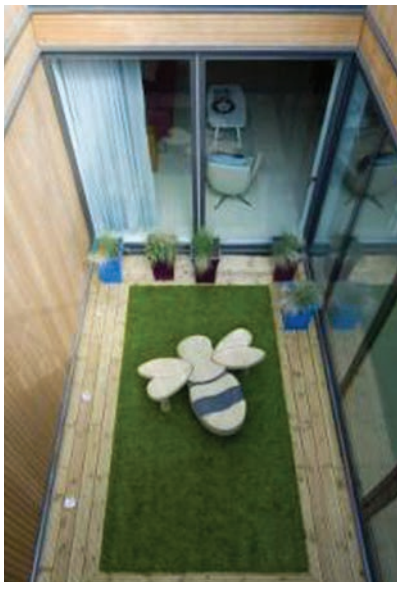
Exploring new housing choices

for changing lifestyles








Christchurch City Council

Greater Christchurch Urban Development Strategy

Christchurch City Council

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This document looks at new housing solutions for Christchurch in response to the changing lifestyles and urban growth challenges of the twenty first century.

The ideas presented here are intended to increase awareness of how to achieve quality and choice for residents, adding to the variety of options already available. They respond to key concerns such as protecting the character of the Garden City, strengthening communities, housing affordability and environmental sustainability.

Part One discusses the issues which inform where, how and why varying housing choices should be provided. It explores how different locations and their access to local amenities, workplaces and transport affects housing. The value of building housing to support and enhance existing communities is considered, together with the need to sensitively integrate new development into existing neighbourhoods. It also identifies the challenges of working with typical urban site opportunities, and the qualities which are important to residents in designing new homes.

Part Two illustrates a range of housing typologies suitable for central city living. These are varied in their design and site arrangements, and respond to range of housing needs and lifestyles; site sizes and formations; urban locations and densities; and environmentally sustainable solutions.

contents

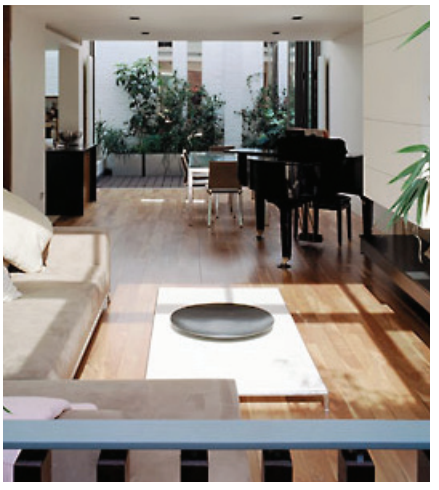
1 | housing in christchurch

liveability

our housing needs

Peoples' needs are diverse and varied, and each person wants their home to be a reflection of their individual circumstances. We look for homes which suit our lifestyle, and provide us with the space and access to places that we want. We want our homes to be easy and stimulating to live in, and to make our daily activities around the neighbourhood and city convenient. In short, we want 'liveable' places.

Because we are all different, a 'one size fits all' approach to housing does not work. Nobody wants to be forced into living somewhere they do not like. Homes and neighbourhoods should provide choice and options to enable people to live life fully.



our housing traditions

Sydenham Worker's Cottage

Daresbury

The Old Stone House

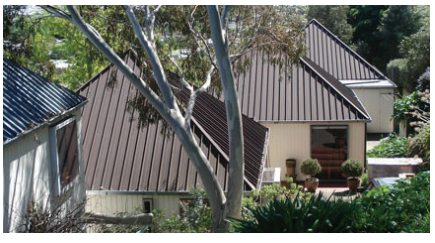
Traditional Villa housing

State housing, Hornby

Dorset Street Flats, Warren and Mahoney

West Avon Apartments

K. Uren House



Barry Dacombe House

Peter Beavan Flats

Christchurch has a diverse tradition of housing, with varying types of homes built in different historic periods, creating distinct neighbourhoods in the city. Many people in the city cherish the character and interest which arises from this heritage.

Early development featured houses that vary in size between large scale estate homes and small scale workers' cottage, in 'worker' or 'affluent' suburbs. As well as private homes both the State and the Council developed housing that has ranged from houses to flats.

In more recent years apartments and townhouses have been increasingly built near the central area of the city, but for many people a detached house with garden remains representative of Christchurch housing. This model will continue to be an important part of the city in the future but it is important to note that while these properties are particularly suited to the needs and lifestyles of particular people, they may not suit or be affordable for everyone.

liveability

choices for the future

At a personal level, the way we are living is changing. We now work differently, have new options for leisure and recreation, and we get around in different ways. We also have a changing population - we are living longer, with an increasing population of older people, and many families are smaller than in the past.

Our changing preferences reflect this with more demand for smaller, easy-care homes in locations which are convenient to local services. While many people may still prefer the idea of large detached homes, these homes do not suit everyone any more.

We also face social and global challenges which have a direct effect on the homes that we live in. Energy for travel and heating is becoming more expensive, and the cost of supplying infrastructure such as drainage systems, schools and community facilities are increasing as the city expands outwards. The realities of looking after our environment are becoming increasingly important.

Concern for these personal, social and global issues underpins the city's growth planning. New housing development needs to allow us to live enjoyable and convenient lives in the future, while trying to minimise the cost of living in our city.

It is also apparent that not all recent central city housing development has been of suitably high quality. The city council is looking to developers, and the public, to push for better quality urban housing. This document seeks to help achieve this outcome.

what does this mean for you?

It should mean a greater range of more suitable accommodation for people. This document particularly promotes new choices and better quality in central areas, because these locations can offer great 'liveability' and improve our city. Central area redevelopment will complement our existing suburbs and recent trends for development around the city fringe.

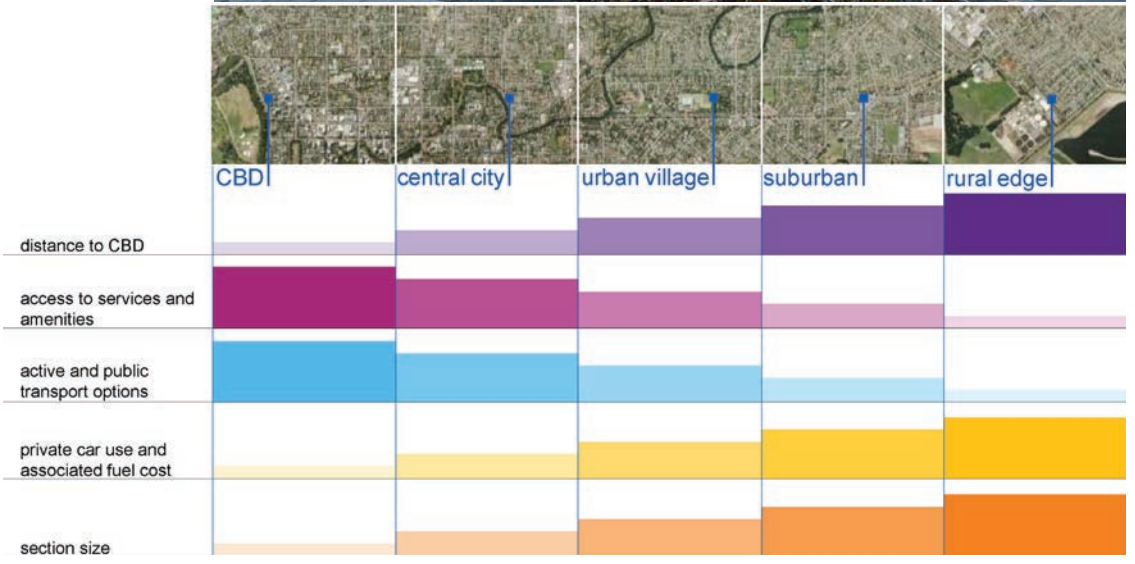
This document should help you understand what to look for in new central city housing, what some of these choices may look like as places, and what they may be like to live in. The city also hopes that developers will learn from the examples shown, and add even more housing models and choices beyond those in this document, building upon the important values and qualities described here.

location

convenience

Our choice of where in the city to live is linked to where we want to go, and how often. Varying locations from the rural fringe to the central city offer different levels of access to the amenities and services that we value.

Being near shops, schools, parks and workplaces is something many people want, and this is generally a trade-off between other factors such as the affordability, size of homes and the people that we may want to be near to. Houses and lifestyle blocks at or beyond the edge of the city offer greater private space, but we may not have convenient access to as many services and community facilities. These services in turn need a local population to be viable, and our urban villages and centres begin to really thrive and offer choices with greater numbers of people in the neighbourhood.



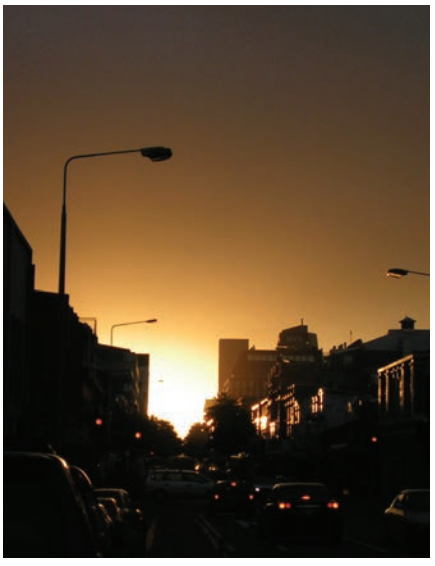
key
high medium low

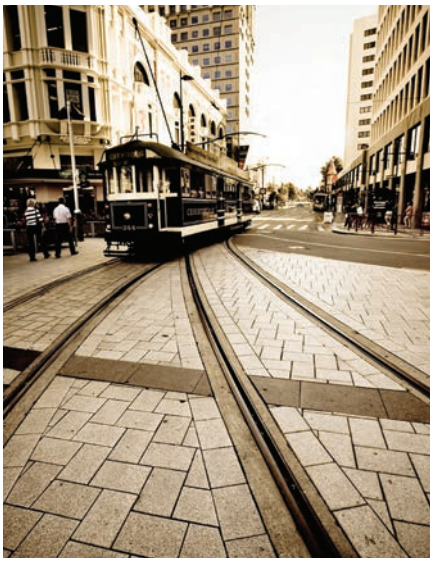
getting around

People use different ways of getting around such as walking, cycling, driving or taking public transport, and our need to travel varies and changes at different times. The location of our homes plays a large role in deciding how we get around.

For example, living near the edge of the city often means we use our cars often due to the distances between our places and a limited range of public transport options. While we all value our cars for many uses we may prefer to have other convenient options available for our daily trips, and to use a car for longer journeys.

Living more centrally tends to give access to better bus routes and shorter travel distances. The greater the number of people living in an area, the better quality and frequency of transport services that can be provided. If we are within 5 to 10 minutes walk of shops, schools and workplaces we also have more opportunities to use 'active' transport such as walking and cycling.





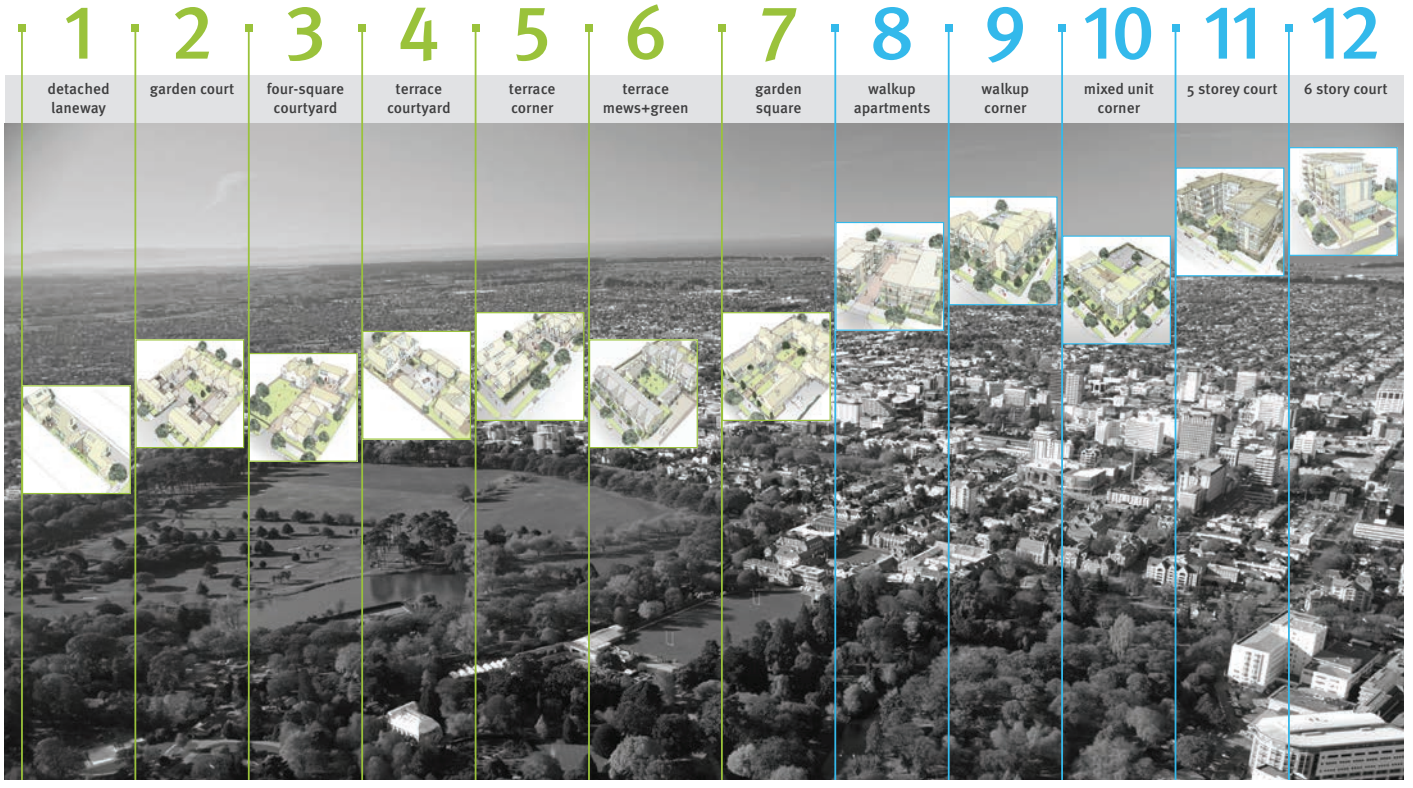
location

housing types and location

The advantages of different locations for amenity and travel are also reflected in the varying types of housing found across the city.

Having more outdoor space and larger homes on the city fringe requires detached, large-lot housing. Creating thriving centres with more services and transport requires more compact forms such as semi-detached houses, terraced houses and apartments.

These different patterns help shape the character of our places, helping to create varied and interesting parts to the city. This variety is clearly visible in the historic development of our city, and should be promoted in planning for the future.



sustainability and location

Where we locate new housing also has some significant effects on how environmentally sustainable our city is. New housing in more central locations can be both more convenient for us to live in and reduce our environmental impacts.

Developing new housing choices in existing central areas helps reduce pressure on ecosystems at the edge of the city - the places where the city relies on the natural environment for clean air, water, food and materials. We reduce the amount of new roading and hard surfaces, by making better use of our existing infrastructure.

In central areas where access to public transport and walking or cycling routes are better, people can also more easily reduce the impact on the environment of emissions from their regular travel. Safe and attractive routes for walking and cycling can also help our individual health, giving us direct benefits as well as environmental benefits.

community

people and places

One of the most important qualities we look for when choosing a home is a sense of belonging. Many of us have strong associations with particular places that we have lived in or would like to live in. Often this is about the people we know or want to be around, and the social activities that happen in that community.

These community opportunities often depend again on location, and on the quality of the place where they occur. Communities come together through casual and organised social gathering as well as the simple chat over the fence between neighbours. A community often comes together more formally in the places where local services and amenities are located, around shops, leisure facilities, parks and halls.

creating a great neighbourhood

A great neighbourhood is one where people enjoy connecting and interacting with one another. It looks and feels good to be in. The physical form of our area has a strong influence on our lives, even if it we don't often consciously think that way about it.

