

Executive Summary:

“Boundaries in the Making” - Garden Courtyard Apartments

An Economy of Spaciousness

Brown and Storey Architects Inc.

“Reflecting on Sunnyside Gardens... Stein noted that the ‘ultimate aim of the City Housing Corporation was to build a garden city....’ Stein observed that ‘most earlier American attempts at community housing for low-income workers had been tempted, by planners’ delight in spacious elaboration, into becoming middle class suburbs.

Wright and I were determined to squeeze our house plans so as to make them available at as low a price as possible. Economical spaciousness we hoped for as a result of judicious group planning.” - Paradise Planned: The Garden Suburb and the Modern City

The daylighting of the Forth River and its existing topography establishes and reasserts the site’s founding landform and identity. Within this site are numerous new streets and green commons that organize the many Garden Courtyard blocks around the natural landform. We have intentionally seen these car-free streets and green commons as open “boundaries in the making.”

The streets are configured to allow for expansion at their edges. All the streets are different and simultaneously pedestrian and multi-modal, while allowing for service vehicles. The streets are expandable and open multiplicities that have environmental functions and renewable energy capacities.

In a similar manner, the numerous wide public commons organize the larger site into strips, interacting with the streets and the new emergent landscape. The green commons are also open and not overly delineated. They carry storm water with their “Sponge City” technology, and are the locales for renewable energy storage facilities or “community batteries” that reference various scaled garden courtyard groupings.

The park commons, the streets and natural topography set *relations of elements* and describe various scalable and non-scalable relations between the residential environments. The streets are non-scalable; some streets are more connected than others. The streets that encounter the founding landform become piers, lookouts and environmental stations.

Everything expands outward from the residential garden courtyard apartments, yet they have a defined spatial configuration. The numerous courtyards are quantifiably and qualitatively different, subject to the households living there, and create instant community. They form various scaled blocks, some open-ended, others limited in extension.

The two large adjacent city parks currently exist as separate destinations that mostly require car access. This suburban separability has boundaries that we have intentionally opened up. We have located residential housing at their boundaries, created new “switches” or public linkages to them, and expanded their pathways to extend to the new community’s street infrastructure.

In particular, the central green commons extend into both parks and establish a new more democratic, scaled set of park spaces and amenities in a new matrix. A new, expandable shade canopy connects the

neighbourhood with the park, and organizes a public building with restrooms and new connections to the surrounding city streets.

The new Mackie's site neighbourhood and environments present a challenge in not pre-naming the new urban spaces, but letting them evolve and find relationships between the households and potential residents. Rather than a keyed site plan, we have generated categories that do not limit the qualitative nature of elements.

Categories of Relations of Elements:

The site includes:

- 45 Garden Courtyard interconnected full and fragmented blocks
- 107 Garden Courtyard groupings
 - With each grouping, there's a minimum of 5 dwellings per floor x 3 floors = 15 dwellings.
 - $15 \times 107 = 1,605$ dwellings total
 - With each grouping, there could be 9 dwellings per grouping per floor x 3 = 27 dwellings
 - $27 \times 107 = 2,247$ dwellings total
 - As the variants increase, with smaller dwellings, the total number of dwellings increases
- 4 public/pedestrian access bridges / bridge commons
- A pedestrian and cycling network organization for the site
- 3 new connections to the adjacent city parks and their corresponding building sitings
- A new covered linkage to the existing large Tesco store
- A continuous encircling 10.0 m perimeter linkage and linear park around the site
- New residential buildings at the larger site perimeter
- Pollinator gardens and green commons through the site



Legend

- 1. Trench Relocation
- 2. Forth River Inlet/Outlet and Public Plinth
- 3. Forth River Wetland
- 4. Forth River Ravine Topography
- 5. Daylighted and Expanded Forth River Sections
- 6. Existing Parks with Expanded Pathways
- 7. Meadowway (edge of river)
- 8. Strand (edge of water way)
- 9. Green Commons (Sponge Soil Strata)
- 10. Pollinator Gardens
- 11. North-south Streets
- 12. Expandable Street Space
- 13. Street Rain Gardens
- 14. Perimeter Linear Parkway
- 15. New Park Boundary Housing
- 16. Residential Garden Courtyards
- 17. Switches
- 18. New Park Within a Park
- 19. Expandable Canopy
- 20. Bridge Commons
- 21. Garden Courtyard Blocks
- 22. Street Lookouts/Piers
- 23. Solar Energy Collectors
- 24. Solar Energy Storage/Community Batteries
- 25. Sponge City Technology
- 26. Existing institutions
- 27. Perimeter Parkway Residential Infill
- 28. Public washrooms and community facilities
- 29. Cafe/Restaurant
- 30. Connected Shade Canopy to Tesco
- 31. New institutions and social services
- 32. Upper floor bridge connections
- 33. Courtyards
- 34. Porch Loggias
- 35. Rooftop Gardens



Overall Site Organization

This community is designed to remove barriers and mediate boundaries. Our design approach resolves the issue of separation not only within the site itself, but also the separation between the site and its surrounding city context. Within the site, there are several “diffracted boundaries,” or intermediary zones between one element and another. For example, interconnected pedestrian streets and courtyards blur the edges between one apartment grouping and another. Similarly, several factors mitigate the boundary between the site and the surround neighbourhood and parks.

Forming New Connections between the Parks, City Streets, and the New Community

Both the neighbouring parks and the new community will benefit from new intensified openings between each other. The perimeter space between the site and the eastern edge of Paisley Park, for example, is currently

characterized by a treed, wall-like condition, which creates a boundary and institutional separation between the park and the site. While preserving most of the mature trees, this boundary can become more porous to better connect with housing blocks.

Strengthening this connectivity, the new community’s green commons connect directly into the parks at strategic points. The existing roads that grant car access into the parks will be upgraded and widened to extend and connect into the new community. Currently dead-end roads, such as Springdale Gardens and West Circular Crescent, will also connect directly into the community’s internal system of pedestrian streets. These boundary mitigation efforts allow residents to more easily access the park and its programming, and encourage other park users to embrace the new community.





Multi-Use Perimeter Path and Linear Park

Further reinforcing the connection between the parks and the new community, a 10-metre-wide multi-use path or linear park encircles the new community. This linear park creates a continuous circulation network between the interior of the new community and the existing surrounding context of parks and streets. While walking, jogging, or cycling along this path, residents encounter several opportunities to move between the local parks, neighbourhood, or back into the garden courtyard apartments.

The multi-use path, while linear, offers lateral connections between “inside” and “outside” of the site, and can help resolve the closed condition where the site encounters residential backyards. The linear park includes a program of elements including a forest greenway, gardens, and distinguishable paths for varying speeds and modes of movement.

Extending Housing into the Parks

Garden courtyard apartments are extended into the edges of Woodvale and Paisley parks, without interfering with the parks’ internal circulation or functionality. Formerly unfriendly boundaries become blurred and intensified. With increased activity and circulation around and throughout the parks, they become safer and more vibrant urban spaces for residents to enjoy.



Climate-Resilient Design: Residents as Part of the Natural Ecology

Many cities have ignored or infilled natural systems such as ravines and creeks, or turned them into “sacred” standalone parks. Given Belfast’s housing crisis, a more informed urban design approach is to sensitively build housing around the natural system of the site. It is also important to create as many connections between the ravine and the new residents as economically possible, so that residents are not disconnected from the natural landscape, and take on responsibility to protect and maintain it.

Single-Point Access

In addition to the layout of homes that minimizes lighting, heating, cooling costs, the single-point stair access design produces more efficient floor plans, resulting in fewer construction materials and less waste.

Sustainable Storm Water Management: “Sponge City” Technology

Heavy rainfall overwhelms Belfast’s historic sewage system, causing floods and wastewater spillages. This new community is designed with “sponge city” technology, an urban design model for storm water management in which natural landscape features absorb water, rather than let it flood or run off into municipal infrastructure.

Rainwater is absorbed on rooftops, which supports the residents’ gardens and vegetation. Overflow from the rooftops travels down to the courtyards, where water is also absorbed for trees and plantings, a process

that creates a cooling effect in summer. From courtyards, additional water then flows underneath porch access points, to the storm gardens on the street, to the green commons, and finally, into the river. This design is supported by layers of sand and gravel beneath the soil, which collect and disperse water into a pipe that flows directly into the river, diverting storm water from the city’s sewage pipes.

Shade

In an ever-warming and changing climate, shade and shelter from weather extremities is a crucial element of this community’s design. Rows of trees along pedestrian streets offer shade in the summer, and covered bridges and porch loggias ensure that these common areas can function rain or shine.

