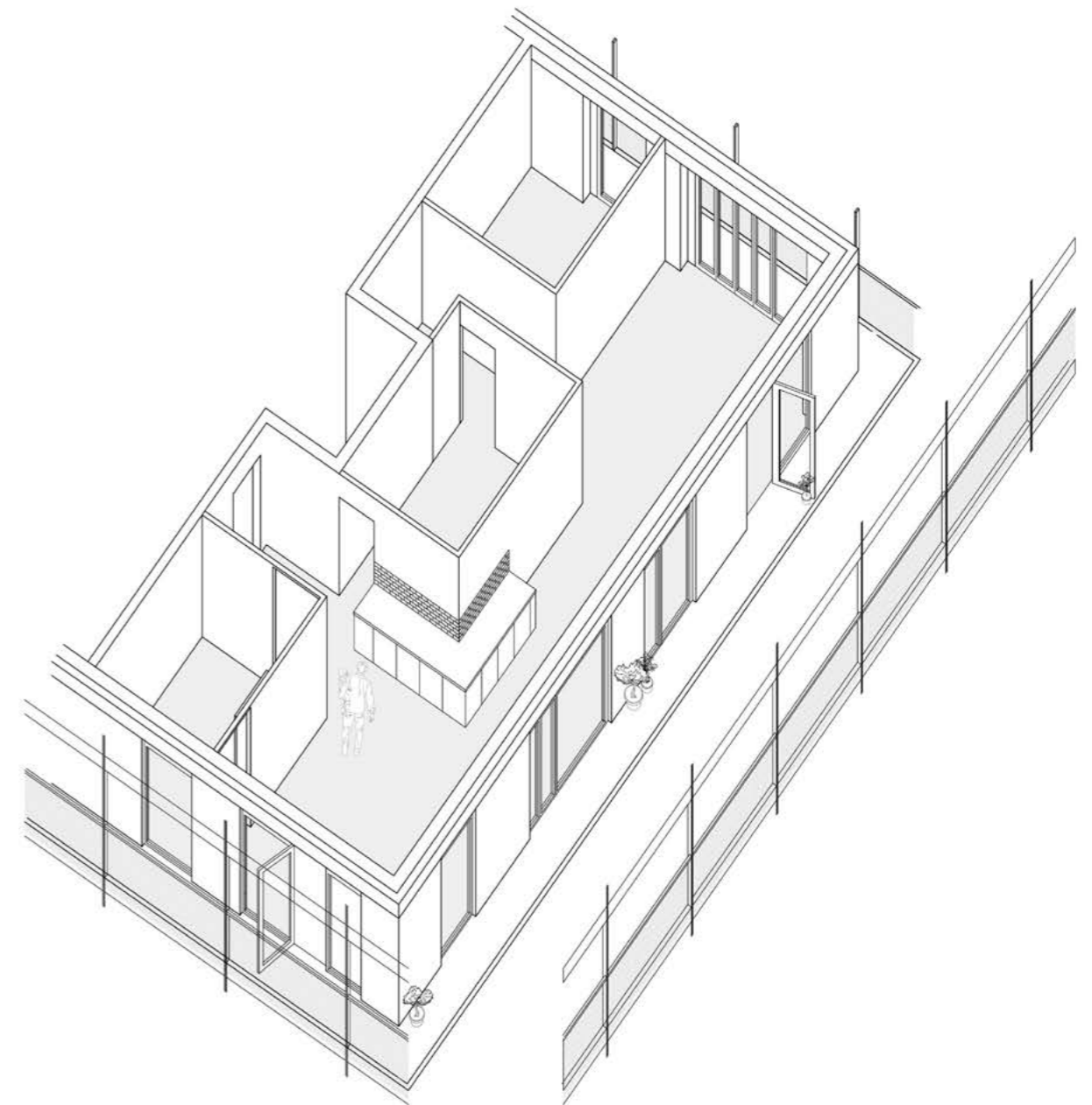


**Figure 24.7 :** Axonometric of *R-50 Baugruppen* development

# 1-2 Mountjoy Square

Dublin, Ireland 2019

## Spatial

City : Dublin
Site : 1-2 Mountjoy Square North
Homes : 2 homes per floor of each building
Height : 4 storeys
Density homes/ Ha : 110 homes per hectare
Green and public space : located right beside the Mountjoy Square green space
Location : 15 minute walk from Connolly Rail station