Because housing forms the bulk of our city environment it is important to design housing well to create good neighbourhoods and support communities. Shaping good neighbourhoods also means fitting housing sensitively into an area, so that relationships between neighbours can work well.

Generally people connect with up to eight houses in their street – a few either side of their own home plus some across the road, depending on how busy the street is. The relationships with adjacent houses, the way our houses connect with the street, and the quality of the street space are therefore very important to get right. For compact housing in central areas these are critical design quality issues.

The design of new housing needs to address all of these issues, but also needs to work with the 'Garden City' character of Christchurch. In more central areas, where the city offers medium and higher density housing, this means creating private or shared garden spaces for residents wherever possible, and ensuring gardens can include generous planting and encourage an outdoor lifestyle in the heart of the city.

community

diversity and affordability

A successful community offers choice of housing for all stages and ages of life including young singles, the elderly, empty nesters, families both large and small, groups of flatmates and couples.

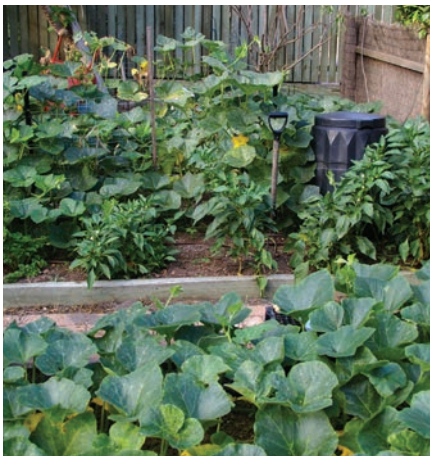
Our diverse needs at different stages of life require a variety of styles and sizes of houses; from 1 bedroom units through to multiple bedroom family houses; houses may include gardens or balconies; private or communal garden space; no carparks or many. It helps our communities if they have a range of choices both within groups of houses, along a street and across an area, so that as peoples' circumstances change they can stay within their community, by adapting their house or moving nearby.

In recent years the problem of housing affordability has grown. Design and planning alone cannot solve this problem, but can help by showing high-quality, cost-effective alternatives to 'traditional' housing. These are now often oversized, and waste space by occupying only a single level and providing garaging for several cars. Alternatives such as compact housing in central areas can require less land to achieve spacious and attractive homes, while reducing the cost of travel to and from the house.

sustainability and community

Community sustainability means strengthening our communities. New housing can successfully enhance a neighbourhood when it is sensitively designed, provide a wider range of housing choice, and increase the social sustainability of our communities by supporting local schools and services. New housing should create homes where people want to live, but also that the existing neighbours want in their area.

As energy for houses and transport becomes more expensive, and resources and food cost more, being near the places that we go regularly allows us to participate more easily in the community. Incorporating 'Garden City' values into our housing gives us the choice of enjoying our gardens for leisure or productive gardening.



site

site variability

The sites available for housing vary across the city, affecting the type of housing that can be developed in different areas.

Each potential site has factors that need to be taken into account including size, shape, access, aspect, orientation and location. A good home is one which has been designed in response to these factors.

On the edge of the city, new development can often be laid out on large sites, with relative freedom to form roads and building lots on the site. In central areas the sites are typically much smaller - often original quarter-acre lots - and are probably bounded by neighbouring houses or buildings. This makes them more challenging to develop well, and they need greater care in the design of their buildings and spaces.

The constraints of central area sites therefore need a more 'contextual' type of housing, where the design pays more attention to fitting in with neighbours. Where this is successful the new housing will look and feel appropriate to the area, and also create homes and gardens which are private, secure and comfortable to live in. Good designs on urban sites often respond to the neighbourhood by 'respecting the street' and by balancing outlook and privacy

shapes and sizes

Typical site opportunities and factors in Christchurch include the following:

a. 'Standard' - a common section size is around 20m wide x 50m deep. Relationships to neighbouring sections are close, and need to be carefully responded to in designs. Boundary height controls restrict options for single sections, and in some orientations the District Plan height and boundary controls prevent good urban design outcomes.

b. Narrow sites (some as narrow as 10m) make it much harder to achieve a good design. Consideration should be given to amalgamating adjoining sections to provide enough space for access and forming usable, comfortable houses.

c. Deep sites can also be problematic as the further a house is from the street the more hidden it becomes, and the longer the driveway or shared access becomes.

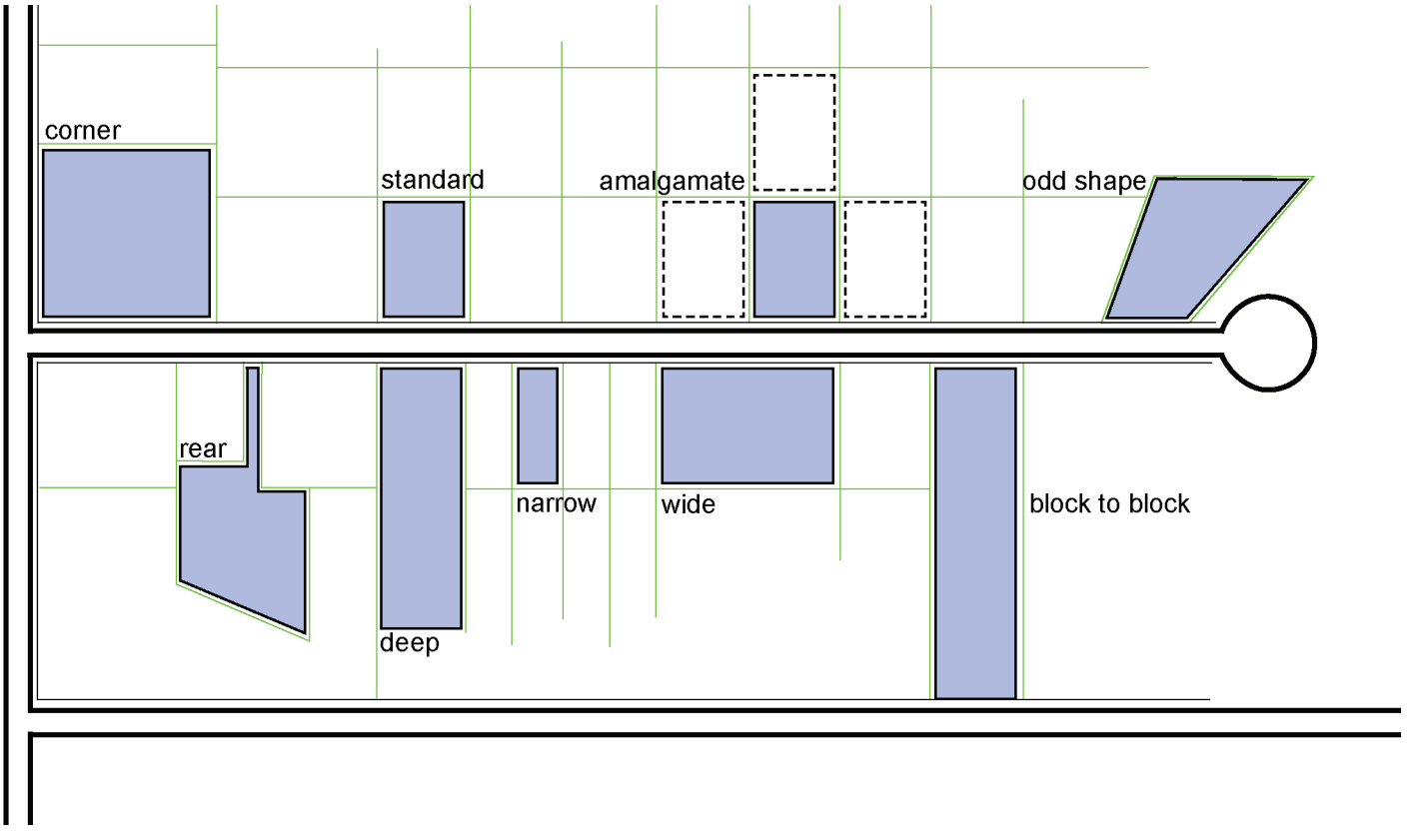
d. Block to block - sites that connect two streets can be an advantage as it gives two potential access ways and two street presences.

e. Corner sites offer lots of possibilities, and are important in the character of any local neighbourhood. A good corner design can significantly enhance streetscapes, and offers good possibilities for organising access routes for people and cars.

f. Area. Big sites allow for a greater density because quite simply their size creates more options and flexibility. They are less constrained by boundary issues and relationships to neighbours, and can enable more integrated design outcomes.

g. Shape. Whether the site is rectangular, square, narrow, wide or an odd shape will all affect the ability to successfully increase the density on that site. The standard 20m x 50m site presents particular constraints when accommodating more than two houses.

h. Amalgamation. Amalgamating sites (either back-to-back or side-by-side) can enable much better design outcomes, particularly for access and outdoor spaces.



site

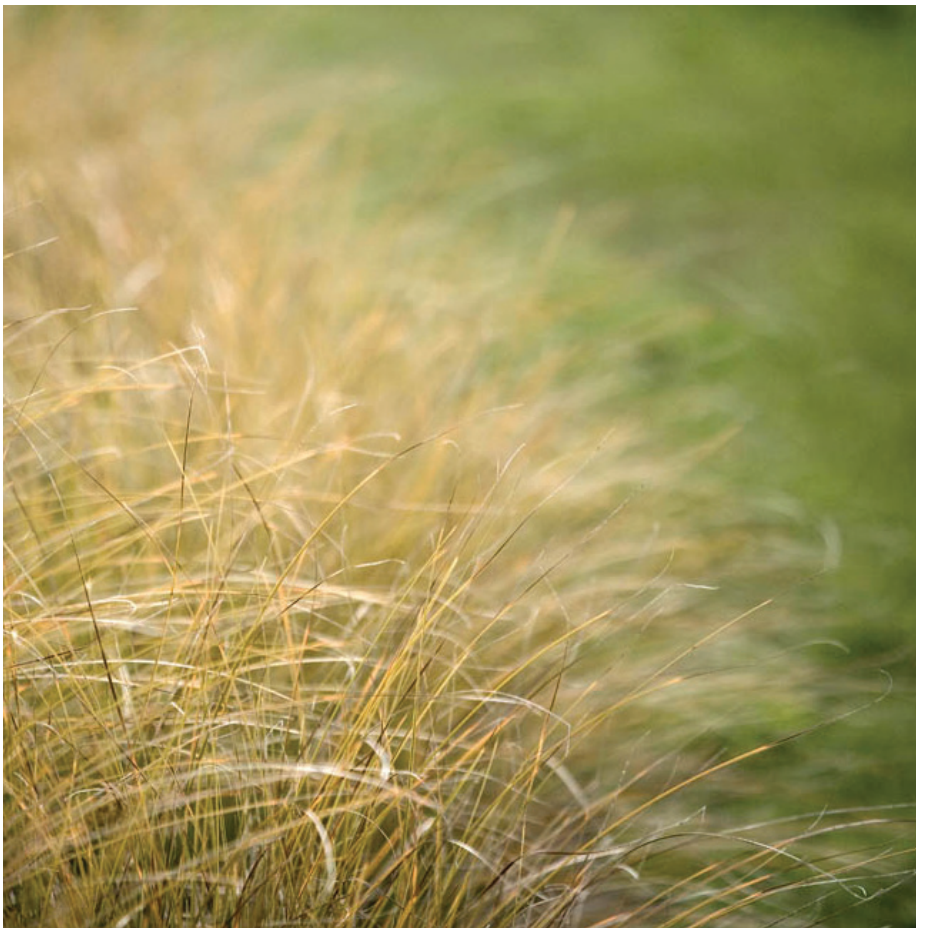
sustainability and sites

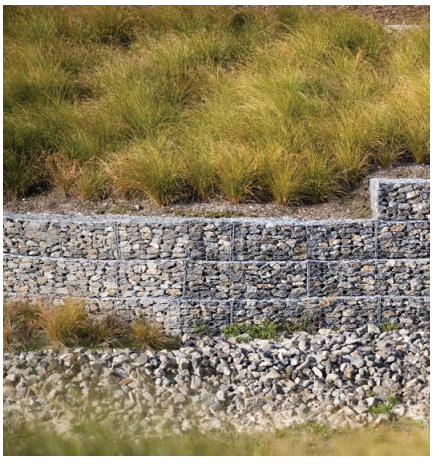
The design of housing layouts offers lots of opportunities for features and spaces which enhance environmental sustainability. Opportunities include:

a. The joining up of small groups of houses, to improve thermal insulation. Terraced houses and apartments lose far less heat from inside to outside than detached houses, because some of their walls and floors are shared with neighbours.

b. Whenever houses can be arranged to get good sunlight access into living rooms this should be achieved. In more central areas this becomes harder to achieve. Solar access can be considered less important if the house or apartment shares walls or floors with neighbours, as the compactness of the building combined with good insulation and double glazing should keep the building warm with only a little heating.

c. Even if sunlight access is difficult to achieve for all main rooms, roofs should be designed to allow solar panels to be installed, immediately or in the future.





d. Terraced and town houses should be designed with well-sized and orientated planted gardens. This helps reduce the area of hard (impervious) surfaces with benefits for drainage and summer temperatures in the city, and provides space for residents to grow their own food if they wish. Providing pervious surfaces for parking reduces the risk of storm sewers flooding.

e. Stormwater from roofs can be collected in tanks for use on gardens and in washing machines, helping to reduce unnecessary disposal of water into mains systems.

f. Areas need to be set aside for bin storage, including recycling bins. Gardens provide the option of disposing of waste food through composting or worm farming. Any waste or rubbish facility needs to be located away from living spaces and places where it can annoy neighbours, and the bins that are collected regularly need to be in a location where they can be conveniently accessed or stored for collection.

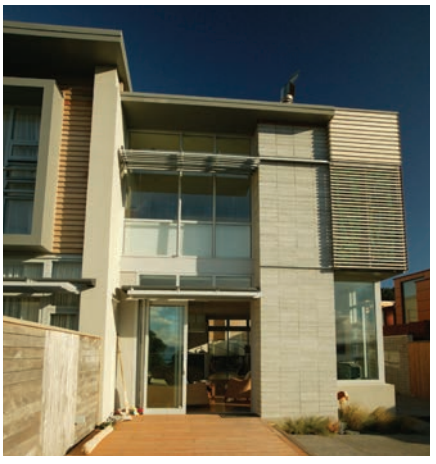
house

attractive spaces

Most of us want homes that feel generously spacious. We want spaces that are large enough and well-shaped to match the activities and belongings that we put in them - some need to be sociable and others need to be private. Rooms need to connect well, with attractive and convenient flow of spaces.

New Zealanders also like their homes to connect to the outside, whether it be a garden, courtyard or balcony. The exposure of the interior to the resulting natural light and the outdoor space is part of New Zealanders desire for their homes.

Houses should appeal to and engage with the street, while also provide a level of privacy for occupants. The ground floor is the critical interface between the house and street - living spaces, not bedrooms, should be located here.

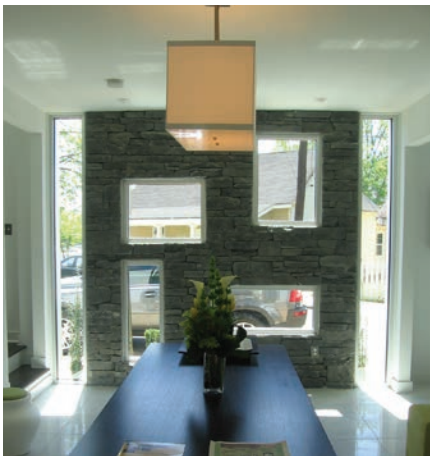


being smart with space

A spacious house needs more than just a large floor area. It is surprisingly easy to build a house which is large but also awkward and which does not feel spacious. This can be a particular problem with large single-level houses on small sections - their spaces are often dark and do not 'flow' well, and their gardens can be small.