Pollinator Gardens

Along the greenways are a series of pollinator gardens—plantings that have been selected specifically to support local pollinator species. These circular gardens form groups and clusters, creating small, unique pathways for residents to weave through. They also offer stair access and seating space. A variety of plinth configurations provide more seating options and lighting opportunities along this space. These gardens strengthen the local ecology and beautify the community.

Photovoltaics: Community Batteries

A system of several photovoltaic panels located on rooftops throughout the community, including on institutions such as the local Tesco, collect energy from the sun throughout the day. The surplus of energy generated then feeds into in “community batteries,” mid-size containers that store the energy for later use. These “community batteries,” distributed along the Green Commons throughout the community, are visually important elements of the public realm. Community members are integral to this system, and use the batteries as surfaces for public art. This photovoltaic system gives residents access to locally generated, low-carbon, renewable energy.



Interior street view

Pedestrian Streets

A combination of north-south and east-west streets, bridges, courtyards, as well as interlinked rooftops and porch loggias form the internal network of movement throughout the Garden Courtyard Apartments. North-south and east-west pedestrian streets are the primary way that residents get around.

The streets are places that can change in character along their linear passages, though they are consistently pedestrianized, prioritizing people who walk and cycle. Measuring at ten metres wide, the streets are sized to create an intimate neighbourhood atmosphere conducive to children’s play, small business, community street parties, and spontaneous events.

Residents of this new neighbourhood will enjoy a lifestyle that is not dominated by vehicles. Pedestrian streets encourage active forms of transportation, and while cars are allowed on these internal streets, to make deliveries for example, they are the exception rather than the rule. Residents are able to walk or cycle to school, places of worship, or the nearby Tesco, all along the internal pedestrian streets and bridges. In fact, one pedestrian bridge has a connection directly into the supermarket.

Some streets are continuous across the entire length and width of the site, while others, where they encounter the ravine, become pedestrian bridges or piers, which function as social spaces, look-out points, and access points into the ravine. These lookouts reconcile a new relationship with the site’s natural landform, offering public access to below or a lookout platform and ecological space for educational and stewardship possibilities.

Walking along the internal pedestrian streets, residents encounter many entry linkages to courtyards, block fragments of various lengths, and upper-floor bridge connections between courtyard blocks. This organization forms a network of choice and directional changes that are open to individual and shared access potentials with the households that manage the courtyards and their interconnections.

Each street is different and in plan has numerous spaces along its edges that interplay with the adjacent courtyard apartments and households. These expansion areas, much like a “medieval street” offer opportunities for mixity, transformation and change. They offer pop-up functions, local bike parking and vehicle drop off zones. The streets are polymorphous—they carry storm water, gardens, and present varied surface treatments.

A “Scale-Free” Network of Streets

In this community’s network of streets and bridges, not every node is fully interconnected; unlike a strictly planned network, this is a “scale-free” network, where some nodes have many connections and others have few. The distribution of connections are structured randomly, yet take on significance by the residents. Families and individuals are encouraged to explore all parts of the neighbourhood and discover the uniquely organized streets, bridges, and piers throughout the new community.



Exterior street view

Bridges and Piers

Bridges are more than pathways for transportation—they are hybrid social spaces, with aesthetic, architectural, and engineering considerations that are functionally integrated with the landscape. The 4 Dutch-inspired bridges are hybrid institutions: pathways but also places for markets, gatherings, and other social purposes. Open at their ends with gaps and discontinuities, bridges frame the ravine, drawing attention to and increasing legibility of the natural landscape. With multiple paths, residents can choose their preferred mode and route of transportation.

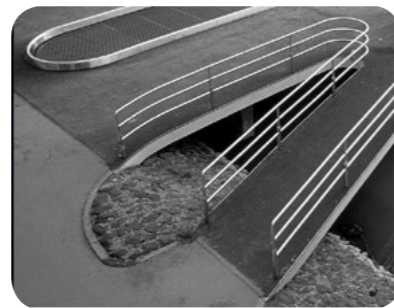
Similarly, a system of 7 piers punctuate points where pedestrian streets meet the ravine, and also act as look-out points and gathering spaces with access into the ravine. Where the street becomes a pier is not a dead-end, but a place in itself. Bridges and piers also offer residents safe points of entry to explore the natural landscape.

Both sides of the riverfront ravine have public amenities along them, connected by the most central bridge commons. The terraces on either side of the river contrast—the eastern end is more formal and urban, with two structures: an L-shaped public washroom and loggia adjacent a long restaurant

Precedents



Corktown Crossing, Toronto



Leidsche Rijn, fine grain access points



Leidsche Rijn, Netherlands

café, with both indoor and outdoor seating. The western terrace, dense with plants and pollinator gardens, provides residents with plenty of shade in a more informal setting. The garden courtyard blocks that face onto these two terraces are uniform, creating a controlled and aligned frontage. This placement gives the river a publicness and asserted frontage.

Green Commons

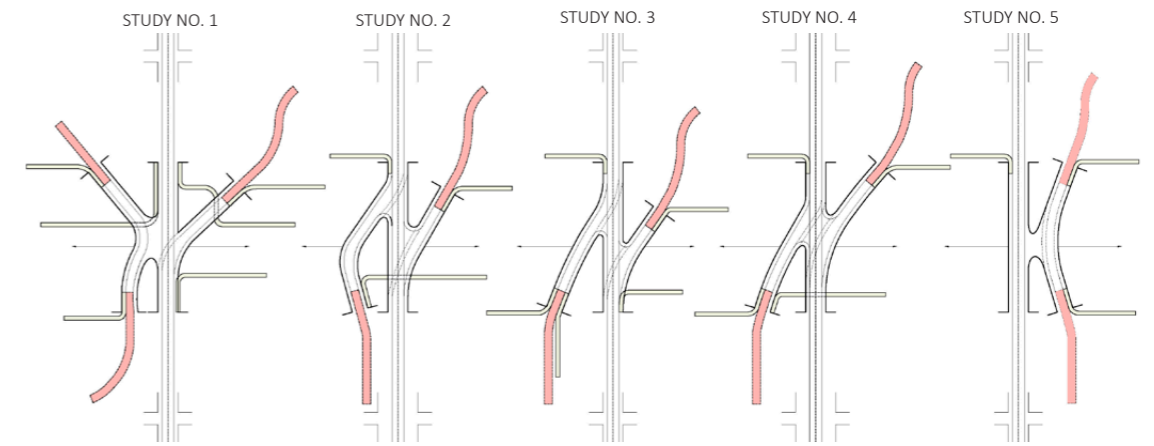
Green commons are 20-metre-wide, east-west running green spaces that organize the overall community into distinct but connected zones. These six different linear green spaces ensure that everyone in the community lives a short walk from a public park. These spaces provide opportunities for playgrounds, gardens, seating, and other park programming.

The green commons have two open ends that connect to adjacent pedestrian streets, opening up alternative routes across the neighbourhood. Articulated surfaces for “sponge landscape” technology and car and bike access allow a variety of modes of movement throughout these linear parks. The green commons minimize the need to cross the river or infill the landscape, while maximizing connections into the ravine and courtyards.

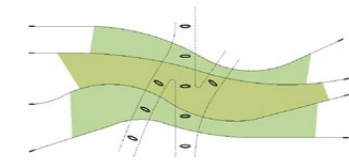
Bridge Technology

Bridge Landscapes and Fine Grain Connectivity
10.0m R.O.W Street / Pathway Bridge Variations

Scale: 1:2500



The bridge landscape organizes open natural spaces between its strands.
Scale: 1:2500



Wilderness Corridor Moving Beneath the Street and Pathways
Scale 1:2500

Bridge Features

Smaller road crossings and bridge can accommodate both the 20m right of water and the smaller 10m right of way.

It can combine the orthogonal street system with non-Cartesian pathways and roads intersecting.

It assumes a flat crossing for the bridge with the landscape falling away underneath.

It also assumes that the bridge organizes various pedestrian and multi-trail movements across its vehicular surface.

There are five variants on this type, each with a different number of intersecting pathways.

The type can be stretched or cleaved to fit different span conditions.

It implies a material construction of segments of surfaces made of different materials and open railings to give individual uniqueness and identity. It can be used in an east-west or north-south orientation.