## Housing model

Architect : renovated by non-profit organisation 'respond'
Tenancy: Social housing
Land ownership : owned by 'respond', leased from the Department of Housing, planning and local government funding, and partnership with Dublin City council under the 'Rebuilding Ireland' initiative
Type : 3 x refurbished interconnected 200 year old Georgian terrace houses

## Priorities

Mixed use : *
Mixed tenure : *
Public participation : It provides a model for effective city centre social housing programmes for a city that has historically shipped large amounts of working class urban citizens into the promisingly modern developments in tallaghht and ballymun.



**Figure 25.1 :** Interior perspectives of *Mount Joy square* social housing



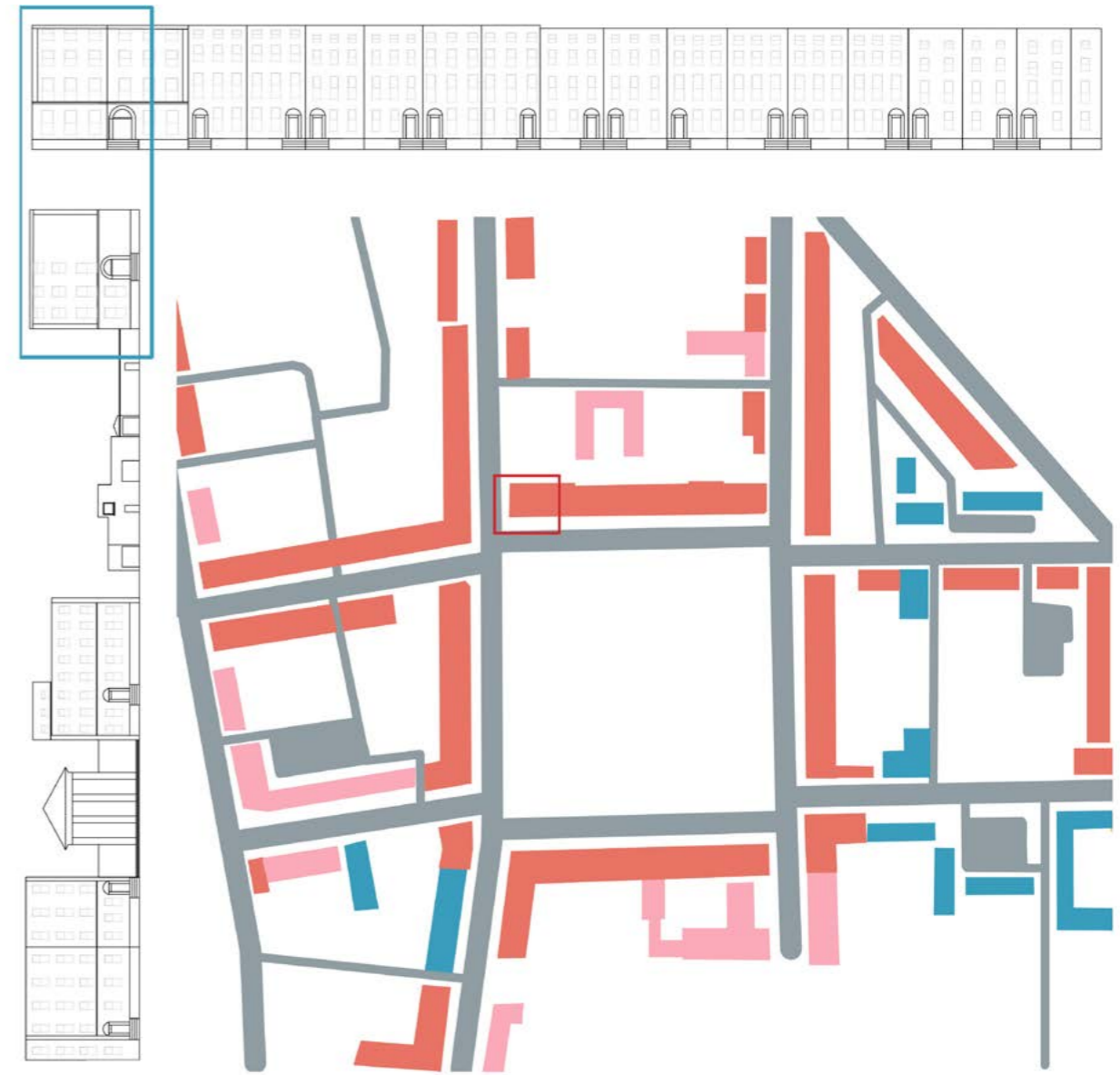**Figure 25.2 :** Interior perspectives of *Mount Joy square* social housing