What is often missing is the third dimension - thinking about creating and using volume, not just floor area. Adding upper floors is not as expensive as is sometimes suggested, and can create lots of benefits. Sociable and private areas can be more easily separated, good flow between spaces can be easier to achieve, and gardens can be larger. Double-height spaces and mezzanines can add interest and drama.

The principle of building upwards not just outwards is often the key to good urban housing. We already have traditions of good terraced and townhouses - it does not mean moving away from our heritage. It does mean recognising that urban housing needs different forms from that of suburban or rural housing in order to make an urban place.

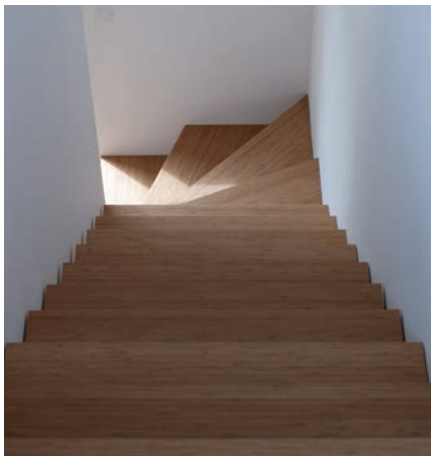


house

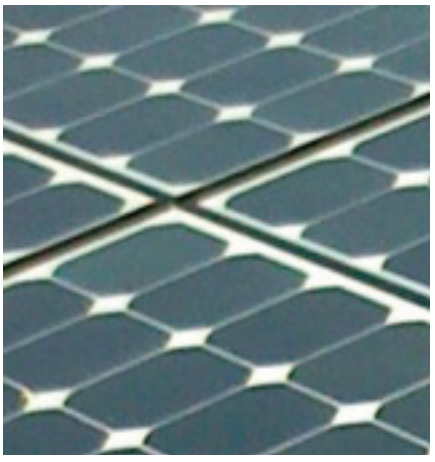
homes for a lifetime

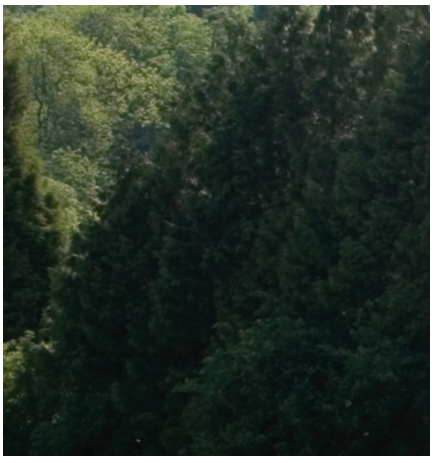
While many people are happy to move if their housing needs or desires change, what happens when you find the house you love and want to stay in for the rest of your life? Our houses should still suit us when we get older and perhaps less mobile. Simple features can make this easier. They often do not cost much and generally benefit everyone because they make well-proportioned and conveniently arranged spaces - it is about more than just handrails, lifts and other special fittings.

Modern lifestyles also involve lots of 'stuff' and over a lifetime we acquire many things that we want to keep, but many house designs fail to provide for storing and displaying it all. Hallway cupboards, wardrobes, storage under stairs, storage platforms in roofspaces - a good design provides lots of storage in lots of places.



sustainability and house





It is relatively easy to make our houses more sustainable with some simple design features which can make our houses both cheaper and more comfortable to live in.

Warm houses that use minimal energy for heating are desirable. Wherever possible houses should capture the sun's energy for main living spaces, through good site and internal layout - called 'solar orientation'. Sharing walls with neighbouring houses, building well insulated floors, roofs, and walls, together with double glazed windows reduces heat loss. In situations where it is not possible to achieve good solar orientation, these techniques are absolutely vital.

Houses which do not need air conditioning use less energy in hot weather. Exposing some heavyweight materials within rooms such as fire hearths or polished concrete floors helps to keep a house cool. Designs should allow a breeze to blow through windows on opposite sides of the house.

Materials for building houses should require as little energy and environmental impact as possible to make them. They should also be non-toxic wherever possible. These aims can be hard to achieve at present, and many building materials require large amounts of energy to make, and may contain harmful substances. Builders should increasingly expect to inform their customers of these issues.

Systems which reduce use of energy and water are becoming increasingly affordable - for example, the cost of solar electric panels are halving every year at present. Houses should be future-proofed with simple provisions which cost very little to ensure these systems can be fitted later if they are not fitted at construction. Roofs should be arranged to receive north-facing solar panels for heating water and producing electricity. They should be able to feed rainwater storage devices.

Convenient storage provision for bikes, skates, scooters and prams will encourage people to use 'active' transport rather than cars. Garages are important, but should not be the main design feature on the frontage of a house. A double garage can be unnecessary if the house is well located and has enough storage space.

Gardens should ideally be of a size and shape to allow residents to have room to relax, grow vegetables and fruit, and hand washing out. Appropriately located space for compost bins or a worm farm can be useful.

2 | housing typologies

introduction

What is a typology?

Housing designers and developers commonly use standard designs, which get described as 'house types', 'house plans' or 'models'. Variations on these standard house layouts are commonly available to provide potential buyers with a customised product, but at the heart of many houses is a standardised plan. In this document the term 'house type' relates to an individual dwelling.

A typology differs from this approach slightly, in that it presents a model which is deliberately more flexible. A typology offers some key features while anticipating that a wide range of different house types and architectural styles could be used to achieve the same key features.

What these typologies address

This document presents typologies at both a site level, and an individual house level. The site typologies are tailored to suit the requirements and opportunities associated with typical sites in central Christchurch. The description of each site typology highlights key features. The illustrations show only one possible combination of house size and layout out of many variations that could be built to suit different preferences and locations.

The key features of each typology are intended to operate in a schematic rather than a precisely dimensioned manner. They are not intended to provide a solution compliant with District Plan rules - rather they aim to conform with a higher level of requirement, such as District Plan objectives.

In some cases this approach highlights typologies which are acknowledged as not complying with current District Plan rules (at the time of writing in August 2010). Anyone adopting these typologies for a development proposal should contact the Christchurch City Council for advice concerning the suitability of the typology for their individual proposal, and in relation to the significance of any non-compliance with District Plan rules.

The typology designs generally address the resolution and integration of the following design issues:

- what spaces should be provided, including shared and private areas
- where these spaces should be located on the site
- how access should be arranged on the site, broadly in line with District Plan requirements
- how much parking should be provided, and where
- where buildings should be located on the site
- how individual houses are grouped together
- the relationship between buildings and spaces, and particularly adjacent streets
- the orientation and dimensions of outlook from buildings related to public and private spaces
- where opportunities are available for including sustainable design features

These typologies do not specifically address compliance with the Building Code, although critical issues, such as escape routes in apartments, have been recognised and taken into account at a schematic level where this affects the overall structure of the site layout.

How the typologies are presented

The first set of facing pages for each typology illustrates one example of the built form and spaces that they can create, together with a description of key features.

The second set of facing pages illustrates the example matching site plan on a sample section, highlighting key dimensions which are likely to be required to achieve an acceptable outcome. Information on potential dwelling numbers and types is provided for the example site size. A series of diagrams illustrates how the design has been organised to address issues such as outlook, privacy, outdoor spaces and opportunities for 'sustainable' design features.

The third set of facing pages illustrates examples of the building forms and spaces, sourced from New Zealand and internationally. It also illustrates and describes key features of an example 'house typology' - an individual house - which could be included in the site typology. The matching of a site typology with a house typology is not a fixed association - just one possibility that can achieve a good outcome. Substituting house typologies on a site is a good way to vary a development while achieving the same overall site typology.

How these typologies should be used

These typologies are not intended to be built exactly as presented here - they are intended as starting points for designers and developers.

While the typologies can be built as illustrated, they should be adapted and varied to suit different needs and locations. Achieving this should involve:

- varying house sizes to suit different areas and market needs
- varying the footprint and form of individual houses as site opportunities allow, to suit different site orientations and market needs, and to respond to any significant relationships with neighbouring buildings and spaces
- varying the elevational arrangements, architectural style and detailing of the buildings, while taking note of situations where the quality of these issues are highlighted as critical to the success of spaces on the site
- varying the layout and materials within public spaces on the site. This might include the type of planting or provision of amenity equipment
- precisely designing vehicle access routes to achieve consent approval
- in the case of apartments, varying the division of the overall building mass to achieve different mixes of unit size, and to achieve consent approval for access and escape arrangements

The pages at the end of the document provide some guidance on how to approach the design of housing typologies, and how to vary the form of housing typologies. This guidance helps to inform and support design development from the starting point of the typologies provided here.

These are not ground-breaking, and may be familiar to many designers and developers. They may be of interest to members of professional groups and the public who would like to become more familiar with urban housing models.

site typology index

1 detached laneway

living 3 zone

37 houses/ hectare

1 narrow section

2 garden court

40 houses/ hectare

2 standard sections

3 four-square courtyard

44 houses/ hectare

2 standard sections

4 terrace courtyard

48 houses/ hectare

1 standard section

5 terrace corner

48 houses/ hectare

1 standard section

6 terrace mews+green

48 houses/ hectare

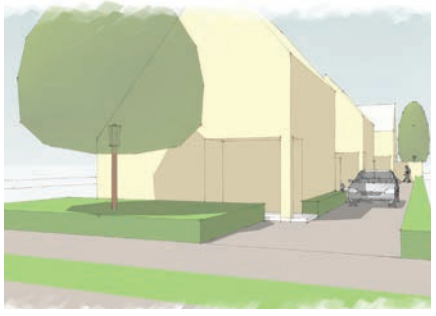
2 standard sections

living 4 zone

7	8	9	10	11	12
garden square	walkup apartments	walkup corner	mixed unit corner	5 storey court	6 story court
40 houses/hectare	72 houses/hectare	80 houses/hectare	56 houses/hectare	124 houses/hectare	137 houses/hectare
2 standard sections	2 standard sections	2 standard sections	2 standard sections	3 standard sections	2 standard sections

typology

1 detached laneway



what can this offer as a place to live?

- Compact, liveable houses with the possibility of open plan ground floors, and bedrooms partly in the roof give maximum internal space.
- Detached houses with convenient attached garaging.
- A small group of houses around a driveway that has been attractively formed to encourage other activities.
- Private relationships between houses, resulting from careful shaping of buildings.

what can this do for our city?

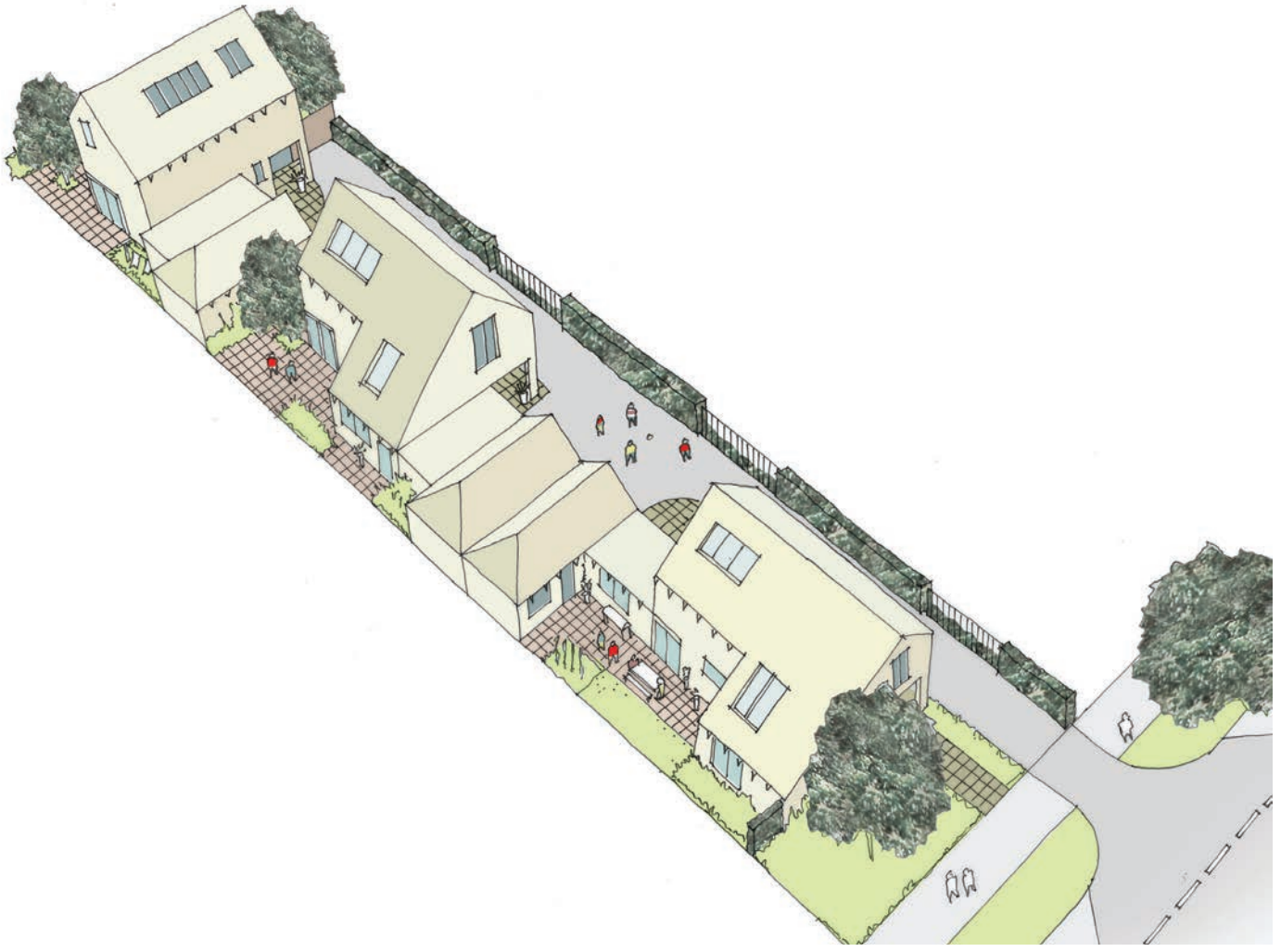
- Demonstrates how to redevelop a small, narrow lot.
- Provides an attractive and functional alternative to 'sausage block' character on a narrow site.
- Creates appropriate privacy relationships towards neighbouring lots.
- Demonstrates how using compact house footprints allows development of detached housing with individual gardens in central city areas.

success factors

- The driveway space should be designed and planted attractively, but should be as narrow as possible to encourage slow driveway speeds.
- Houses should be built right up to the driveway to maximise efficiency while including design features to create a good interface with the driveway space.
- Houses are separated from each other, and the gables made interesting using entrances and windows overlooking the lane and street.
- Strong roof forms over the bedrooms minimise shadowing and domination towards neighbours.
- Garaging is recessed from the main building lines along the driveway, and treated as an individual building element rather than fully integrated into the house form.
- Front doors located on building corners can create a strong 'frame' to the entrance to enhance great kerb appeal, and 'take ownership' of the driveway.
- Bedrooms use gable window locations and roof lights to minimise privacy issues within the site and towards neighbours.
- The rear house should provide a 'full stop' enclosure to the driveway space. Turning the house in contrast to the other houses helps achieve this.
- Where a garage needs to be located near the frontage (as illustrated) there should be a generous planted area between the garage and the street frontage, with trees and shrubs to help screen the garage from the street.