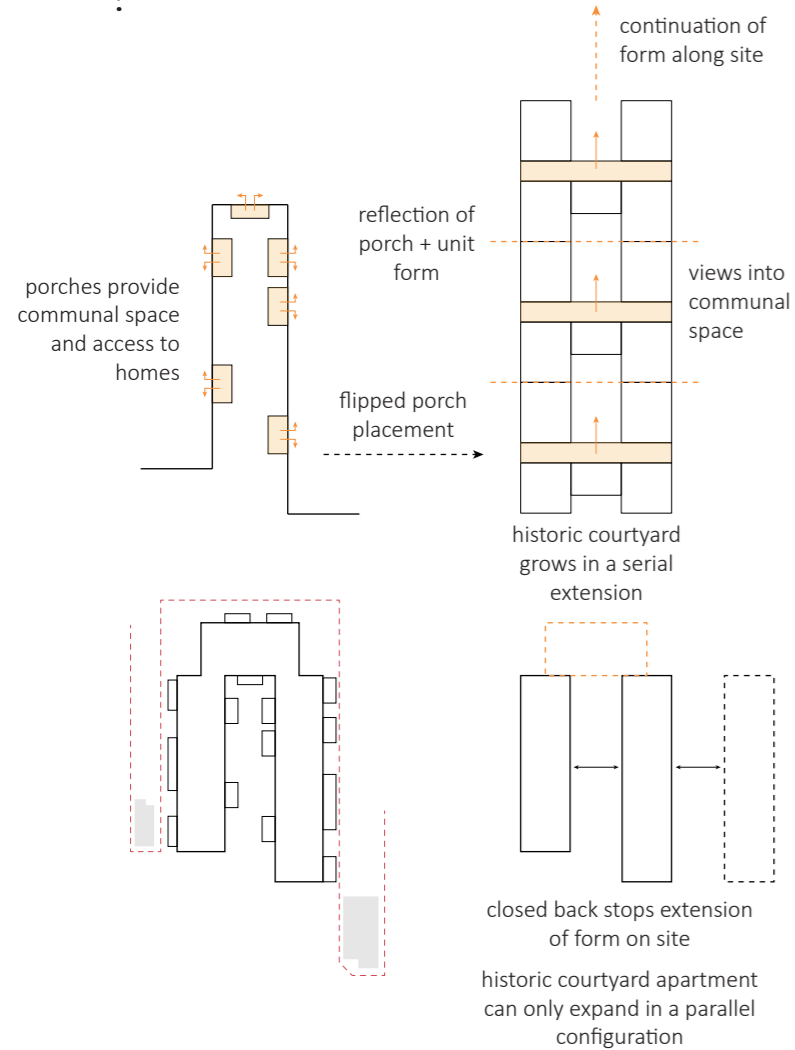
Similarly this type can obtain its own unique identity and respond to local conditions at specific sides.

The bridges open up and structure open spaces between the various connectors, revealing the openness between them for views and robust visual and physical contact with the wild cores or corridors.

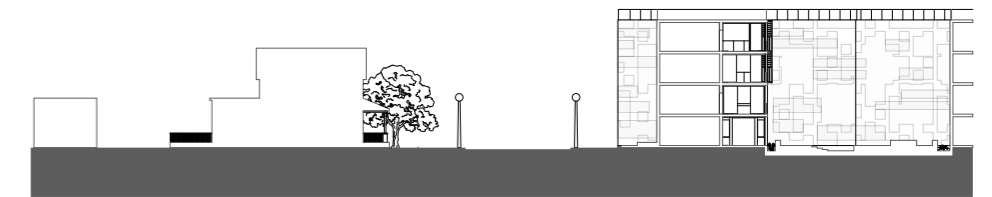
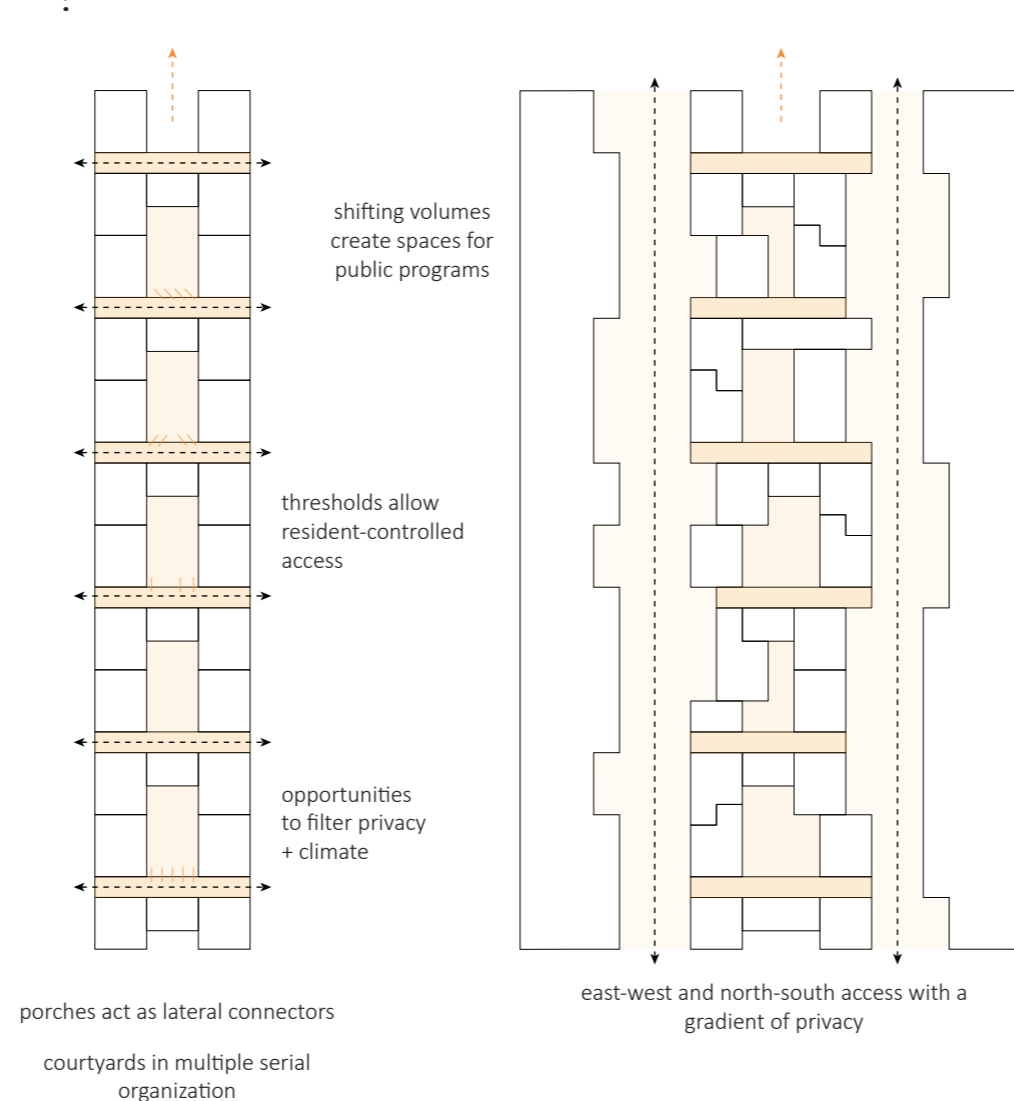


One of several bridge commons over the Forth River

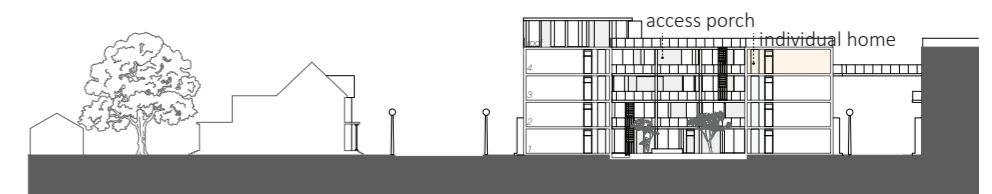
Historic Courtyard Typology



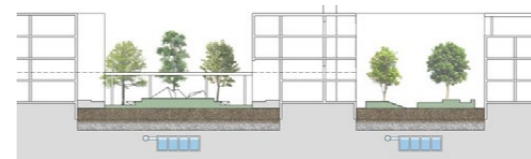
New Courtyard + Street Typology: Larger, Interconnected Courtyard Blocks



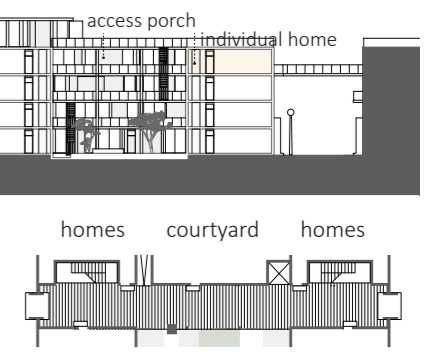
1:250 section b porch and courtyard



1:250 section a courtyard and internal street



section through courtyard showing sponge landscape



homes courtyard homes

Linked System of Porch Loggias and Rooftops

Porch loggias or access walkways are an important element in the design of this collective housing type. Unlike the traditional courtyard type with single access points serving individual apartments, this access serves 5 different apartments on each level, and takes on a social and collective spatial dimension. Residents can place furniture, plants, and art in these spaces, and can either lock or unlock them at their discretion. Similarly, residents influence the recreational nature of the rooftop, another social space and opportunity for gardening.