**Figure 25.3 :** Exterior perspective of Mount Joy square social housing



**Figure 25.4 :** Figure ground plan with coinciding Elevations of *Mount Joy square* social housing



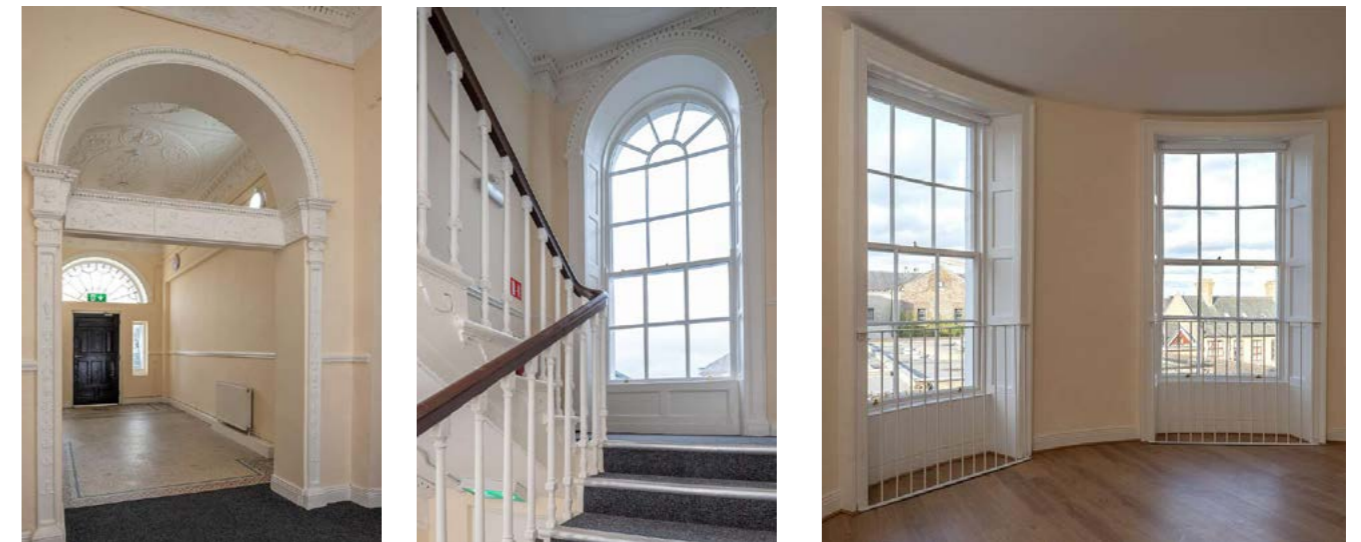**Figure 25.5 :** Interior perspectives of *Mount Joy square* social housing

# Timberyard Housing

## Dublin, Ireland 2009

### Spatial
City : Dublin
Site : Inner city area 'The Coombe', Cork Street, Dublin 8
Size : 3,800 m²
Homes : 47 dwellings of varying family sizes, an average of over 80 m² per unit
Height : 6 storeys
Density homes/ Ha : *
Green and public space : internal courtyard space protected from the busy nature and traffic of the nearby cork street
Location : 1km walk from the River Liffey