typology

detached laneway | 1



privacy

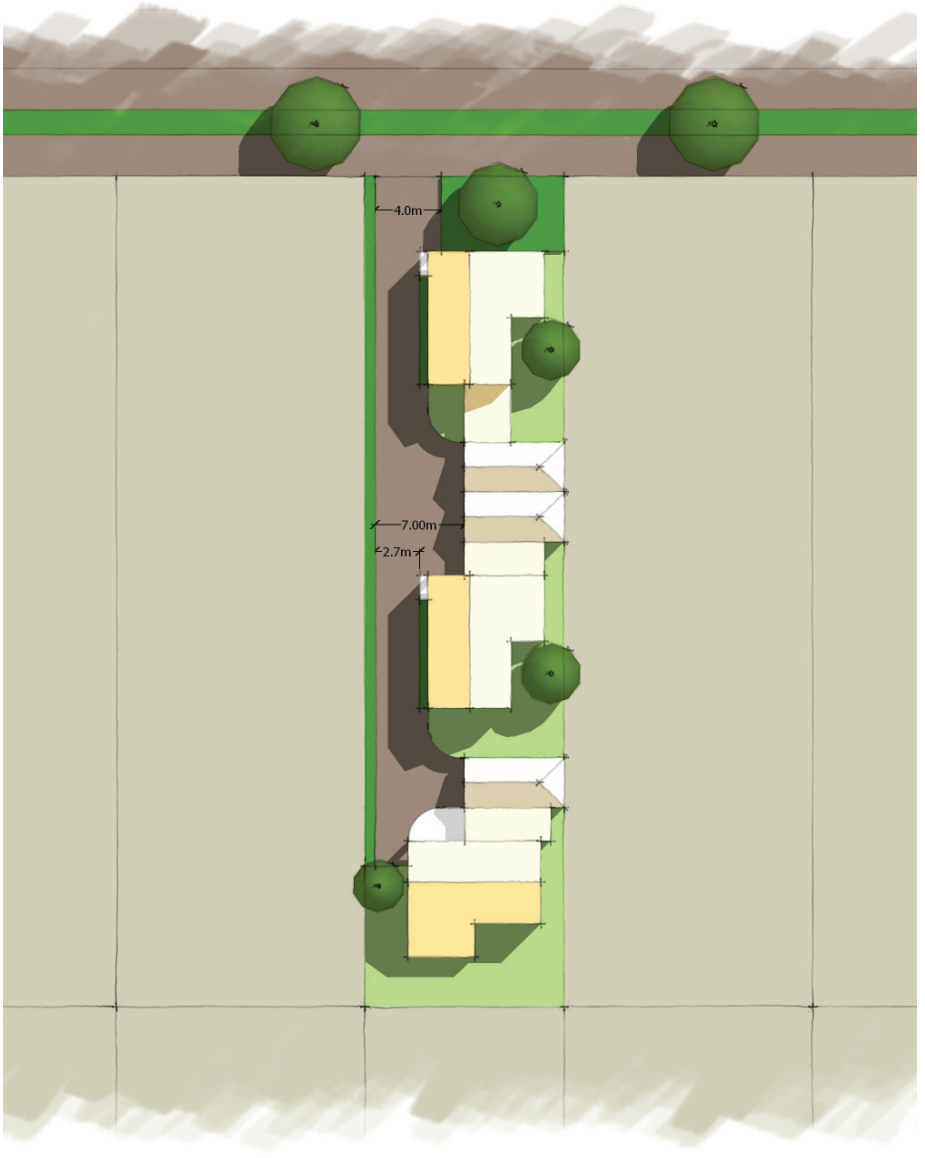
Ground floor windows against the drive should have low planting or other ‘screens’ in front of them to indicate a privacy threshold. Upper floor bedroom windows should be in varied locations along the side elevations, in the gables or as roof

driveway space

The drive way is treated as a ‘lane’, narrow and with tall planting around can slow down drivers. The quality of wall and road materials should encourage children and adults to use the space for activities, rather than leaving it only for cars.

typology

1 detached laneway



illustrated example

This typology requires a site of at least 13m width. Potential variations include changing the location of garaging to suit site width. Where houses face north (as shown) locate private private gardens to the side to avoid presenting high fencing to the street.

L3 district plan zone

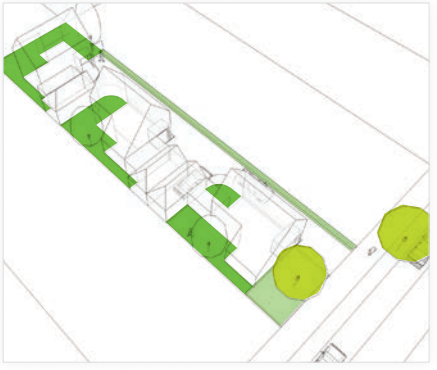
37 households per hectare

Site: one section 13 x 50m
Three 2-bedroom detached houses:
0.48 Floor Area Ratio
Each house approximately 85m² plus 1 garage space

detached laneway 1

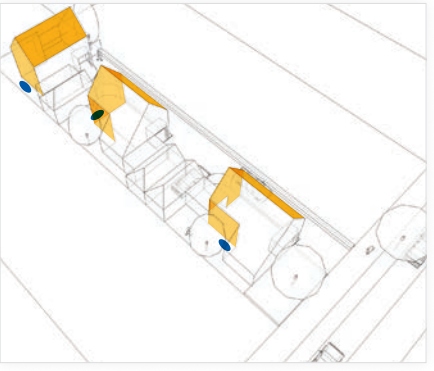
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling

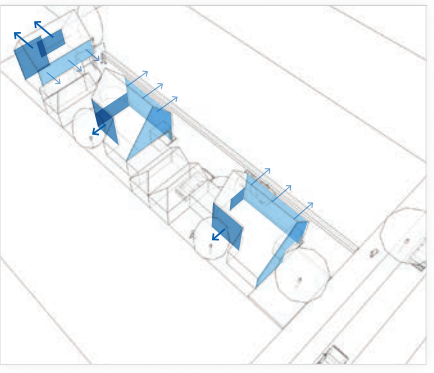


access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch

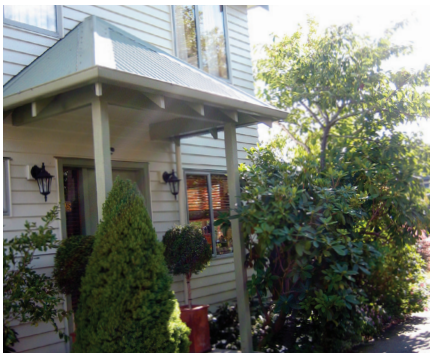
outlook and privacy

- Private orientation
- Public orientation



house example

1 lane house

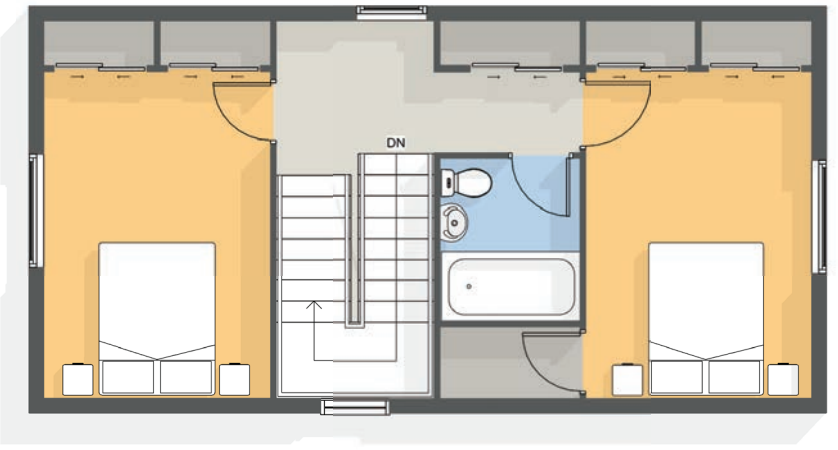


- Lane houses are built right up to an access street or drive.
- An attractive lane needs elevations with doors and windows, preferably with deep reveals.
- When lane spaces are narrow, the quality of materials and architectural features becomes very important.
- Rooflights can be used to provide additional light to the upper floor.

typical features

- Entrances should be located and arranged to create shelter, and show 'ownership' of part of the lane.
- Privacy between the home and the lane can be carefully managed using planting or other elements such as moveable shutters and screens.
- On narrow sites, the first floor can 'borrow' roofspace into the bedrooms to keep the building low.
- For very compact houses, central dogleg stairs can enable the rooms around them to have the most usable shapes.

lane house | 1



first floor

ground floor

example design

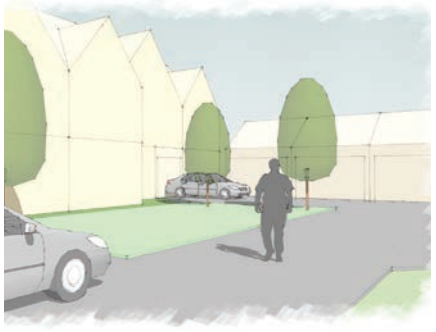
This layout creates an open-plan ground floor with several indoor-outdoor connections. Both the kitchen and the living room look into the driveway space, to encourage interaction and increase security & safety.

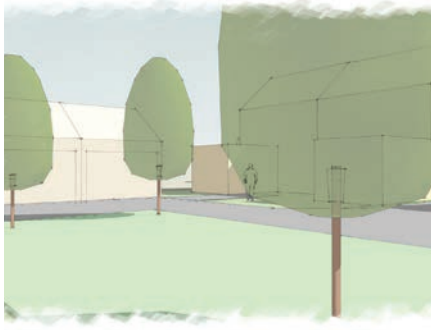
105 m²

The central stair with half-landing allows the two bedrooms to have usable shapes. Upper floor windows are shown in the gable ends, but could also be located on side elevations.

typology

2 garden court





what can this offer as a place to live?

- A variety of semi-detached houses within a group of ten.
- A shared courtyard including a mini-park at the heart of the group.
- Short terrace and semi detached enables access to heat and light from the sun.
- Outlook from living rooms - at least 9m to a boundary, and 18m between buildings on the site.
- Compact houses which are more affordable to buy and to run.
- Clear organisation of public and private space.
- Well-proportioned gardens for all units, with direct connection from living rooms.
- House footprints which can offer a choice of internal layouts.

what can this do for our city?

- Creates good frontage to the street, and a well-proportioned courtyard.
- Creates shared playspace which has good overlooking, and is well arranged in relation to driver's sightlines.
- The layout creates a vista focused on feature elevations when entering the courtyard, rather than just a long, narrow driveway.
- Gardens and shared greenspaces which can incorporate good amounts of planting, while still being of a manageable size.

success factors

- Frontage houses must 'engage' with the street, with parking at the rear.
- Rear houses should minimise shadowing and dominance towards neighbours by achieving good separation / outlook distances.
- The shared accessway should be designed to slow down drivers, with a 'gateway' formed by the adjacent street-facing houses.
- The shared playspace should have good overlooking from all the houses, and be well arranged in relation to driver's sightlines relating to the site entrance.
- The layout of houses in relation to each other forms a fairly continuous enclosure to the courtyard, with variation achieved through location of garages.
- Garaging is located in small groups, to disperse the parking and to help enclose the courtyard without dominating it.
- Rear fences for the front four houses, next to the court, should be designed as high quality treatments to avoid dominating the space.
- Visitor parking is located on the street.

typology

garden court | 2

shared court

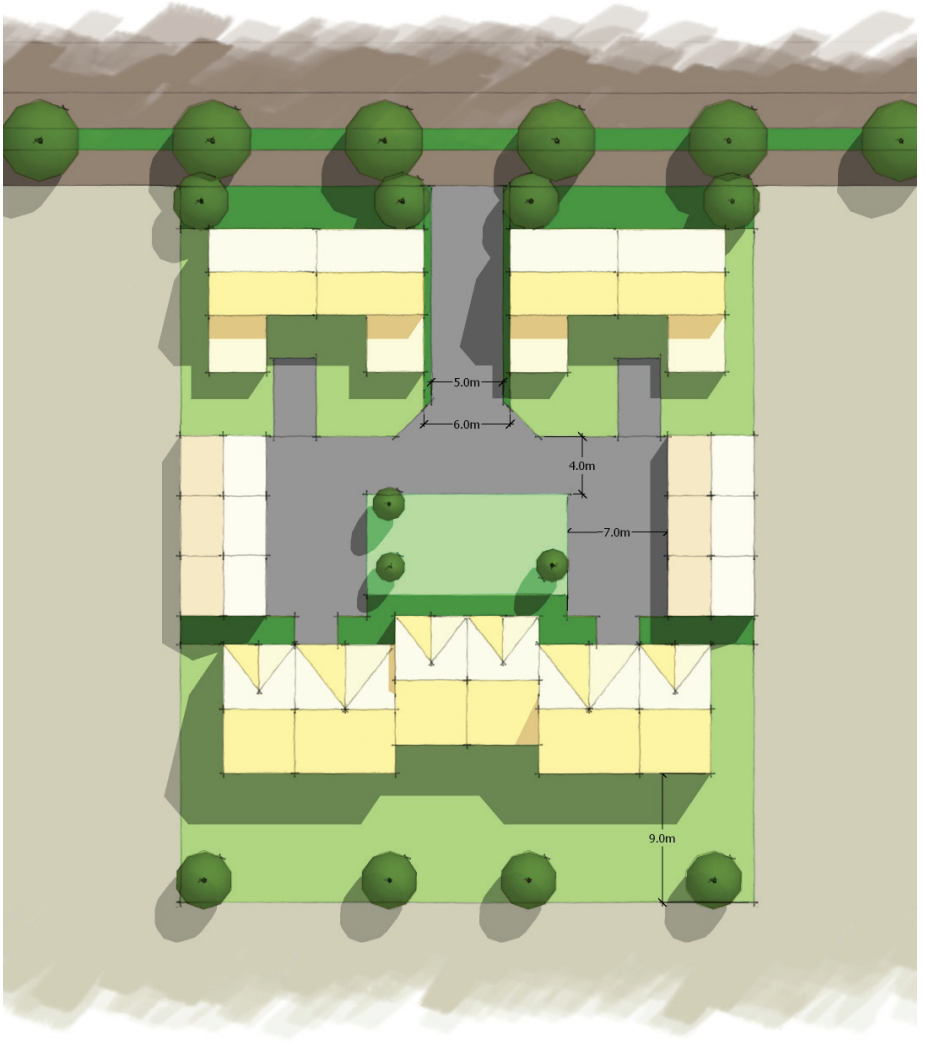
The court gives several benefits - it mixes access and play areas to maximise the use of space, provides a play area that is equally accessible, and is located to achieve good overlooking for safety and security. This space should be designed as a ‘Homezone”.

grouped garaging

Locating garaging in groups near houses reduces the amount of driveway needed, while retaining convenient access. Some integrated garaging helps to keep the garage groups small on this site, reducing their dominance of the court space.

typology

2 garden court



illustrated example

This typology requires the central shared space to be designed for activity and occupation rather than just vehicle movements. The garage groups should be kept small where they abut neighbouring properties. The frontage houses can be a variety of shapes and formats.