Residents access their home or visit a neighbour from the porch loggia—a covered outdoor space that runs along the length of the building and faces into the courtyard. Porch loggias are similar to a typical Indian chawl, in which a set of rooms are strung together by a shared corridor that functions as a threshold space. Covered yet open to the outdoors, the porch loggia is one of many common spaces for everyday socialization and activities. Sliding glass screens and curtains along the outdoor side of the loggia allow residents to adjust the light, shade, and air in the space according to weather conditions.

Porch loggias play a vital role in knitting together the site. The porches extend as bridges between separated blocks of apartment groupings, both at grade and on upper floors. The porch loggias are also where residents can move throughout the apartments vertically, with stair elevator access. At the ground level, porch loggias allow entrance into courtyards and double as entrance foyers. The upper porches, while not as public, nevertheless provide collective space for the homes they serve. Residents control movement across and through the porches—they can choose to keep it open or closed.

Linked System of Courtyards and Forecourts

Forecourts and courtyards offer places for residents to enjoy the outdoors under an open sky. These spaces accommodate a range of uses and purposes between neighbours. While many who live in apartments lack access to significant outdoor space, the residents in the garden courtyard apartments enjoy courtyards as the central public element of the community design.

Courtyards are formed around the house-like apartment structures, and belong to those that live there. Residents experience instant community with their neighbours in these collective spaces. Adjacent homes have balconies that extend into the courtyards. Apartment structures can split and shift in position and orientation, creating a varied network of courtyards and forecourts that respond to adjacent conditions, contexts, and allocations of space.

Given the quantity of courtyards and forecourts throughout this community, they can all have distinct programs, uses, materials, and natures that are defined by the residents. For example, one courtyard may function primarily for growing fruits and vegetables, while other courtyards may be more oriented for large gatherings. Similarly, some forecourts may be used for parking, while others, for gardens.

The courtyards are open-ended where they encounter the Green Commons, contributing to the greenery and gardening opportunities along these linear spaces. The “unfinished” condition of these courtyards leaves them open to new possibilities, such as additions, building extensions, trellises for shade, and other fine grain elements at the discretion of the residents. The collective landscapes of the courtyards are relational and interactive with the open river ravine landscape, promoting access and intra-action between the two “natures.”

Mixity

The emergent street walls and ground floors of the garden courtyard apartments are open to functions beyond residential. Schools, shops, daycares, communal work spaces, places of worship, and small businesses have the potential to take root and establish a landscape for making a living along street edges. These non-residential spaces provide residents with opportunities for employment, leisure, and social services just steps from their home.

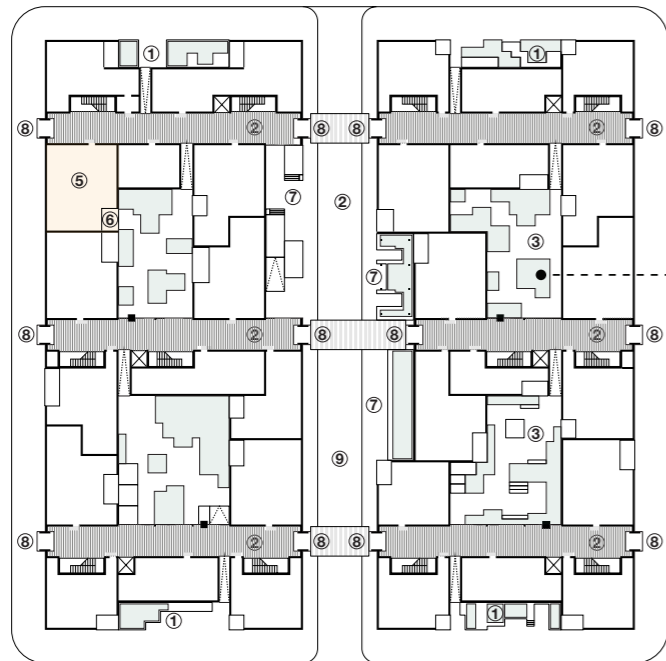
Typical Dwelling

"Boundaries in the Making" - Garden Courtyard Apartments

1:500 floor plan: ground floor 31 units per floor

Key

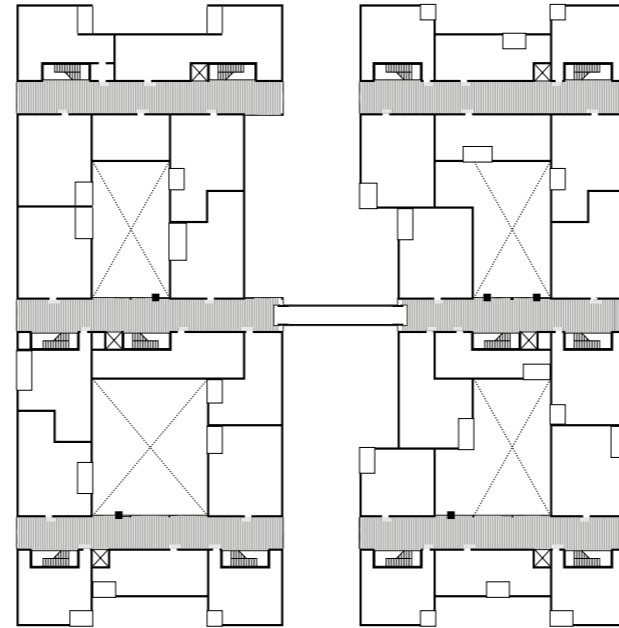
- 1. forecourt
- 2. passage
- 3. access porches
- 4. garden courtyards
- 5. home/dwelling
- 6. balcony
- 7. activated pedestrian street space
- 8. entry access
- 9. internal pedestrian street



coverage 66%
 FAR 2.66
 density 78 dwellings/acre

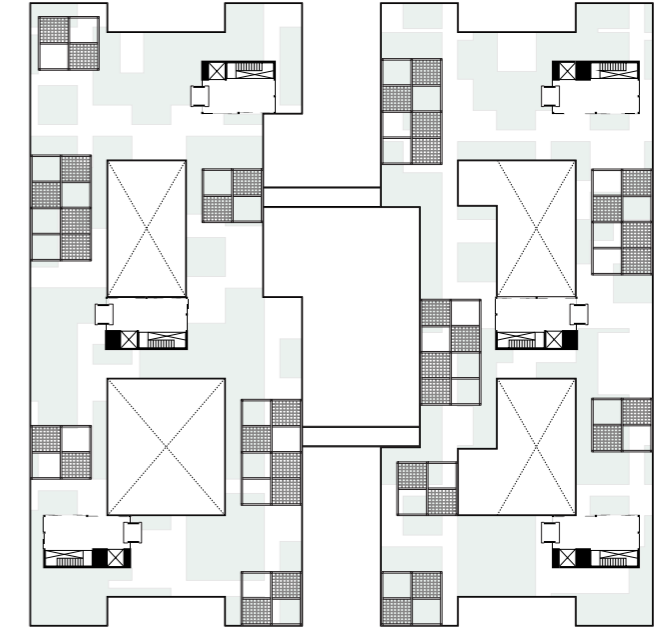
differentiated courtyards

1:500 floor plan: level 2, 3, 4 31 units per floor



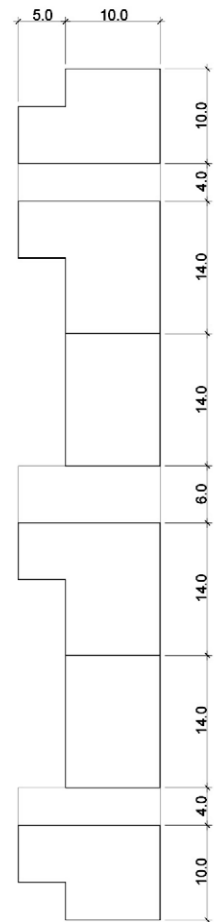
coverage 66%
 FAR 2.66
 density 78 dwellings/acre