### Housing model
Architect : O'Donnell + Tuomey
Tenancy: social housing initiative cliented by the Dublin City council via compettition in 2001
Affordability : *
Land ownership : Dublin City council
Type : repairs the local landscape by providing a new collective space, built around a former timber yard

### Priorities
Mixed use : Yes
Mixed tenure : Yes, the homes are mixed tenure and feature many communial facilities such as parking and outdoor seating. The layout also feature 2 walk-ways to connect to the streets and housing efforts to the back of the site, to aid in the integration of the Timberyard site into the surrounding urban context



**Figure 26.1 :** Exterior perspective of *Timberyard Housing* development



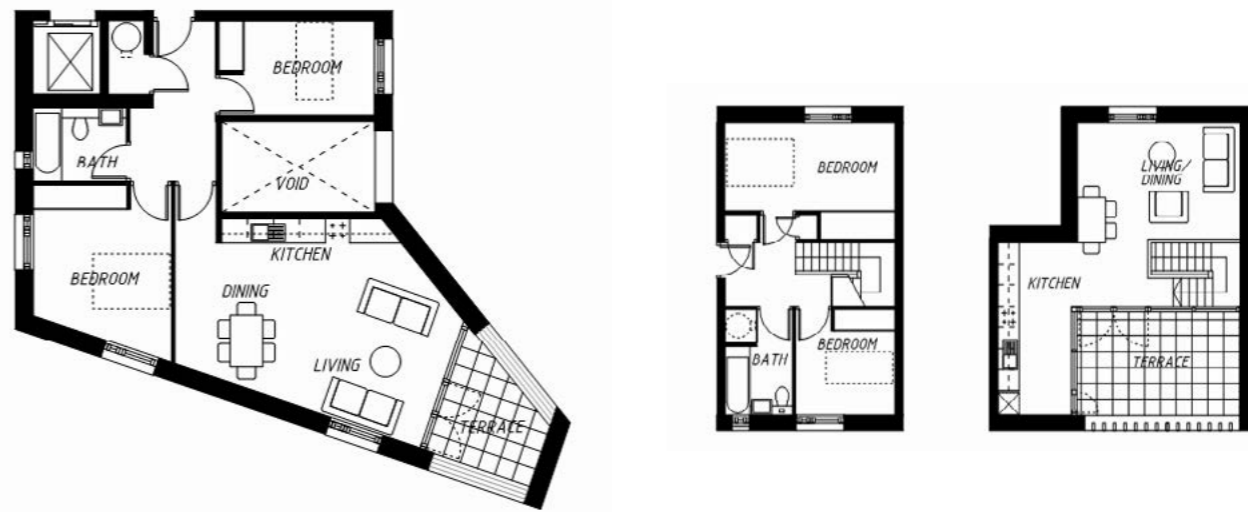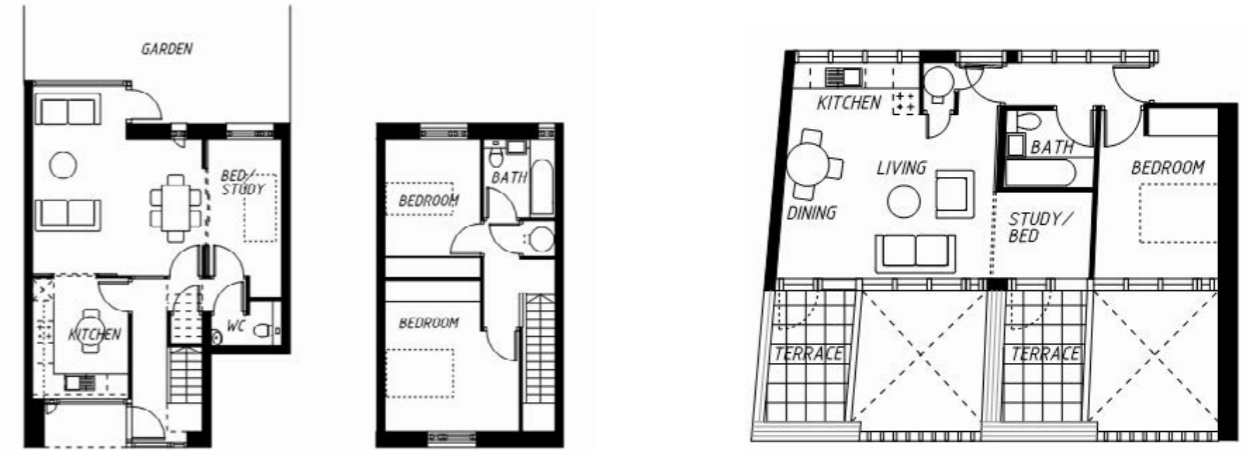**Figure 26.2 :** Exterior perspective of *Timberyard Housing* development