L3 district plan zone

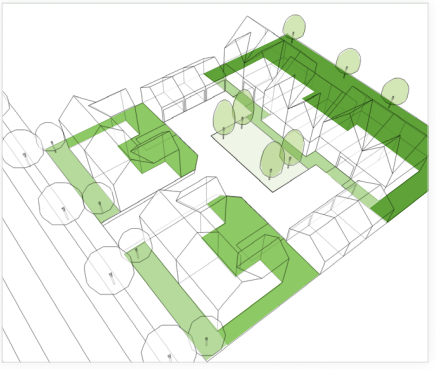
40 households per hectare

Site: two sections 20 x 50m
Ten dwellings: 0.63 Floor Area Ratio
Two 3-bedroom houses: 126m² + 25m² courtyard garage
Four 2-bedroom houses: 90m² + 2 5m² courtyard garage
Four 2-bedroom + study houses: 108m² + 18m² integrated garage

garden court 2

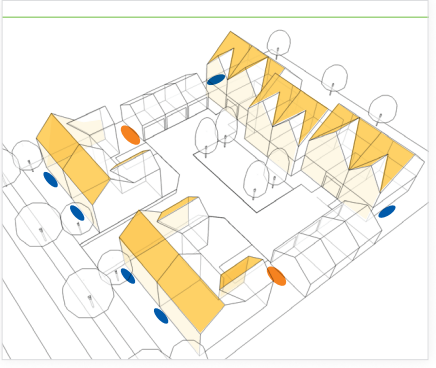
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



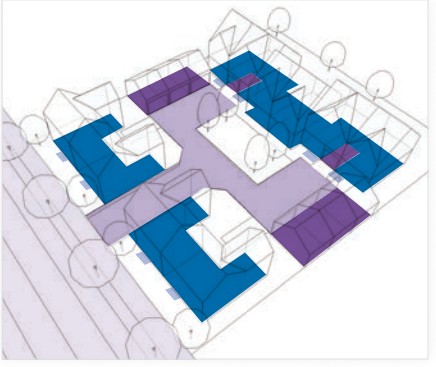
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



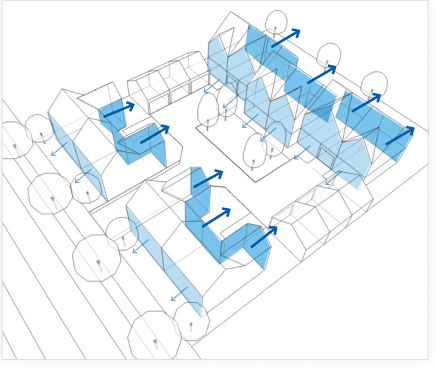
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



typology

2 courtyard house

- Joining houses at a boundary creates better outdoor spaces and improves energy efficiency.
- Joining just two houses provides lots of flexibility for internal layouts, indoor-outdoor flow, solar orientation and future extension options, and also retains a high level of privacy.
- On other sites, car parking can be arranged alongside the house, or garaging can be located behind the house with a drive along the side.
- Stairs are best located against the joining wall, unless future expansion of upper floors is anticipated

typical features

- Integrated garaging can excessively dominate the street frontage of houses, and should be handled carefully. The rear elevation can be a better location if rear access is available, as shown in the Site Typology layout.

typology

courtyard house | 2

ground floor

first floor

example design

The ground floor layout is relatively open plan, creating good indoor-outdoor flow, with storage and ancillary spaces concealed around the stairway.

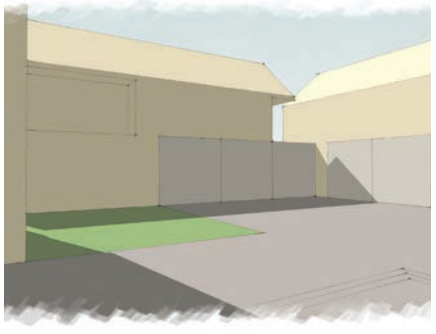
Single garaging is integrated into the building without dominating the frontage.

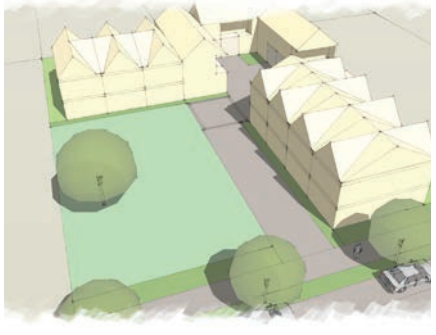
104 m²

The house can be easily extended along the line of the rear 'wing', or by building across the back of the garage space.

typology

3 four-square green





what can this offer as a place to live?

- Low-rise apartments and/or houses surrounding a large planted open space.
- Variable configuration options to suit any site orientation.
- An attractively-shaped parking court with several front doors leading directly off the space, creating a safe hard-surface area for children to play in.
- Potential for 'big house' apartments which relate well to more historic surrounding properties.

what can this do for our city?

- Generous areas for greenspace and planting. For some sites this will allow retention of valued mature trees when redevelopment occurs.
- The layout consists of four 'quarters' which can be interchanged, enabling this typology to suit a variety of sites and orientations.

success factors

- The more square the site, the better the form of the spaces and buildings.
- The entrance driveway should be designed to slow down vehicles, using curves, planting, raised platforms and other features.
- The hard-surface court at the rear should be finished to encourage activities to take place in this space.
- Mews houses above garages should be customised to suit orientation and the relationship to neighbouring properties, varying the location of the building mass, ground floors, entrances, and balconies.
- The frontage elevations adjoining the street and surrounding the green space should be highly articulated to create a strong 'edge' to the spaces.
- Gardens for 'big house' apartments or terraced houses should be at least seven metres long, preferably nine metres.
- Garages and mews houses should be at least three metres from boundaries, with setbacks to create larger separations where ground floor rooms look towards boundaries.
- Fencing between the street and green area should clearly define the private area, without dominating the street edge.

shared court

The view on the left shows an alternative layout, using terraced houses in place of the 'big house' apartments shown in the main illustration. It also shows a different arrangement of garages and mews houses in the rear court, to suit a different orientation and outlook.

four-square green | 3

play green

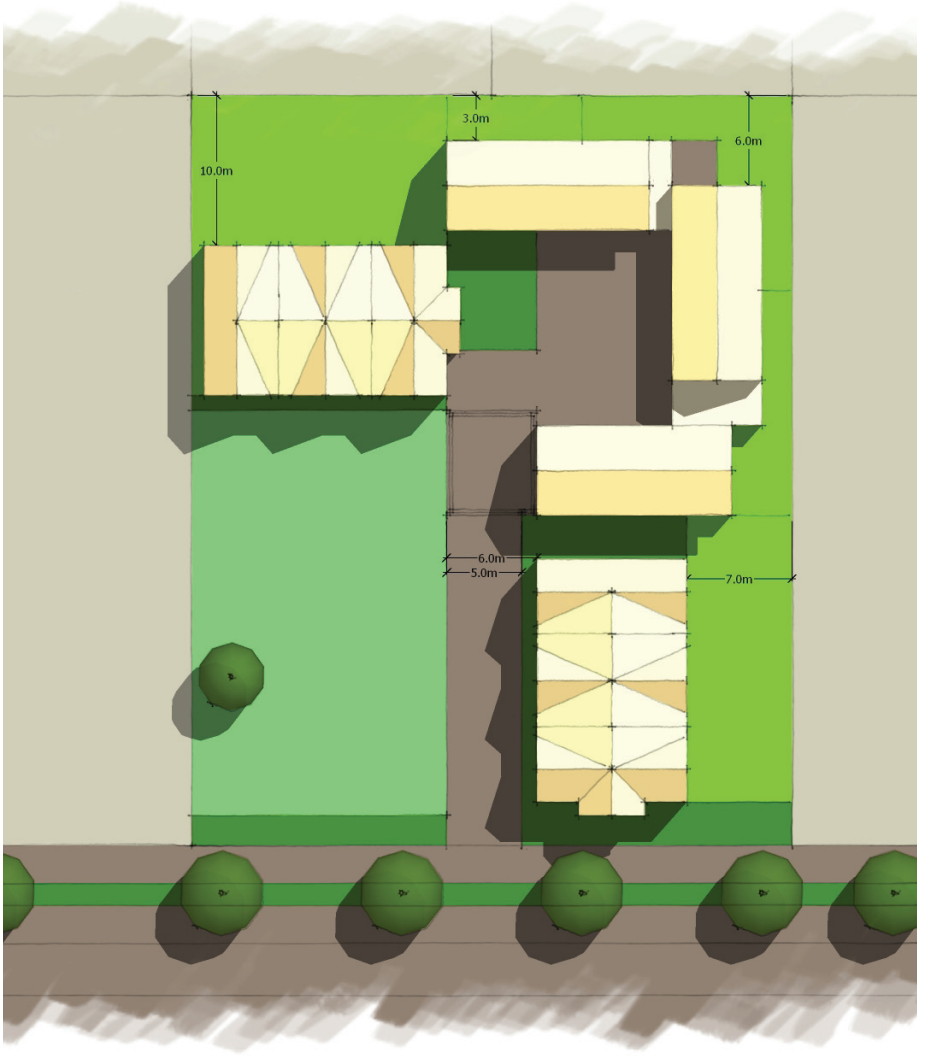
The green space is large enough to accommodate a variety of elements and activities. The perimeter should include fencing or planting to prevent casual vehicle parking. It is important that the adjacent driveway encourages slow vehicle speeds.

mews houses

For this site, mews houses are used in a different configuration from typology 5. This arrangement uses relatively detached formation, to enable sunlight access to units and into the court. The single outlook direction minimises overlooking of neighbours.

typology

3 four-square green



illustrated example

The site is divided into interchangeable quadrants. In most situations the green space is best located next to the street, with the parking court located at the rear of the site. The green space is therefore visually 'shared' with the street, enhancing the Garden City image.

L3 district plan zone

44 households per hectare

Site: two sections 20 x 50m
Eleven homes - : 0.50 Floor Area Ratio
Eight 'big house' apartments, 70m^2 +18m^2 external garage
Three mews houses, 100m^2 + 18m^2 external garage

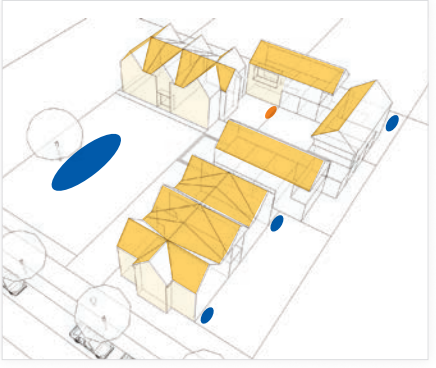
four-square green 3

garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden

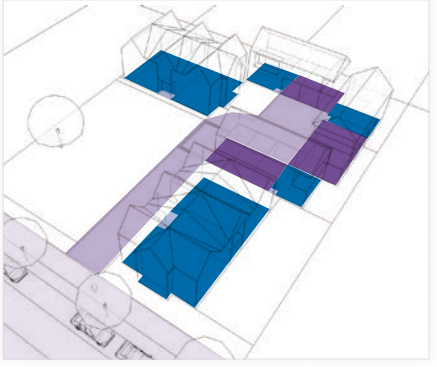
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



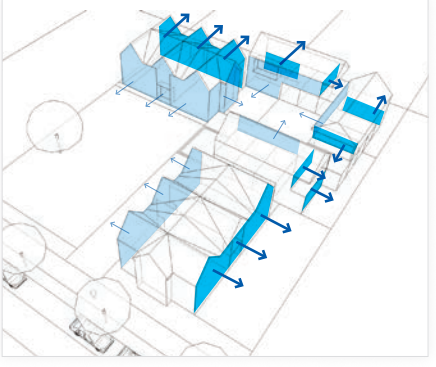
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

3 big house apartments

- Big House apartments are detached buildings, generally two storeys and no more than three, designed to appear as a large single dwelling.
- The building should be set in open space, and any other closely related buildings should be designed to appear as ancillary units to the main 'house'.
- Where possible, parking should be arranged in a separate garage court. Excessive surface parking will indicate that these are apartments, undermining their appearance.
- Elevation treatments should vary between ground and each upper floor, rather than repeating the exact layout of apartments on each floor.

typical features

- The use of traditional massing forms and symmetrical layouts can help reinforce this strategy, but are not absolutely necessary.
- Locating unique-shaped apartments in the roofspace can create additional floorspace and units without compromising the singlehouse appearance.

big house apartments | 3

apartment layout

example design

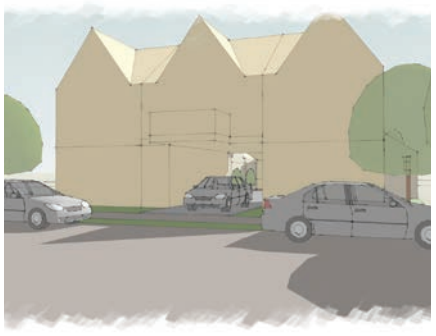
- This design provides two apartments on each floor, with a simple shared stair access.
- Apartment layouts include a corridor to separate living from bedrooms, although this could be varied if an open plan design is desirable.

86 m²

- The bedroom nearest the stair can be reduced in size on the ground floor to create a connection from the stair to a rear garden area.
- Balconies could be provided in a variety of locations to suit orientation.

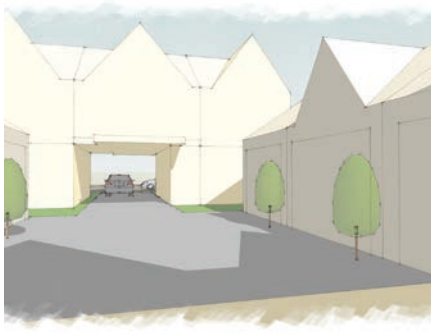
typology

4 terraced courtyard



what can this offer as a place to live?

- Primarily 3-storey family-sized terraced houses, with an archway apartment.
- A shared courtyard which is designed to be active and multi-purpose.
- Good solar orientation for sites on east-west streets.
- Outlook from living rooms - at least 9m to a boundary, and 18m between buildings on the site.
- Compact houses which are more affordable to buy and to power.
- Compact, well-proportioned and well-located outdoor living areas.



what can this do for our city?

- Creates good street frontage, rather than 'sausage blocks'.
- Creates a multi-use hard-surface courtyard which is well overlooked, and is well arranged in relation to driver's sightlines.
- Strong street frontage, helping to increase safety and surveillance for pedestrians.

success factors

- Three-storey houses.
- Create good street frontages and locate rear houses to minimise shadowing and dominance towards neighbours.
- The shared accessway arch and compact court is designed to slow drivers.
- The courtyard needs to be attractively designed including garage frontage,
- materials, fences to units and architectural detailing,
- Using the same housetypes for front and rear groups of houses can create an attractive symmetry in the enclosure of the court space.
- Visitor parking is located on the street.

alternative layout option

The view on the left shows an alternative layout which does not require an archway house. To achieve this the driveway is located alongside the front row of houses, with the result that the courtyard is not arranged symmetrically and must be driven into at an angle. The space is therefore not as attractive, and the detailing of the court and driveway spaces becomes even more important in achieving a successful housing group.

terraced courtyard | 4

parking courtyard

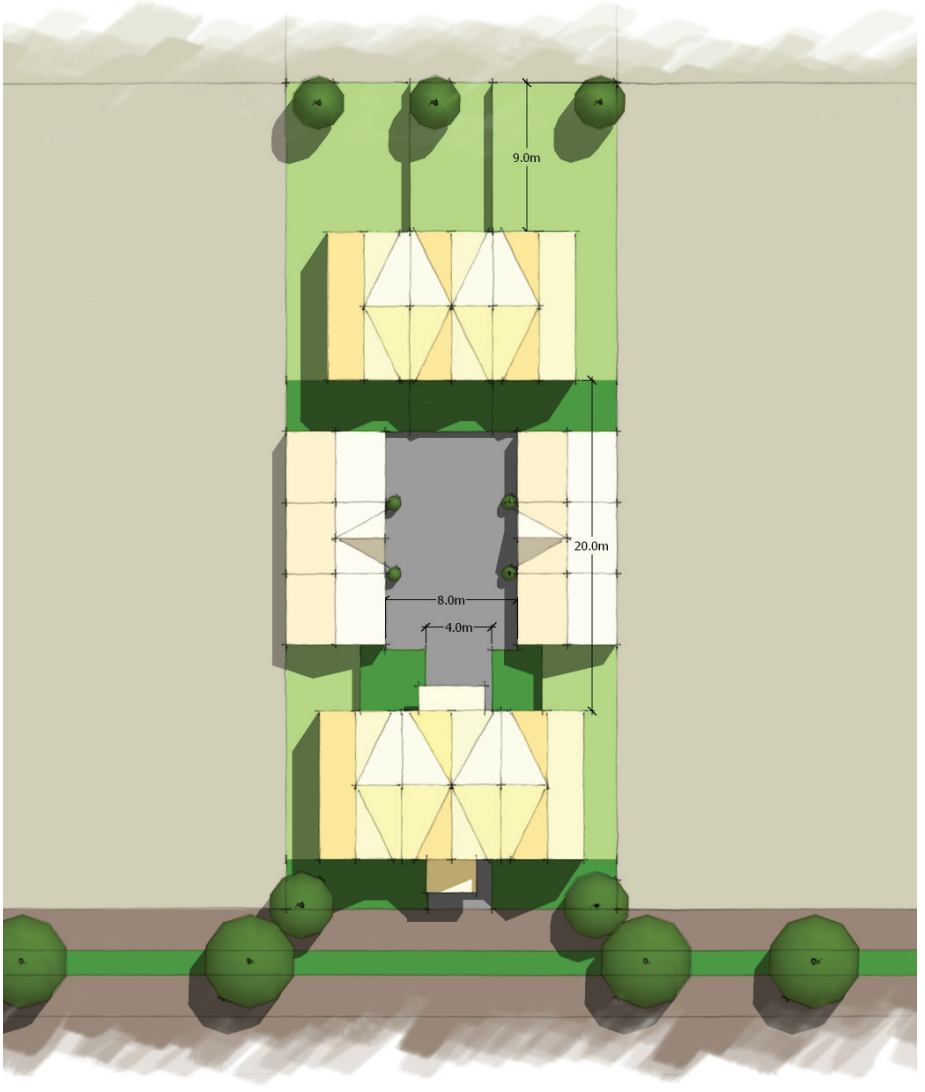
This space is key in this layout, and should be designed for people and activities as much as it is designed for vehicles. It is important to ensure the front of garages are more attractive than normal, and that there are plants and details which make the space enjoyable to be in. There must be clear sightlines for drivers entering.

archway houses

The archway 'frames' the entry to the site. A unit above the drive uses space cleverly, increases the choice of homes in the site and creates a more active, attractive street frontage. A large balcony off the first floor living space should overlook the street.

typology

4 terraced courtyard



illustrated example

This plan can work with either two or three storey houses. The quality of the house elevations is important because the court is relatively compact. The archway unit should be carefully designed, especially in relation to it's entrance area and balconies.