1:500 roof plan: level 5 31 units per floor



coverage 66%
 FAR 2.66
 density 78 dwellings/acre

Unit Layout



Ground Floor



Second Floor



Third Floor



Fourth Floor



Roof Plan



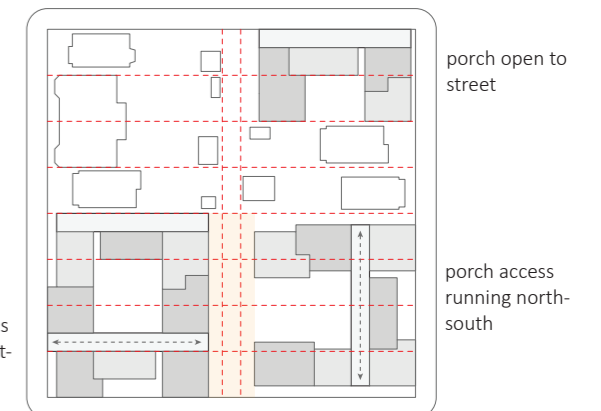
Each apartment has a shared rooftop for gardening and recreation.



Ground floor porches connect into courtyards and can double as entrance foyers.



Upper floor porches extend into neighbouring apartment groupings.



Incremental Building: Expansions and Changes in Use



Precedent: DCOOP's Collective Housing Project



Source: ArchDaily



Our Garden Courtyard Apartments take inspiration from several international architectural styles, including collective housing models in India:

“Traditionally, Indian homes would shelter generations of a family together under one roof, forming close-knit neighborhoods of relatives and friends. The residential architecture was therefore influenced by the needs of the joint family system. Spaces for social interaction are pivotal in collective housing, apart from structures that adapt to the changing needs of each family. The nuanced relationship between culture, traditions, and architecture

beautifully manifests in the spatial syntax of Indian housing.

DCOOP's collective housing project draws inspiration from the vernacular chawl settlements found in western India. Typically, a chawl is a set of rooms strung together by a shared corridor that doubles as a functional threshold space. Such semi-open spaces are nodes for social interaction, offering refuge from the warm and humid climate.

With multi-generational living comes the need for houses to grow and modify. In India, families will add rooms, floors, or buildings to their existing homes to accommodate

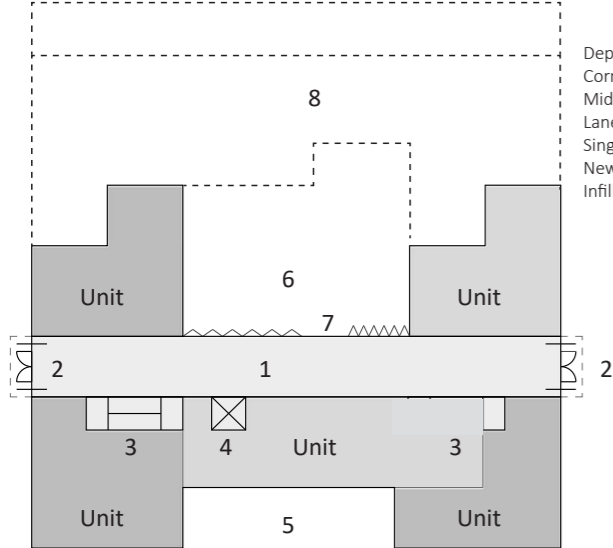
new family members from birth, adoption, or marriage. Taking cues from the traditional incremental construction and Charles Correa's Belapur Housing, Filipe Balestra & Sara Göransson have developed a replicable strategy for affordable housing systems.”

- Ankitha Gattupalli

Residential Courtyard Grouping

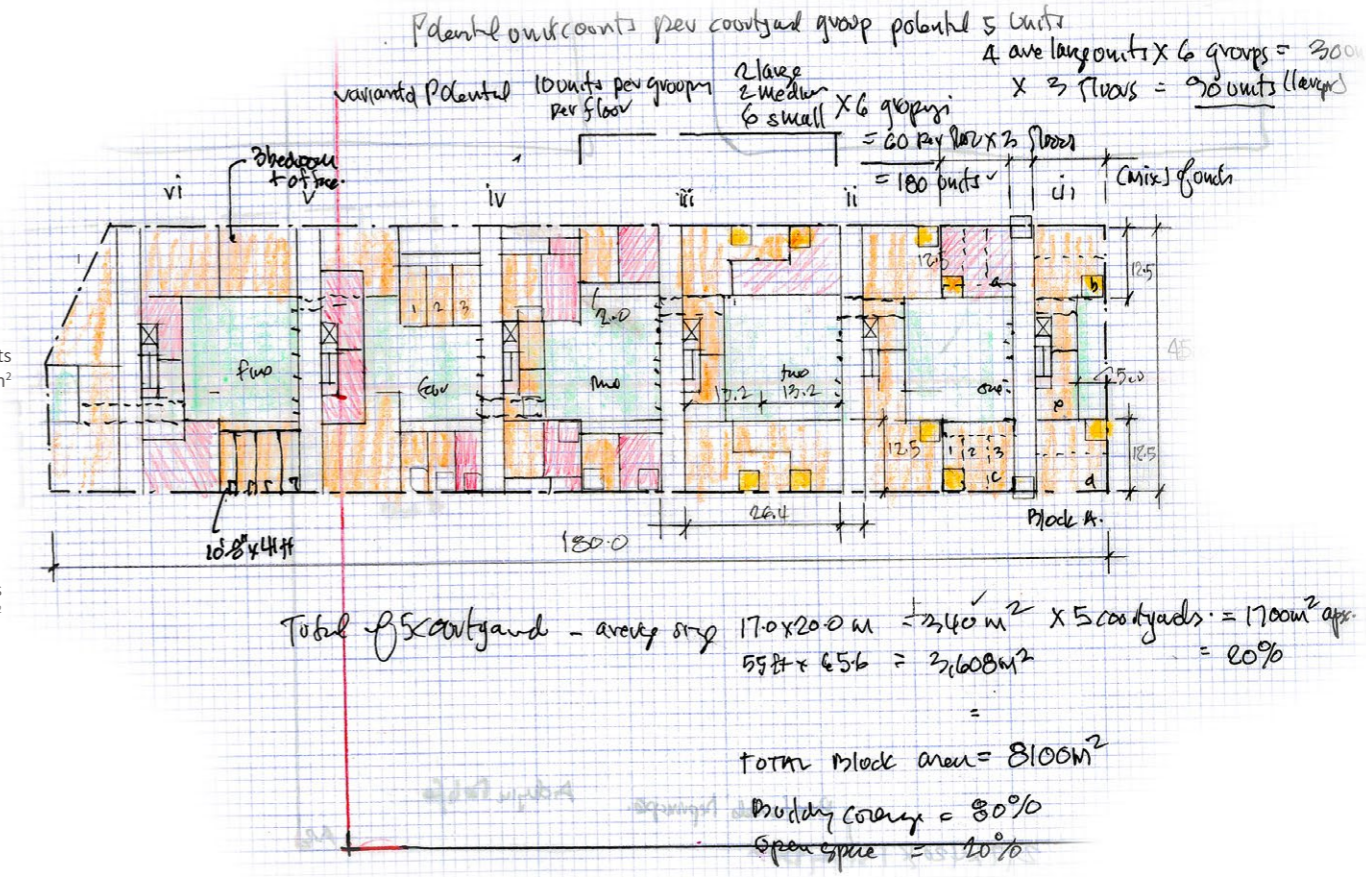
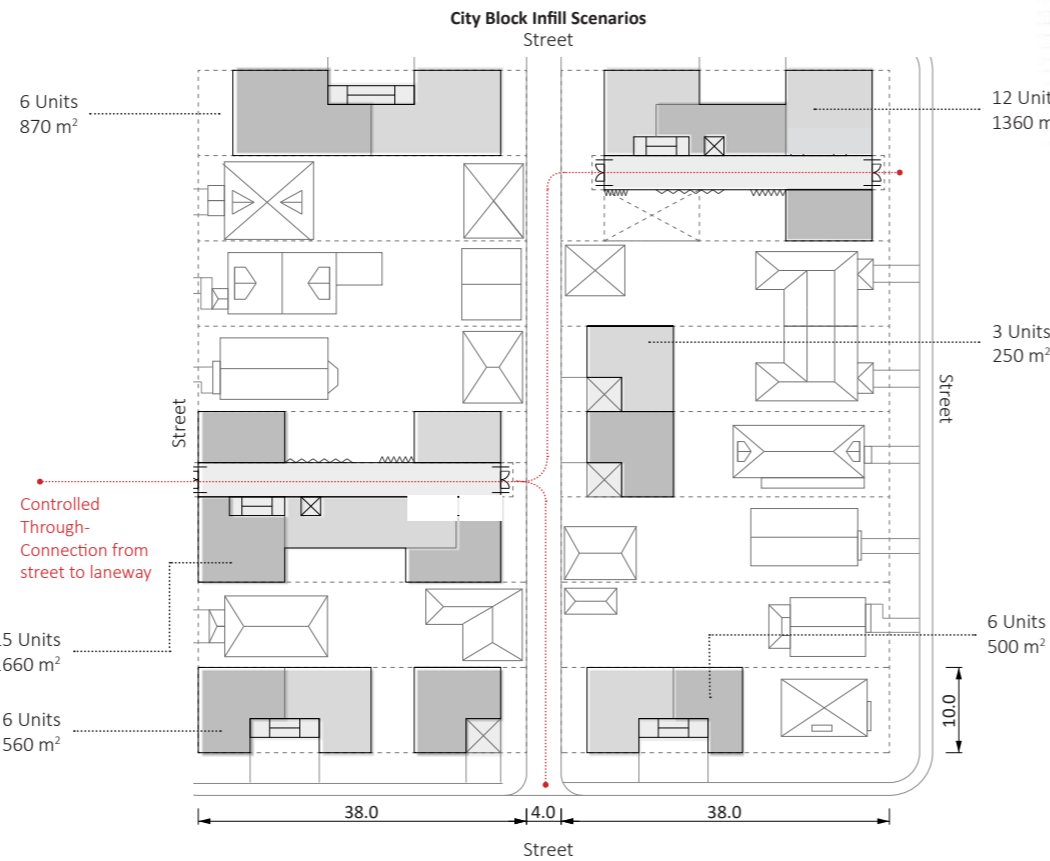
870 m²