**Figure 26.3 :** Ground floor plan of *Timberyard Housing* development



**Figure 26.4 :** The four types of housing homes within the *Timberyard Housing* develop-
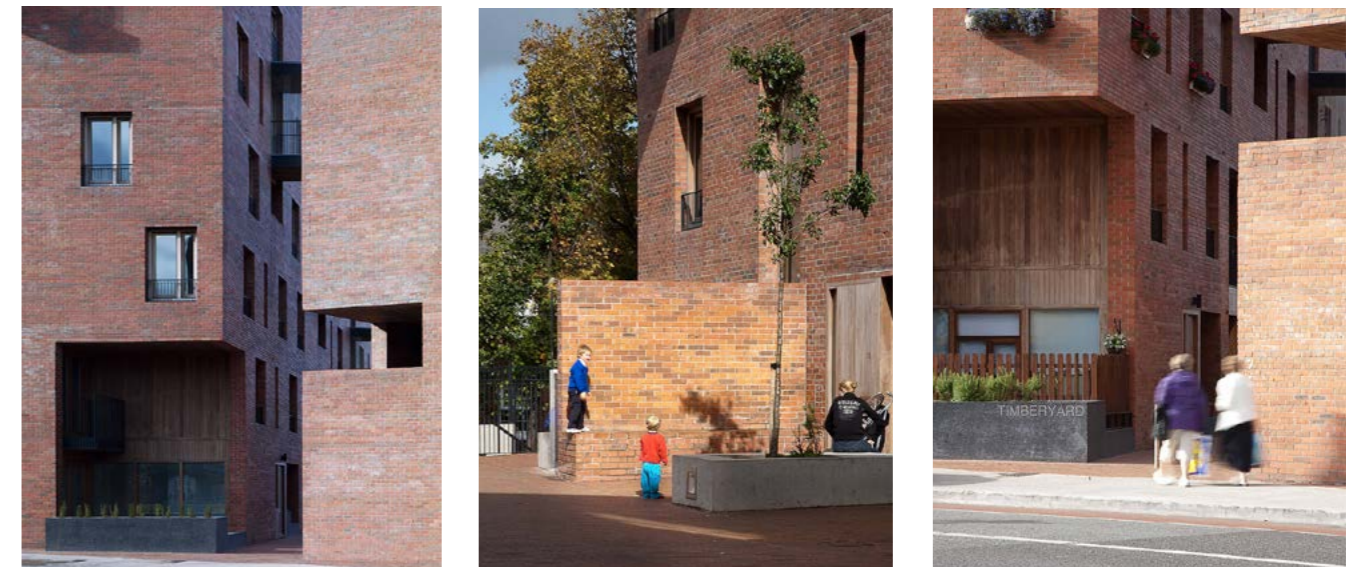


**Figure 26.5 :** Exterior perspectives of *Timberyard Housing* development

## Recommendations

1. Keep land public: there is a big risk of falling into the problems faced by the Republic of Ireland and especially Dublin of housing financialisation and pushing people out of both home ownership and affordable rents. Regulation of development by limiting the amount of land a single developer can acquire could foster smaller local developers to build plot by plot, encouraging a more organic growth of the city and housing that is adequate for present and future residents.