L3 district plan zone

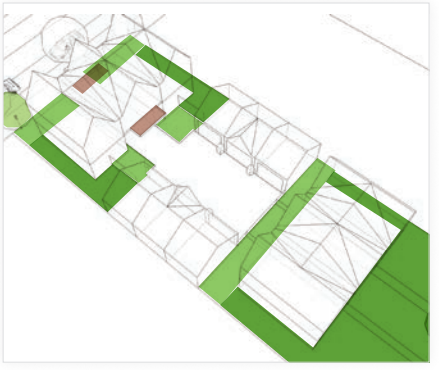
48 households per hectare

Site: one section 20 x 50m
Six dwellings: five 3-storey houses, one maisonette. 0.69 Floor Area Ratio
3-storey 3-bedroom houses: 120m² + 30m² garage
2-storey archway house: 90m² + 30m² garage

terraced courtyard

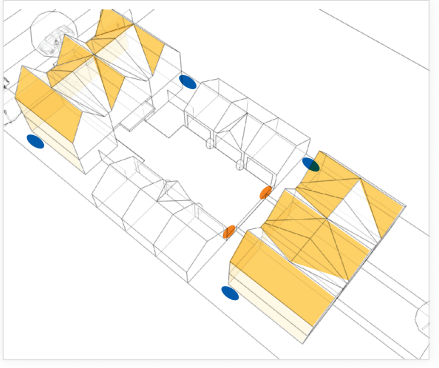
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling

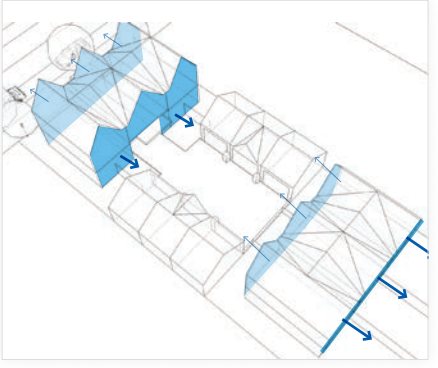


access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch

outlook and privacy

- Private orientation
- Public orientation



house example

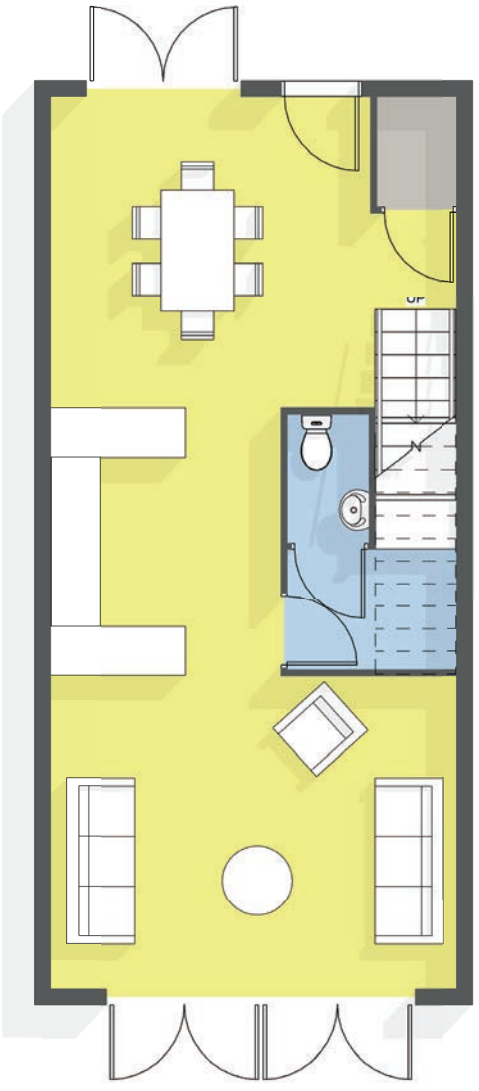
4 two-storey terrace

- Terraced houses gain advantages by being joined to each other.
- Terraces should be relatively short. As a rule of thumb, there should not be more than 5 or six houses in a single adjoined row, unless particularly high quality materials and detailing are used on elevations.
- Individual doorways should be designed with strong features. This asserts the importance of individual houses in the group, and encourages residents to customise their own front doorstep area.
- Bay windows are a traditional device to create interest on the elevations of a terrace group, and to capture additional sunlight into the house.

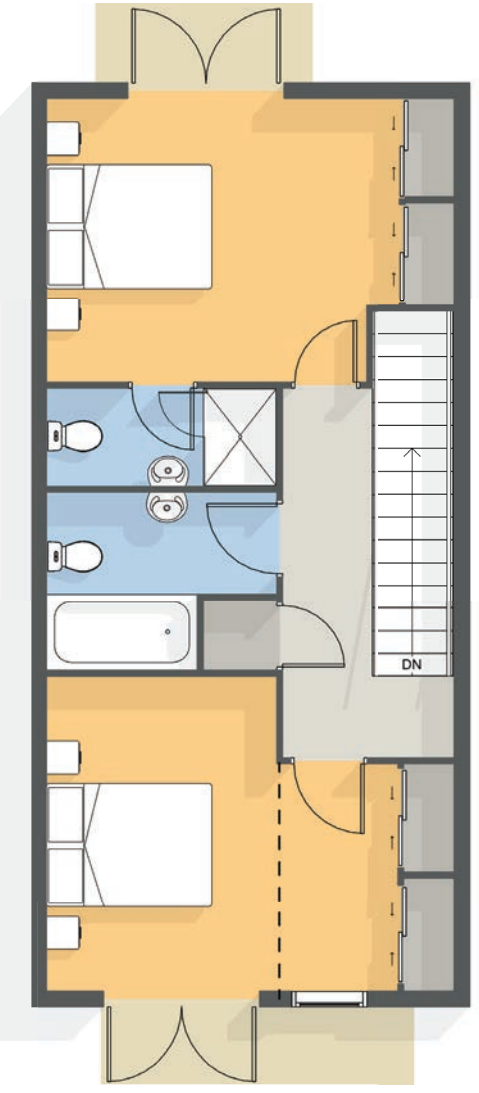
typical features

- Houses at the ends of a terrace should be customised to their location. There should be windows in the gable ends, to avoid large blank areas facing the street or neighbouring properties.
- House plans are most efficient and cost-effective when layouts adopt straight lines for structural walls.

two-storey terrace | 4



ground floor



first floor

example design

The ground floor of this terraced unit locates the kitchen, laundry and wc in the centre of the layout, while retaining an open-plan flow. The dining area can open onto a street-front patio, if this suits the orientation of the house.

107 m²

The upper floor features the possibility of dividing the rear bedroom into two rooms to accommodate a growing family - the potential wall is shown dotted. While not large, this additional room could suit a young child.

typology

5 terrace corner

what can this offer as a place to live?

- Mainly 3-storey family-sized terraced houses, with an additional apartment in a “mews” arrangement over garages.
- Good-sized rear gardens for all of the units, well located with good indooroutdoor flow.
- Good solar access for all site orientations.
- Compact houses which are more affordable to buy and to power.

what can this do for our city?

- Creates a positive street corner by the arrangement of house frontages near to the street, with architectural features which emphasise the corner location.
- The garage court is compact, with room for a larger tree and planting to soften the space. This reduces the area of impervious paving, therefore retaining more area for planted, private garden areas.
- Having a home within the parking court makes this space less anonymous, creating activity and occupancy.

success factors

- Terraced houses used to positively enclose space, built fairly close to street edges to maximise rear garden dimensions, with small planted front gardens providing a privacy buffer
- Garaging is strategically distributed to optimise space - a single garage is located between a house and boundary, with the others grouped around a compact mews court.
- The chauffeur unit has a ground floor garden located in the area between the two garage groups around the court.
- The entrance to the chauffeur unit is recessed, creating an attractive threshold transition between the public court and the privacy of this home. Recessing the entry gives space for planting and offer shelter, creating opportunity for this entrance to be personalised, enlivening the court.

alternative layout option

The view on the left shows an alternative layout which forms the beginning of a new laneway which could provide access to development on adjacent sites. This may be useful in some parts of the city where the distance between streets is large, and where additional access lanes would help to create more new housing. The parking court is re-arranged to enter from this lane, with the mews house turned towards the main street.

typology

terrace corner | 5

eyes on the street

Building close to the site frontage allows for good surveillance of the street. Interaction between houses and streets can help make streets safer and more welcoming. Window proportions, blinds, shutters and screens can help protect privacy.

mews house

A unit over garages with entry from the parking court helps make this space more attractive. The unit needs a strong and distinctive entrance, and should be well designed to achieve a balance of privacy and interaction between the home and public space.

typology

5 terrace corner

illustrated example

This typology can be located on corners with a variety of orientations. The parking court should be arranged to access the longer street frontage. The shape and form of the mews unit is similar to the terraced houses, to create a consistent appearance for the group.

L3 district plan zone

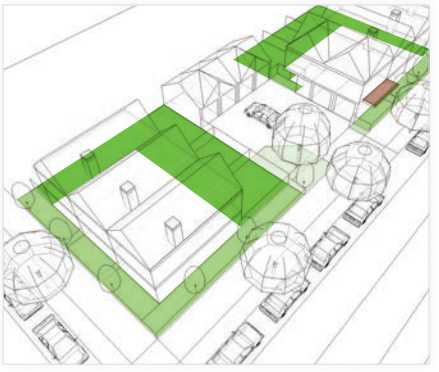
48 households per hectare

Site: one section 20 x 50m
Six homes - five terraced houses and one mews house: 0.77 Floor Area Ratio
Six 3-storey, 3 bedroom houses: 110m² + 18m² garage
One 2-bedroom + study mews house: 110m² + 18m² garage

terrace corner 5

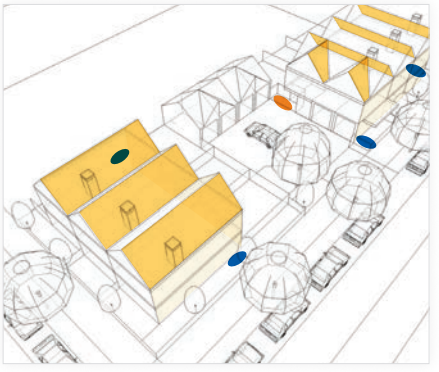
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



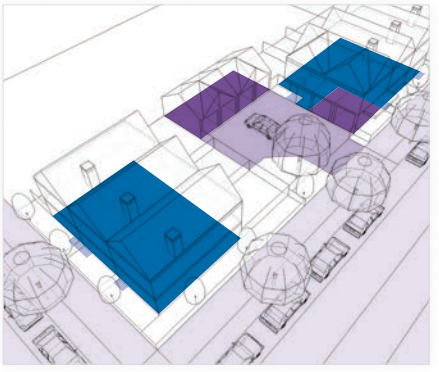
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



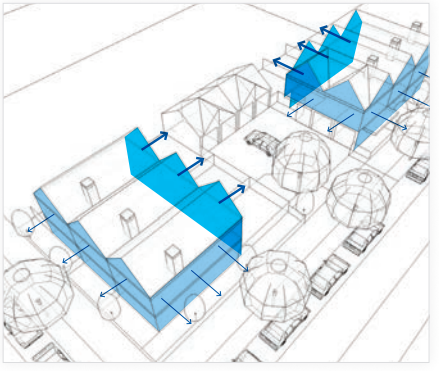
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

5 mews house

- ‘Chauffeur’ units over garages are not unusual - but they need to be well designed to offer good living.
- A ground floor room with access to a garden increases the attraction of the unit. Ground floor rooms should not be the main living space unless they are very generous. Studies / spare rooms and rumpus rooms can be ideal.
- Units over 2-levels (ground and first) work well for parking courts in ‘rear’ locations on larger sites, minimising shading of gardens.
- Chauffeur units are often located abutting rear courtyards and gardens. This means that they often need planning with no outlook from one side - either an adjoining wall or a sensitively located blank facade.

typical features

- Entrances should be well articulated, and arranged to achieve both privacy and a strong presence in the parking court.
- Living spaces can be open plan or divided - access to a balcony is a valuable addition to the garden.

mews house | 5

ground floor first floor second floor

example design

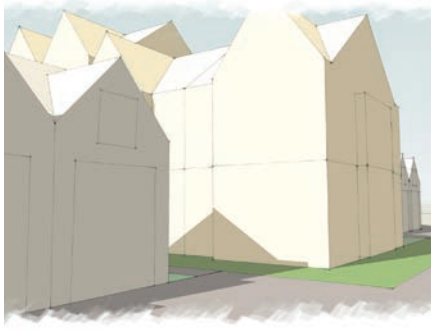
- This is a large mews house over three floors, sized to adjoin a row of terraced houses as shown in the site typology illustration.
- It includes a ground floor garden room, first floor living spaces and guest bedroom, with main bedrooms located in an attic storey.

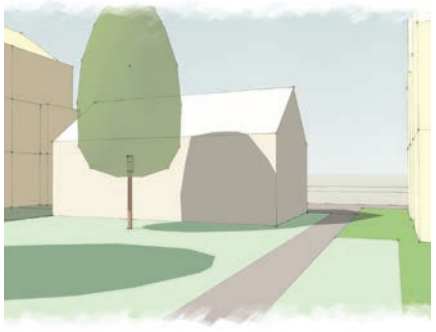
190 m²

- The entrance to the house has been recessed to create a threshold area, entering into a family / garden room.
- As an alternative, the living room could be arranged above the family room - the stairs would then be better arranged against the blank wall adjoining neighbouring houses.

typology

6 terrace mews+green





what can this offer as a place to live?

- A range of 2-storey and 3-storey family-sized houses.
- A central shared common green / playspace, separated from driveways.
- Good solar orientation for sites on east-west streets.
- Outlook from living rooms - 9m to a boundary, and 18m between buildings.
- Compact houses which are more affordable to buy and to power.
- Compact, well-proportioned and well-located outdoor living areas.

what can this do for our city?