Deployment with varying property conditions
 Corner Condition
 Mid Block Condition
 Laneway House
 Single and Double Lot Opportunities
 New Courtyard Type and Converted Laneway
 Infill with lane widening

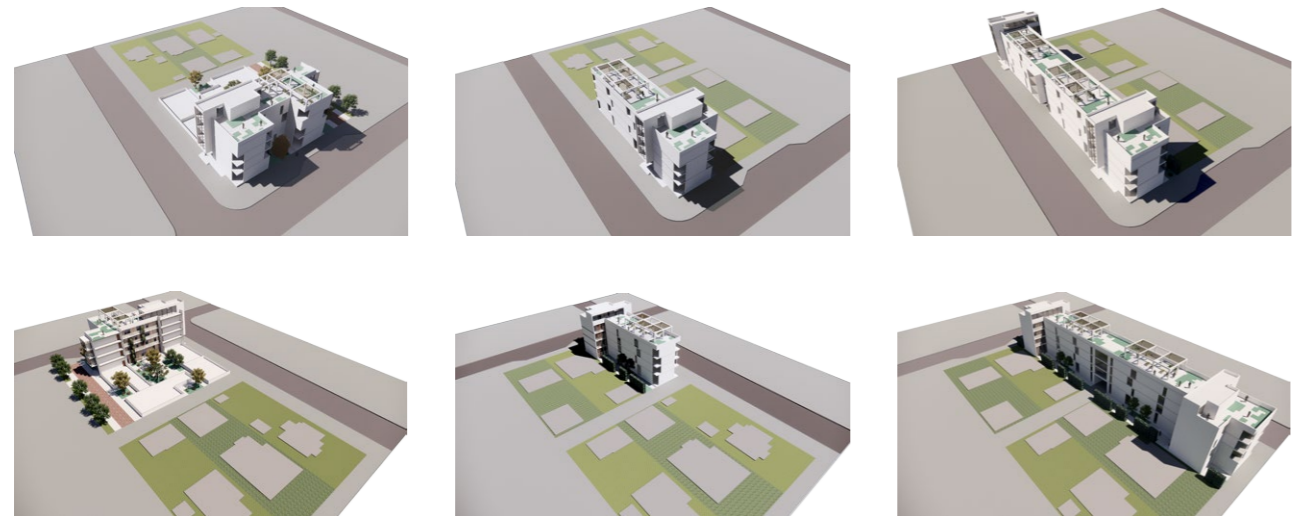


Residential Type Elements - 5 Dwellings

- 1: Collective Porch
- 2: Entrances
- 3: Stairs to Roof Terrace
- 4: Elevator
- 5: Forecourt
- 6: Courtyard
- 7: User-Activated Climate Modifiers
- 8: Expansion into adjacent possible:



Perspectives

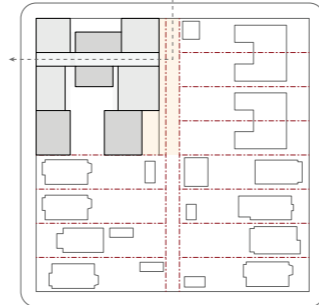


The garden courtyard apartment type can adjust and expand in size and orientation based on its surrounding context and spatial allocations.

city block compositions

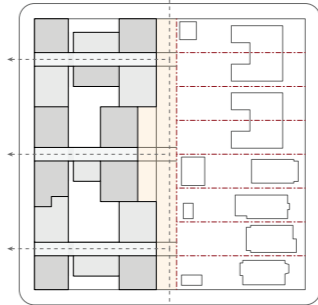
serial extensions of garden courtyard apartments

1 porch 0.25 pedestrian street
4 floors 32 dwellings



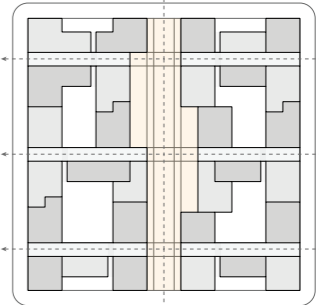
quarter block
full corner frontage gives maximum access and begins to break down lot structure
access from 1 street and laneway

3 porches 0.5 pedestrian street
4 floors 64 dwellings



half block
street frontage allows for connections to newly expanded laneway
access from 2 streets and laneway

6 porches 1 pedestrian street
4 floors 128 dwellings



full block
the existing lot and laneway structure has been completely broken down for a new public realm
access from 4 streets and laneway

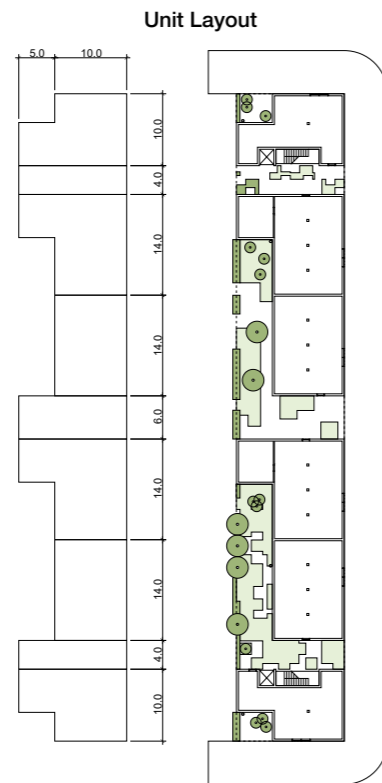
Support, Fill Action: The typology of housing grouped around a series of interconnected courtyards is reminiscent of textile worker housing in both Europe and America, and perhaps even within the environs of the Mackie’s factories. Providing homes for large mill workers and their families, this simple collective housing typology has a great history and significance. This historic housing type’s ability to group simple constructions around open courtyards guaranteed strong community relations, creating socially vibrant, integrated communities.

Is it still possible to build these 3-storey, box-shaped houses, with simple point access stairs and elevators and the potential to adapt, modify and change themselves according to the needs of the households living there? Reflecting on the significance of “starter homes” and “starter apartments” suggests the idea of a larger and more economically spacious building configuration in which varying degrees of infill construction by the residents allow for adaptation and evolution. This is not a minimalist starting point, but an idea of configurations of space with initial, built-in spaciousness able to adapt to changing needs over time.