2. Multimodal transportation infrastructure: Transportation infrastructure is essential for good quality housing. Access to affordable and frequent public transport and active travel to all the places that are needed to fulfil people's activities such as work, health, education and leisure, can contribute to residents' wellbeing. Active travel can be boosted by protected and segregated paths for cyclists and pedestrians as well as limiting car use. Car parking could be restricted or discouraged increasing the parking fees.

3. Foster gentle density: use land efficiently to develop housing that is embedded into mixed use streets. The right density for an area depends on many factors, but increasing density does not mean losing quality of life. On the contrary, it fosters an everyday life that has diminished in Northern Ireland and could be recovered. Floor area ratios are good tools for regulating building mass and can foster good use of land and effective proportion between height and density. A tall building policy can prevent developers from building too high in the expense of existing residential and mixed use areas.

4. Demolition and heritage: Planning legislation should give incentives to the reuse of buildings rather than taxing them. Currently, VAT on new build is only 6%, while VAT on refurbishing of existing buildings is 20%. This legislation currently rewards demolition instead of reuse of existing buildings, many of them heritage assets. Penalising developers for poor maintenance of derelict buildings, or long-term vacancy could also go a long way in fostering reuse and preventing areas from becoming run down. A large amount of the building stock in Belfast and Northern Ireland has disappeared; solid, sound and beautiful buildings were demolished to be replaced by poor quality new builds, while many of those could be used for housing. Heritage scholarship has proved that the reuse of existing buildings for housing is a more environmentally and economically sustainable option. Belfast should follow the example of cities around the world that have successfully converted historic buildings, listed or not, to housing.

5. Avoid silo culture: As in most European Capitals and in many Irish towns, a city architect could coordinate all the different planning and architecture developments of the city under a unified office that could oversee all the scattered work and organise priorities of different government departments.

6. Maintenance: Existing housing stock needs to be maintained properly and achieve a net zero urbanism. All new housing needs to comply with standards that will align with sustainable development goals.

7. Green the city: use every opportunity to plant trees and support biodiversity.

Recommendations

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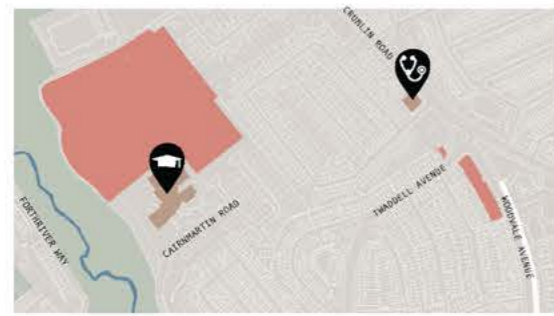< https://www.archdaily.com/240896/timberyard-social-housing-odonnell-tuomey-architects >