- Combining more than one section allows for more and larger houses, as well as high quality outdoor space - a mini-park shared by the group of houses.
- Positive street frontage, increasing surveillance / safety for pedestrians.
- The long, straight driveways are made more attractive through location of planted front garden areas, entrances and bay windows along their length.
- Garaging is grouped, but only in small numbers to avoid dominance, and to allow the width of the drive to be reduced at the rear, making room for planting.

success factors

- Three-storey houses used to enclose space, orientated parallel to the street.
- Locates rear houses to minimise shadowing and dominance to neighbours.
- Driveways are treated as mini-streets by positioning building frontages, entrances and windows, and including planting to soften the spaces.
- Mews houses (alongside the driveways) are scaled appropriately, using 3-storey at the site entry to strongly define the entrance, and 2-storey where this reduces shading and dominance of the shared areas in the site.
- The common green gives local play and social space for families, and is overlooked and easily accessed by every house.
- Every house also has a private garden area, whose size is related to whether they adjoin the common green: smaller for street-front houses, and larger for rear houses.

alternative layout option

The view on the left shows an alternative layout, using the same courtyard principle as Typology 2. The shared space is larger overall, but this also requires wider driveways to service the greater number of residents using each access. Houses adjoining neighbouring lots may need to be two storey only to avoid excessive shading, and to create a satisfactory transition of scale along the street.

terrace mews+green

6

shared play green

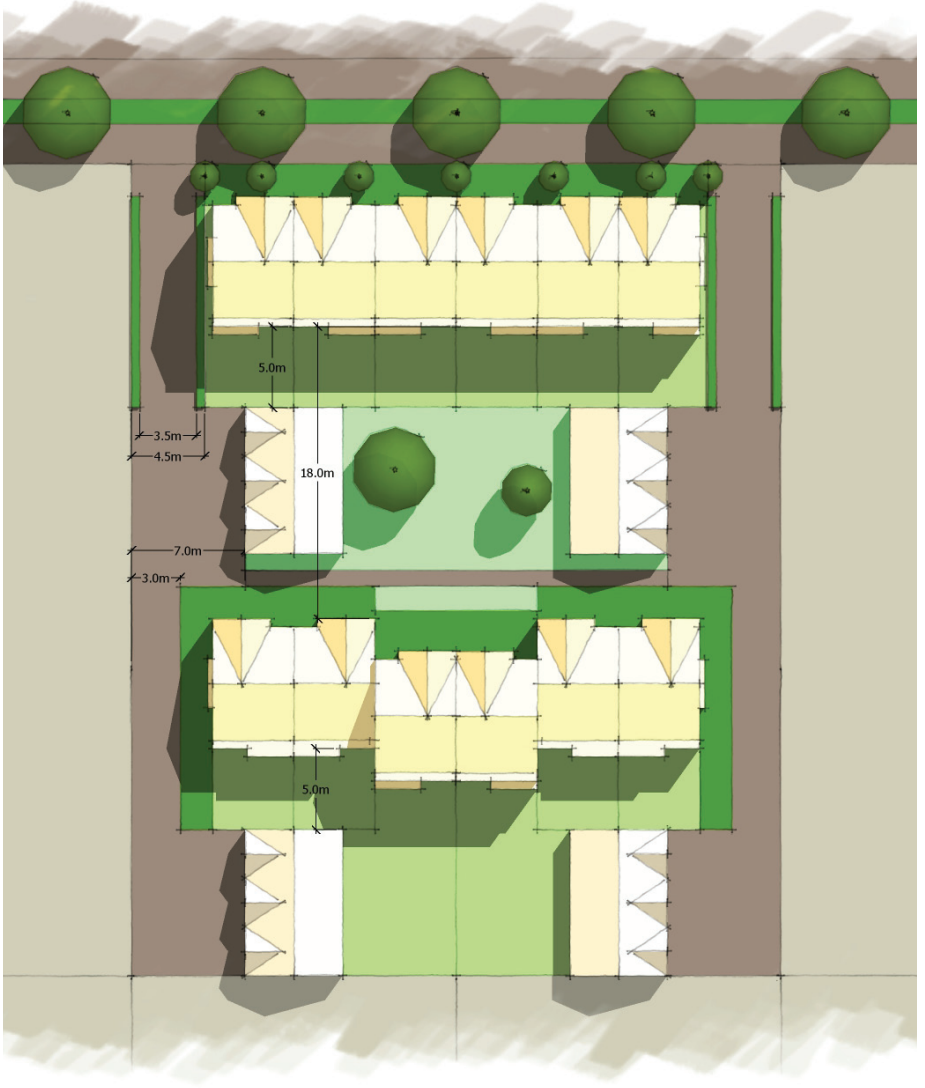
Th shared space creates a strong heart to the community on this site. It is overlooked well from every house, while the garages create enclosure from the driveways. The space is large enough for children's games and social activities, and for larger trees.

mews spaces

Creating two access routes and splitting the garaging on each mews allows the driveway to be intimate and softer, rather than dominated by cars. They should be designed as 'Homezones', to encourage activities to spill out of houses into the mews.

typology

6 terrace mews+green



illustrated example

The arrangement of garages and houses creates appropriate separation towards neighbouring lots. The access drive has house frontages looking into it, while orientating the terraces at right angles to the drive spaces. Rear houses have direct access to their garage, through the garden.

L3 district plan zone

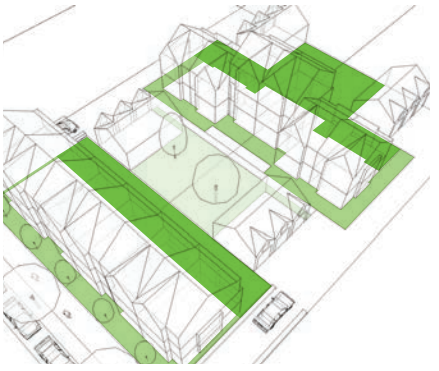
48 households per hectare

Site: two sections 20m x 50m
Twelve 2-storey and 3-storey houses:
0.8 Floor Area Ratio
Eight 3-storey, 4 bedroom houses:
128m² + 18m² garage
Four 2-storey, 2 bedroom houses:
90m² + 18m² garage

terrace mews+green

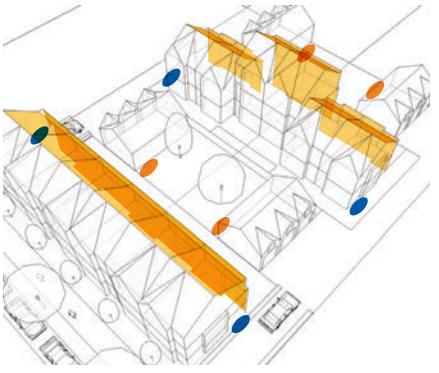
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



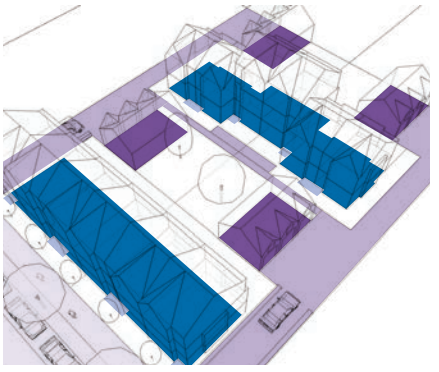
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



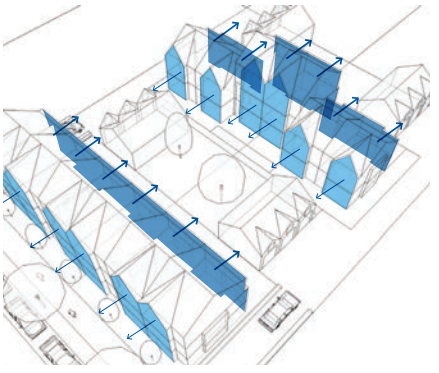
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

6 three-storey terrace

- Terraced houses are a traditional form of 'town housing', and can be configured in many different ways.
- Three-storey houses offer generous spaces on a small footprint. The upper storey can be a full storey, or partially into the roofspace.
- The ground floor of terraced houses is wasted by using it for garaging. This means living rooms need to be on upper floors, or split over two floors. Instead, locate garaging near the house, and locate living throughout most of the ground floor.

typical features

- Five metres is a good minimum width for terraced houses - bedrooms next to stairs can be at least three metres wide.
- Locating bathrooms in the centre of the upstairs layouts allows bedrooms to have good daylighting.
- Ground floor layouts should allow for flexible space planning, with smaller spaces such as storage located near to side walls and stairwells.

three-storey terrace | 6

ground floor

first floor

second floor

example design

The ground floor layout is relatively open plan, creating good indoor-outdoor flow, with storage and ancillary spaces concealed around the stairway.

Single garaging is integrated into the building without dominating the frontage.

150 m²

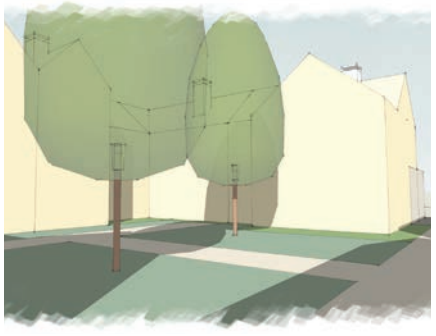
The house can be easily extended along the line of the rear 'wing', or by building across the back of the garage space.

typology

7 garden square

what can this offer as a place to live?

- Child-friendly courtyards separated from vehicle access, with a strong visual appeal from the street.
- Indoor-outdoor flow from ground floor of all units into this shared space, while retaining privacy from the street with small front garden areas.
- Good-sized rear gardens for many of the units, with large private balconies for mews houses.
- Outlook and privacy within the site, with around 18 metres between frontage elevations looking into the courtyard.



what can this do for our city?

- The pedestrian courtyards provide an attractive and safe play space for young children, within sight of each house.
- Courtyards can include larger groups of plantings and trees to enhance the garden city character.
- The shared and private spaces also offer opportunities for productive food use and for environmentally friendly systems such as rainwater storage.
- Building heights are generally only two storeys, creating a comfortable relationship within established neighbourhoods.
- The two vehicle accessways are small in scale, and overlooked by dwellings along and across the spaces.

success factors

- Houses will need to be designed with individual layouts to suit specific locations and outlooks within the site.
- Some houses in the rear courtyard will need to have main living and bedroom spaces facing in only one direction, particularly where they are relatively close to adjacent boundaries.
- Garages should not be located next to the street frontage - a ground floor area with an entrance for an upper unit should be located here to overlook the street.
- The quality of landscaping finishes and planting within the courtyards will be critical to the success of this as a place.

garden square 7

pedestrian court

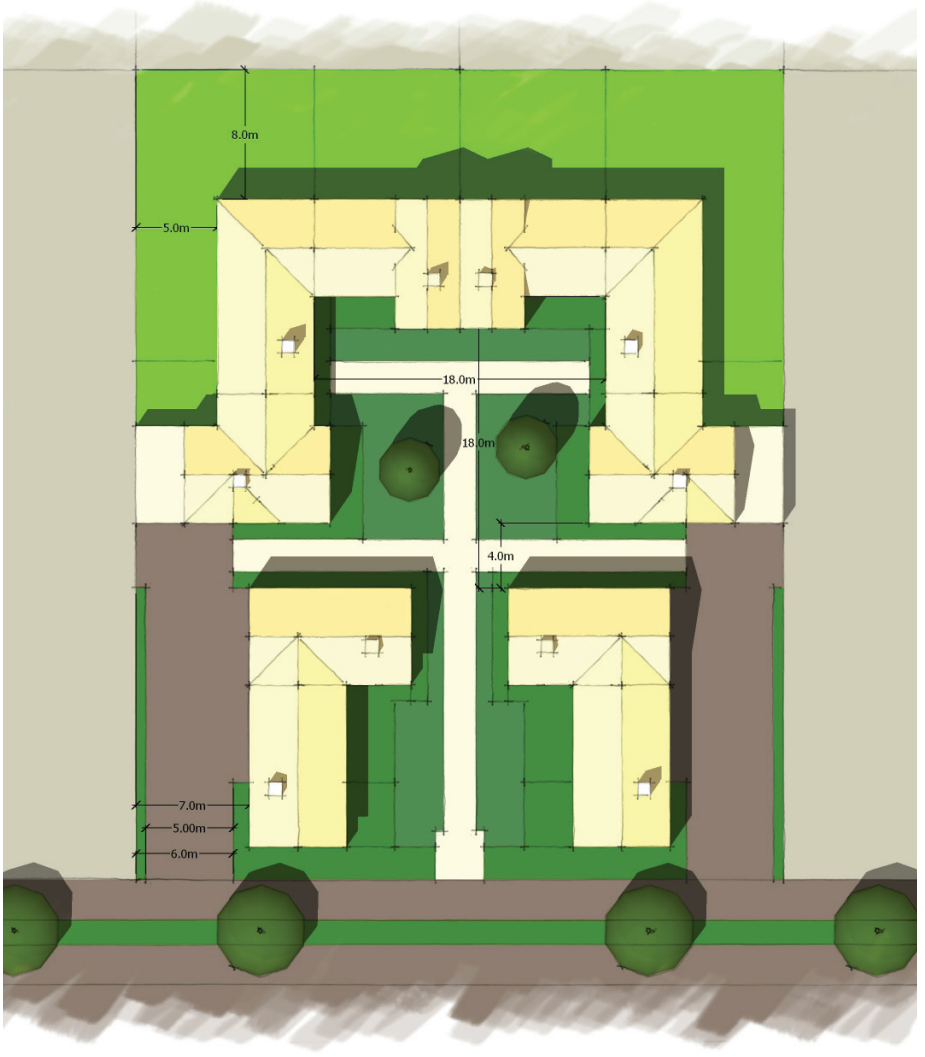
These spaces are designed to provide a shared area into which the ground floor of houses can 'flow'. The ground floor layout of houses, and the treatment of front gardens and doorways need to resolve a balance of privacy and engagement.

building frontages

The courtyard spaces also need to be enclosed with buildings which have articulated frontages to create interest. The axial line of the courts when viewed from the road suggests a strong visual composition at the far end of the courtyard.

typology

7 garden square



illustrated example

This layout creates a formal set of courtyard spaces by using custom house plans to create a surrounding enclosure. The layout suits east-west streets most, but could be tailored to suit other orientations.

L3 district plan zone

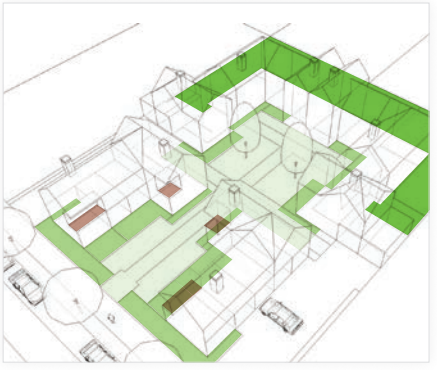
40 households per hectare

Site: two sections 20 x 50m
Ten homes - : 0.65 Floor Area Ratio
Four terraced houses, 140m² + 18m² external garage
Two mews houses, 110m² + 18m² external garage
Four mews houses, 85m² + 18m² external garage

garden square

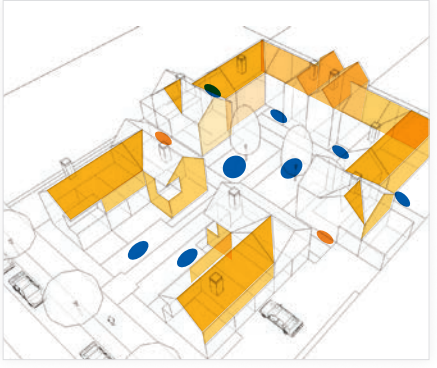
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



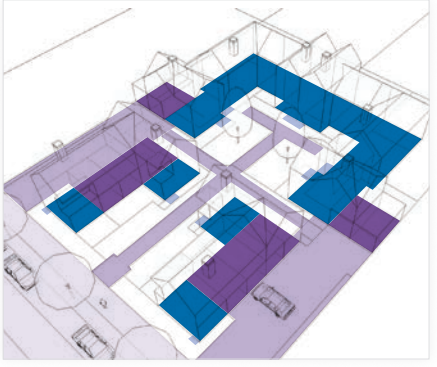
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



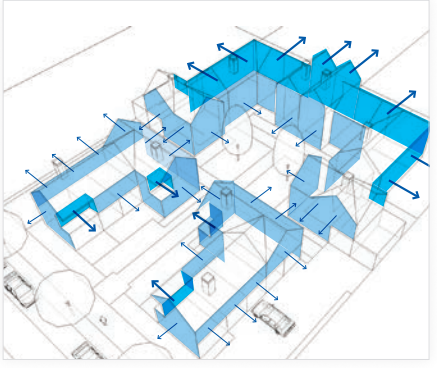
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

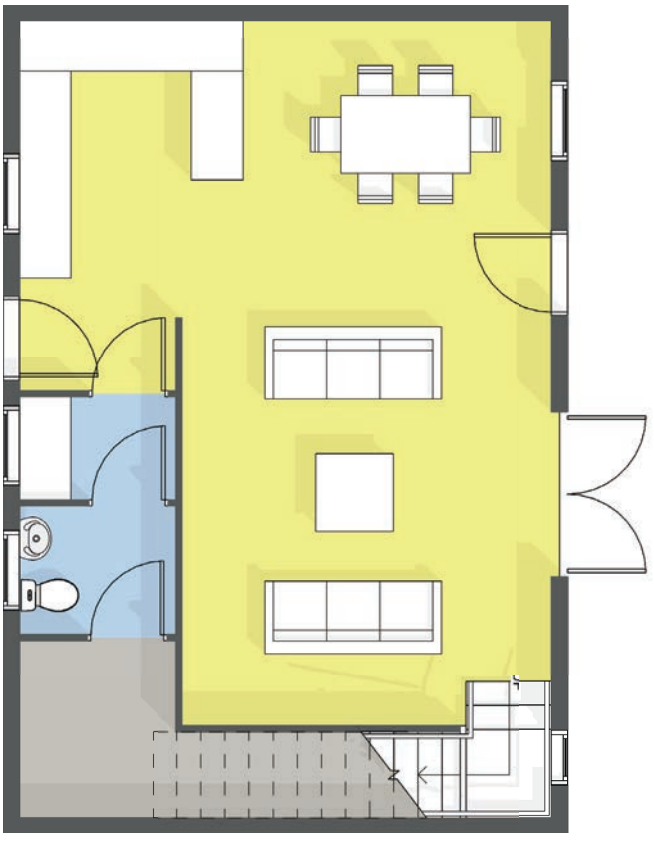
7 single-aspect house

- These houses are designed to face all major living spaces and bedrooms towards a single orientation. This can provide a solution where privacy towards neighbours or key spaces is the primary consideration.
- Windows on the 'rear' should onlybe for minor rooms and kitchens.
- This type of internal planning is similar to good solar planning, and should face the sun wherever possible.
- Upper floors may need to locate corridors along the rear of the plan to access rooms. Ground floors can use an open-plan approach.