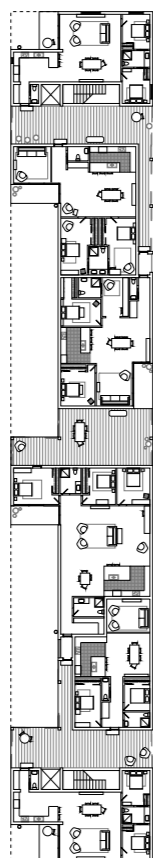
Our “support, fill, action” story parallels the principles of “design, build, live.” The garden courtyard apartments provide the basic structure of the living space or “support,” allowing residents to “fill” the space according to their needs—for example, by adding or removing a wall. This allows them to reorganize the entire space, for example, by adding a bedroom or work-from-home space. “Action” describes how residents interact with these elements in relation to objects, time, personal needs and economics.

Support/Design

The basic spatial structure and organization that the architect provides (e.g. floors, windows, ceilings, washroom locations, access to sunlight and air, stairs, elevators, the infrastructure of connection)



Sample Floor Layout Maximizing Potential on the Site



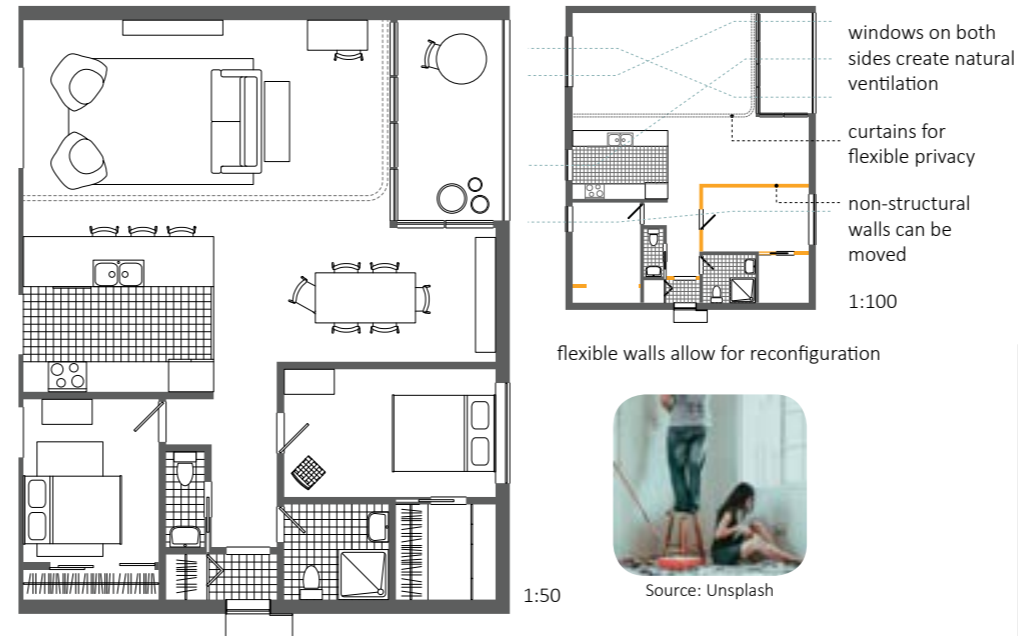
The courtyard garden apartment type is compact, efficient, and flexible. With approximately 5 units per floor on 3 storeys, this new community maximizes the housing potential on the site while being sensitive to the surrounding context of low-rise, single-family houses.

The buildings split and shift in position and orientation to create a varied network of courtyards and streets that responds to adjacent conditions and contexts. At points of the site where the landform slopes downward, such as the edges of the Forth River, garden courtyard apartments are eliminated, reduced, or opened up. These homes face into the ravine with stair and ramp access, creating an integrated relationship between the ravine and the community. By building sensitively around the unique spatial characteristics of the site, we are able to maximize the amount of housing available without infilling or degrading the natural landscape.

Fill/Build

The changes and potentials that residents bring to the space (e.g. expansion of living space, infilling of a balcony, addition of a room, completion of the construction of an open area)

sample unit: two bedroom with terrace



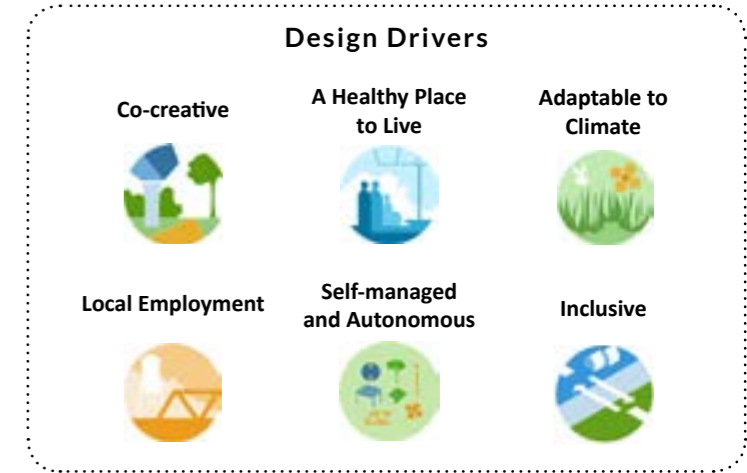
Flexible, Sustainable Home Design + Incremental Construction

The garden courtyard apartments are composed of varying typologies to accommodate a full spectrum of people. The apartment structures are able to adapt to the changing needs of each family, culture, and traditions. Apartments can take on a range of different sizes and configurations subject to the evolving needs of residents.

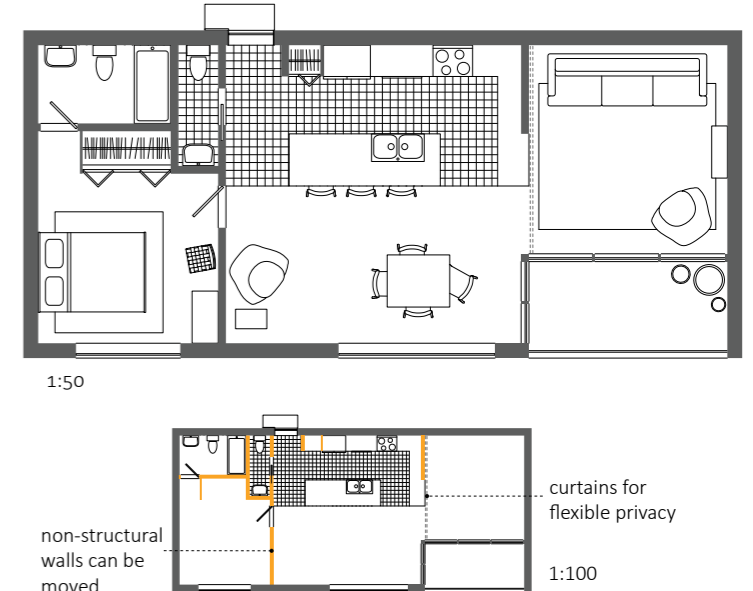
Residents can choose from a variety of flexible and spacious bachelor, 1, 2, and 3-bedroom homes. Dwellings are large enough to allow a variety of layouts, and a modular system means the apartments can easily adapt as the demands and demographics of the community change over time. For example, residents can switch between a two-bedroom apartment and a three-bedroom by adding or removing non-structural walls. Individuals who work from home can also choose to have a separate in-home office space. Residents are given a sense of ownership by enabling them to customize their own households as they like and where funds are available.

Apartments are scattered across the buildings to enable families with children, young couples, people living alone, and older community members to mingle easily. Each apartment, regardless of size, location, or the socio-economic status of the families living there, has the same basic amenities. All homes within the community are treated with equal design considerations, and geared-to-income units meant to be chosen at random.

Each home within the community is oriented to take advantage of natural light and air; with most units having double exterior frontages, residents benefit from cross-ventilation, sunlight throughout the day, and various outdoor views. This strategic placement of homes can help reduce the carbon emissions associated with heating, cooling, and lighting.



sample unit: one bedroom with terrace



Action/Live

How residents live in a space and interact with the elements (e.g. how the space works with different groups of people, how the space can accommodate social events and changes in the family structure)

Spaces for social interaction are pivotal in collective housing. Architects play an important role in creating living spaces that are informed by and responsive to the socio-cultural context of its location. The objective here is to establish community interaction and build a sense of belonging amongst residents of this new, low-rise, gentle-density community.

The composition of garden courtyard apartments introduces a new way of living centred on shared public amenities. With a large degree of interconnection between multi-family units, this organization represents a new model for collective living and shared outdoor space. The public courtyards, roof terraces, and porch corridors promote social cohesion and resilience among neighbours. These open, multi-purpose spaces offer fluid freedom for a multiplicity of activities, social groups, households, and individuals.