**Cover photo** by Mauricia Croan (2021)

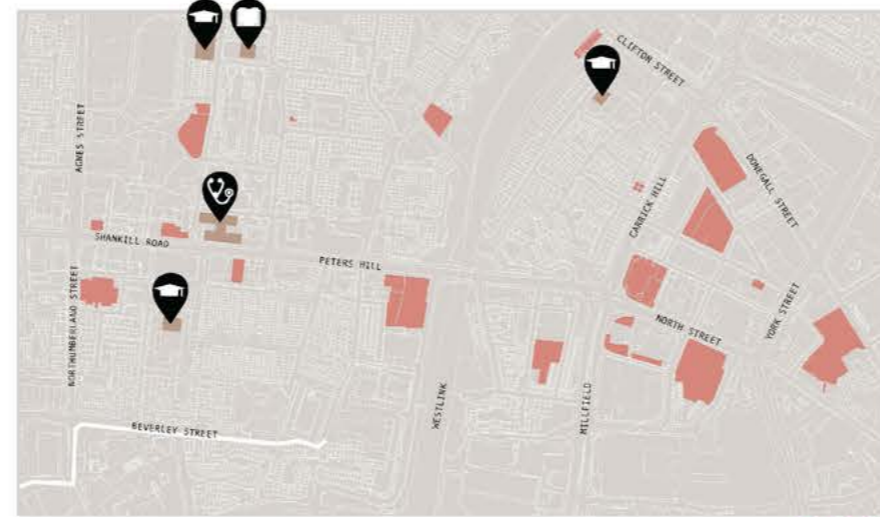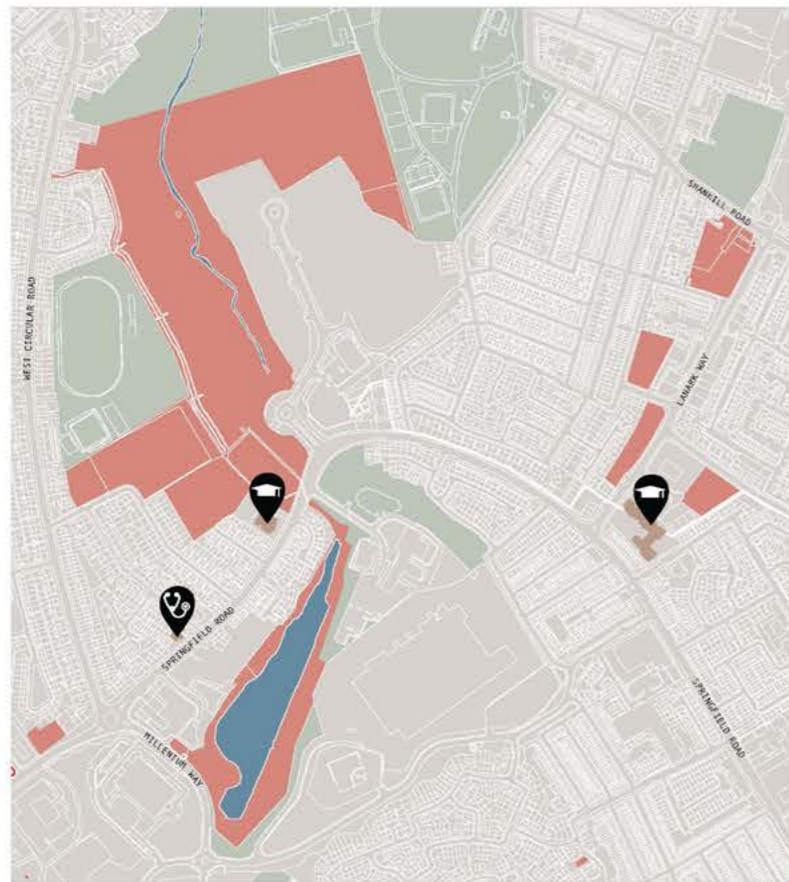BELFAST
PUBLIC
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KEY

PUBLIC LAND

88  AMOUNT OF PUBLIC
LAND OUTSIDE THE
MAP LIMITS (in
hectares)

PPR
PPRPROJECT.ORG

NO ONE LEFT
BEHIND

OAK
FOUNDATION

QUEEN'S
UNIVERSITY
BELFAST

STREET
SPACE

SCALE: 1:10000

# BELFAST
# PUBLIC
# LAND
# OWNERSHIP

PPR
PPRPROJECT.ORG

NO ONE LEFT
BEHIND
PPR

OAK
FOUNDATION

#EqualityCantWait
#NoMoreDelay

QUEEN'S
UNIVERSITY
BELFAST

STREET
SPACE

(A)

(B)

TAKE
BACK
THE CITY

"The housing crisis is one of the most fundamental challenges we face across the island of Ireland. An affordable, decent-standard, secure home is the most fundamental of all human needs. It is a human right, and governments have a fundamental responsibility to ensure their citizens have a home.

Rory Hearne

"This development model is an extractive model. The last thing we need is to give public land to the private sector. We cannot separate planning from people's needs.

Hugh Ellis

AVAILABLE PUBLIC LAND (A):
2.4 hectares
HOUSING UNITS (A): 180
AVAILABLE PUBLIC LAND (B):
2.6 hectares
HOUSING UNITS (B): 195

HOUSING NEED FOR HNA
NORTH BELFAST 2: 98

### GENTLE DENSITY

"Gentle density is attached, ground-oriented housing that's more dense than a detached house, but with a similar scale and character. Think duplexes, semi-detached homes, rowhouses, or even stacked townhouses.