Sunnyside Gardens: 49-01 39th Avenue New York, New York. Source: Google Maps

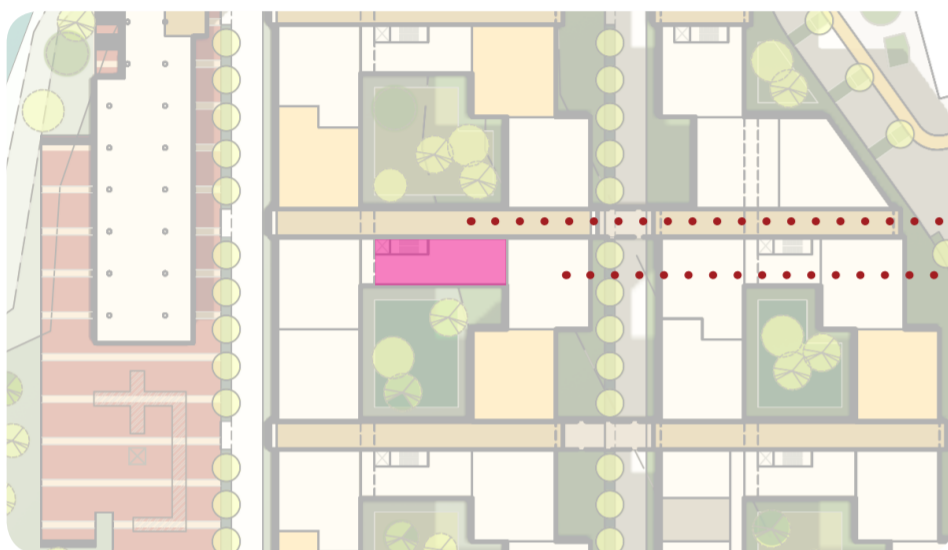


Albert terrace, Saltaire, Yorkshire. Source: Alamy



Morning coffee on the porch.

Before waking up her son our “typical resident” takes a seat on her porch, chatting with neighbours and enjoying the fresh air.



Highlighted view of our “typical resident’s” apartment.



Harvesting vegetables from the rooftop garden:

Our “typical resident” grows vegetables in 3x6 metre garden roof plots, a shared amenity with her neighbours.



Walking and cycling through pedestrian streets.

Our “typical resident” gets around the community primarily by walking and cycling along an internal system of pedestrian streets.



Source: Google Maps

Shopping at Tesco:

Our “typical resident” cycles along a bridge that extends and connects directly to the Tesco’s roof canopy, where she locks her bike and gets her groceries.



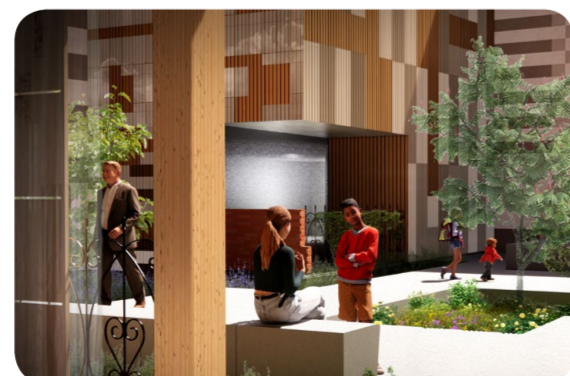
Expanded view of typical resident’s immediate neighbourhood.



Source: Unsplash

Exploring the creek.

On the weekend, our “typical resident” and her son access the ravine from the pedestrian bridge.



Greeting neighbours in the courtyard.

From the courtyard, our “typical resident” walks into the porch loggia, where she takes the stairs up to her apartment.



Source: Unsplash

Cycling to the local elementary school and daycare:

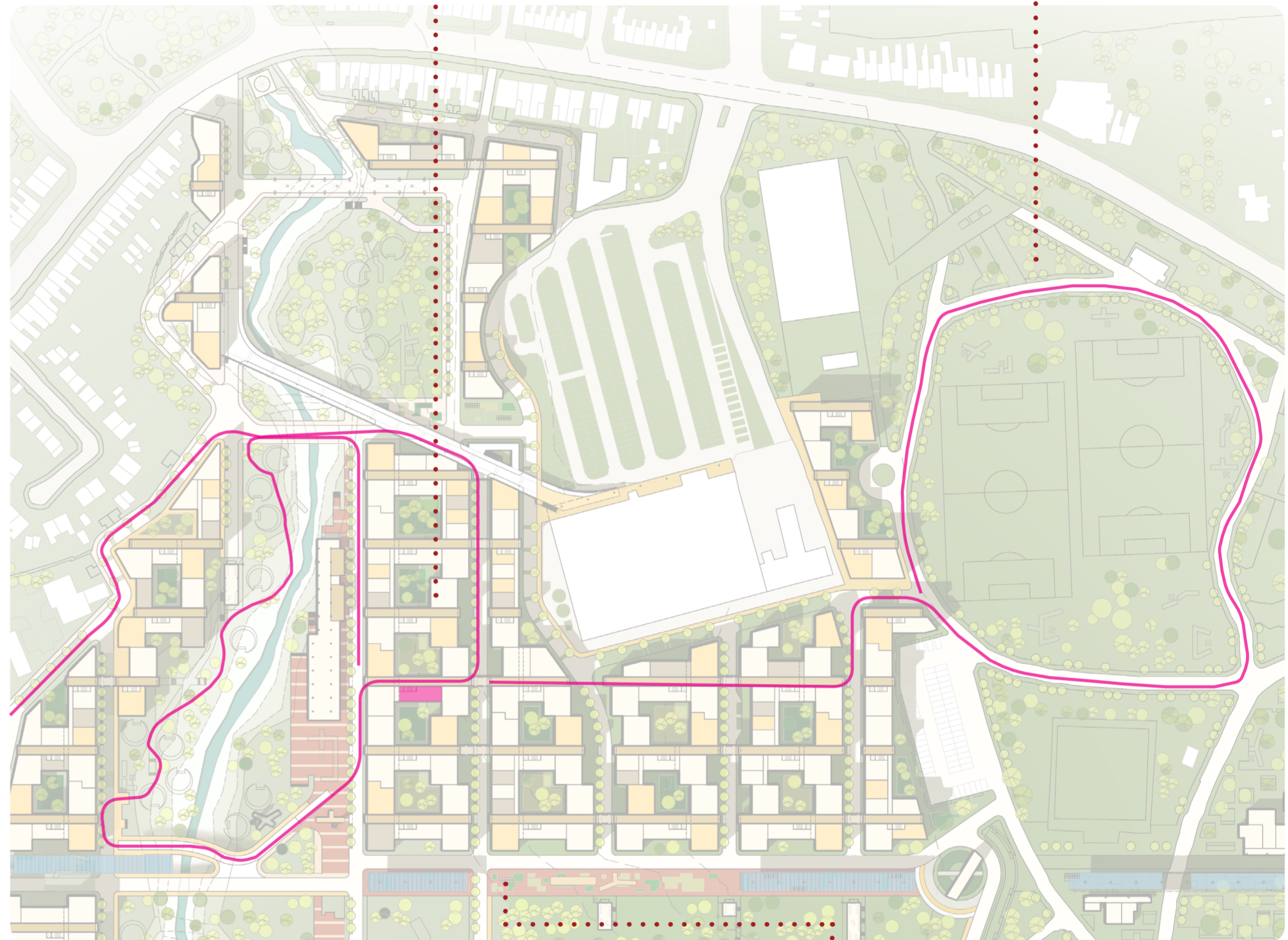
She cycles with her child, dropping him off at daycare in the morning, connected to his elementary school.



Source: OutMoreNI

Cycling to the expanded Woodvale Park:

After her son finishes school, they cycle through the pedestrian streets and along the perimeter path that takes them directly into Woodvale Park. She takes a seat under the new canopy while her son plays.



Example path of travel from our typical resident’s apartment throughout her immediate neighbourhood

Overall view of typical resident’s neighbourhood.



Wine Quay Bar, Porto, Portugal. Source: Trip Advisor

Working at a local restaurant and cafe:

Our “typical resident” crosses the pedestrian bridge to her job at a local restaurant cafe.



Energy storage in Melbourne. Source: OneStepOffTheGrid / Brant Kozlovskis

Walking through the Green Commons

On her work break, walks through the green commons, where she encounters pollinator gardens and “community batteries,” solar energy storage containers and surfaces for public art.



Source: MiracleGro