Brent Toderian 2020

AVAILABLE PUBLIC LAND: 2.6 hectares
HOUSING UNITS: 195
HOUSING NEED FOR HNA AINSWORTH WOODVALE: 43

AVAILABLE PUBLIC LAND: 21.7 hectares
HOUSING UNITS: 1575
HOUSING NEED FOR HNA MIDDLE AND OUTER WEST BELFAST: 1509

AVAILABLE PUBLIC LAND: 3 hectares
HOUSING UNITS: 225
HOUSING NEED FOR HNA INNER WEST BELFAST, MID & LOWER SHANKILL: 745
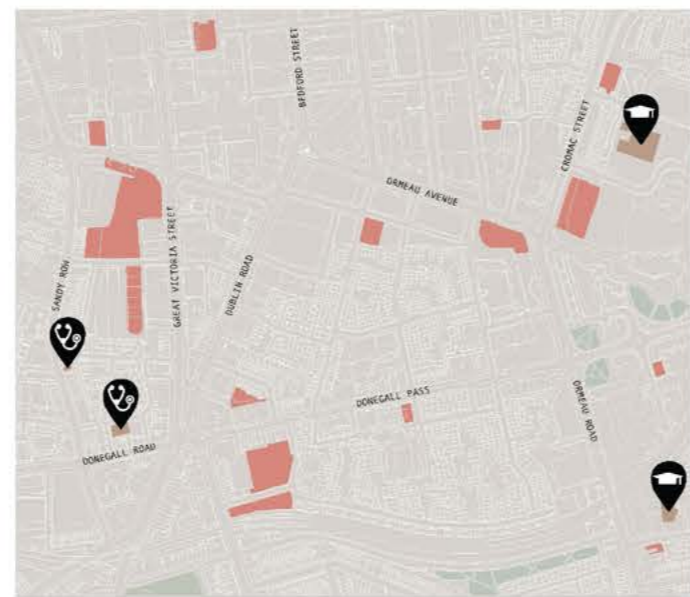
AVAILABLE PUBLIC LAND:
3.7 hectares
HOUSING UNITS: 277
HOUSING NEED FOR HNA
DONEGALL ROAD,
LOWER ORMEAU,
LISBURN ROAD
& ANNADALE: 976

AVAILABLE PUBLIC LAND: 5.2 hectares
HOUSING UNITS: 390
HOUSING NEED FOR HNA NORTH BELFAST 1: 1222

AVAILABLE PUBLIC LAND:
1.3 hectares
HOUSING UNITS: 97
HOUSING NEED FOR HNA INNER EAST BELFAST: 294

AVAILABLE PUBLIC LAND:
0.5 hectares
HOUSING UNITS: 38
HOUSING NEED FOR HNA
SHORT STRAND: 46

### KEY

GP PRACTICE      SCHOOL      LIBRARY

100 HOUSING UNITS that can be accommodated in the available public land at a density of 75 units per hectare

Average Residual Need of 100 HOUSING UNITS in HNA area HNA

10      20km

0      SCALE: 1:5000

HOUSING UNITS: Housing Units that could be accommodated in the available public land at a density of 75 units per hectare
HOUSING NEED FOR HNA: Average Residual Need in each HNA area, as calculated by the Housing Executive

NORTHERN IRELAND HOUSING EXECUTIVE DEFINITION OF PROJECTED SOCIAL HOUSING NEED:

PROJECTED HOUSING STRESS - (Average No of applicants in housing stress over the past 5 years) + (Average annual allocations to applicants in Housing Stress projected forward 5 years) + (The net average change in housing stress projected forward by 5 years)
PROJECTED SOCIAL HOUSING SUPPLY - (Average annual relets multiplied by projection period 5 years) + (Current voids, excl. "pending demolition" and "pending sale")
PROJECTED SOCIAL HOUSING NEED = (Projected Housing Stress) - (Projected Social Housing Supply) - (Average annual relets x 1 year)