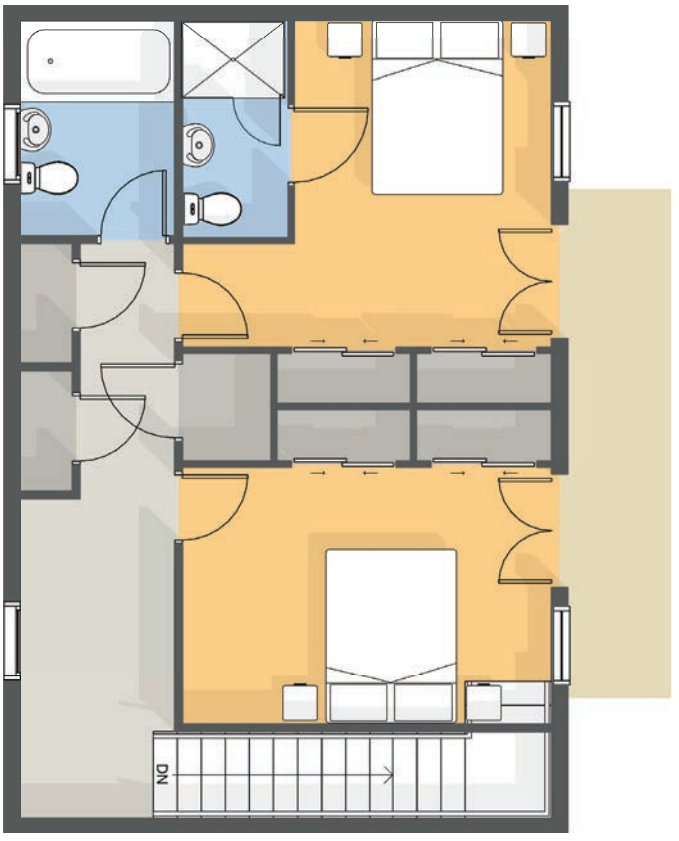
typical features

- The plan should therefore be of limited depth and increased width to provide sufficient daylight access.

single-aspect house | 7



ground floor



first floor

example design

The location and arrangement of the stairs shown facilitates a variety of options for the ground floor. This plan conceals secondary rooms under the stairs and off the kitchen area, to create a full-width open plan space. The upper floor includes space for a potential study desk on the landing area

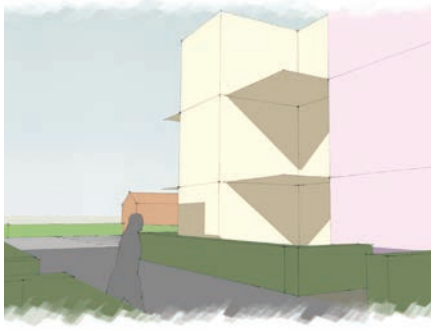
112 m²

typology

8 walk-up apartments

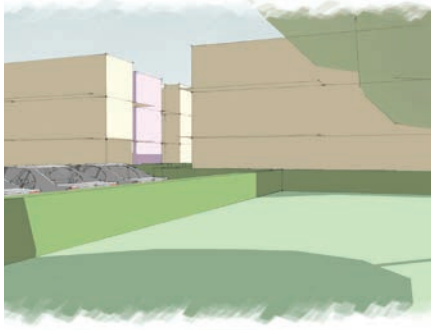
what can this offer as a place to live?

- Apartment living in a small building rather than a large complex.
- A choice of unit sizes, all with well proportioned private outdoor space.
- Outlook to the street or over the rear garden from main living areas.
- Bedrooms and other private areas are located to protect privacy.
- Orientation for sunlight access to all living rooms.
- Potentially low maintenance costs, with no lifts and large communal areas.
- A well-formed communal garden area at the rear of the site.



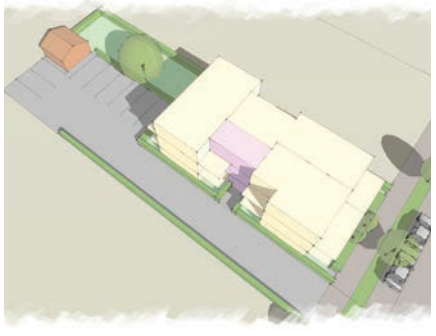
what can this do for our city?

- A model for apartments which does not require expensive lifts.
- Apartments at a scale which could fit into existing neighbourhoods.
- Creates a positive street frontage, with good overlooking of the street.
- Rear parking does not dominate the site, and supports good street frontage.



success factors

- Limit the building to three storeys to avoid needing a lift.
- Location of the stairs and arrangement of adjacent individual units should allow the living spaces of apartments to face the sun.
- The stairs and landings should be fully internal to create a quality environment in the approach to people's homes.
- The building form should be articulated to provide access to sunlight for units on the potentially shady side of the building.
- Generous main balconies should overlook the street and communal garden and should be provided with shutters or screens to enable uses to modify privacy and avoid inappropriate overlooking of neighbours.
- Use of finishes and planting in the driveway between the street and the stair entrance must be high quality, and ensure that drivers move slowly.
- Bins and cycle storage should be located in a fully enclosed service building, near the drive but away from the apartments.
- All apartments should have generous internal storage spaces.



alternative layout option

The view on the left shows an alternative layout, requiring only one section. This demonstrates that the same typology can be used in situations where two sections cannot be assembled for development. However, it should be noted that the inefficient use of space for the driveway will necessitate less efficient and attractive internal layouts within the building. In more central areas it may be possible to reduce the amount of parking provided, or to locate the parking in a semi-basement to release more space for the building on the site.

typology

walk-up apartments | 8

outlook

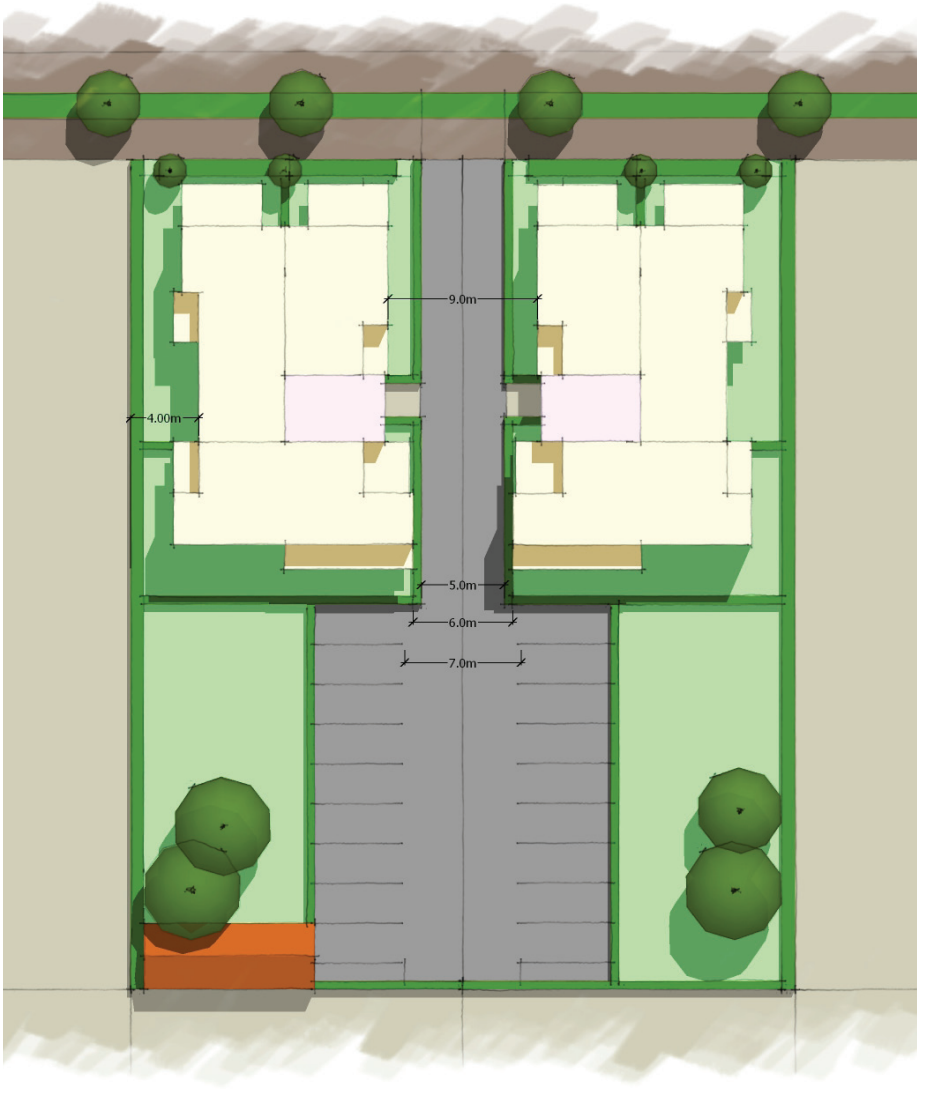
On a standard mid-block site three apartments on a floor is the limit for achieving good outlook. Orientate living areas towards the street and rear garden for good outlook, and to encourage positive interaction between public and private areas.

sunlight access

Articulating the building form with steps and recesses, especially along the side elevations, can enable sunlight access to units which are otherwise on the shady side. These forms can also enhance privacy, avoiding living spaces that look into adjacent bedrooms.

typology

8 walk-up apartments



illustrated example

This typology relies on creating an attractive entrance space between the buildings. The relationship to neighbouring properties should be assessed carefully, and the layout of elevations and rooms along the outer sides of the building adjusted to suit.

L4 district plan zone

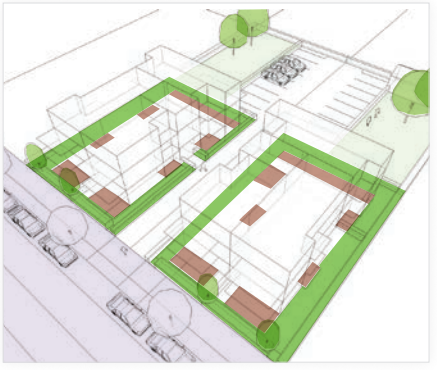
72 households per hectare

Site: two sections 20 x 50m
18 homes, six 1-bedroom and twelve 2-bedroom: 0.74 Floor Area Ratio
1-bedroom apartments: 55m² + 1 outside car park
2-bedroom apartments: 80m² + 1 outside car park
Communal stairs and external bin store building

walk-up apartments

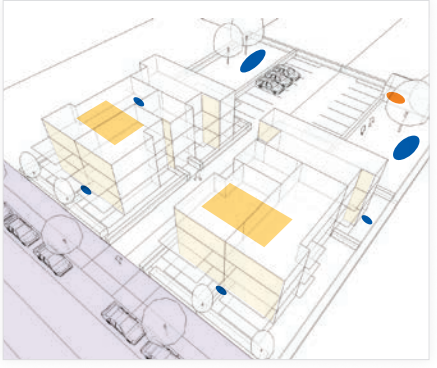
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



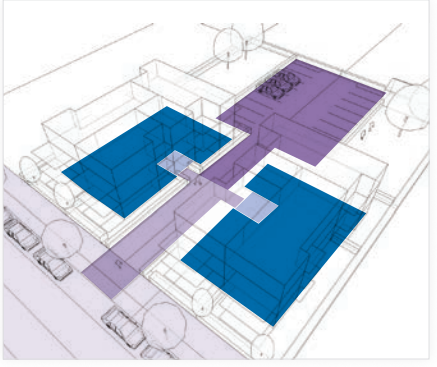
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



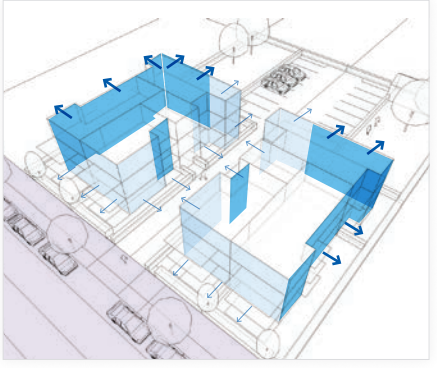
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

8 walk-up apartments

- Central, efficient stair core with no lift - needs to be internal to present a good quality experience for residents.
- The three apartments per floor can be arranged to suit solar orientation, but should primarily have outlook towards the street and rear garden.
- Provide private outdoor space around ground floor units. Locate communal space away from unit frontages, or with a private buffer space in between.
- Communal stair areas should be internal, with convenient storage or parking for cycles within or nearby.

typical features

- Windows towards side elevations should be limited in number. Use setbacks and box windows to get light in to the side of the buildings.
- Communal provision for bin storage can be located away from the main building, within a completely enclosed building. Alternatively it can be integrated into ground floor if sufficient space is available.

walk-up apartments | 8

floor layout

example design

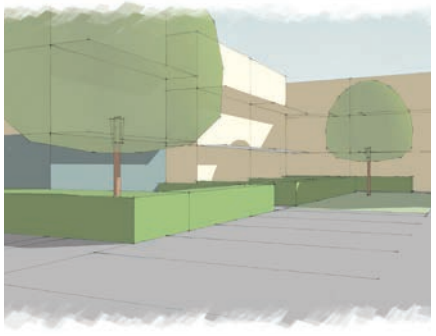
- The location of bedrooms and their windows ensures minimal nuisance from access routes.
- Main living spaces face the street or access driveway, and avoid overlooking neighbours in their primary outlook.

58–88 m²

- All units include large storage cupboards - the more the better.
- Storage and bathrooms are located between bedrooms and living rooms to provide acoustic privacy.
- All units have at least two external private balconies, for living and bedrooms.

typology

9 walk-up corner



what can this offer as a place to live?

- Urban apartment living with walk-up access.
- A choice of unit sizes and layouts, all with well proportioned private outdoor space as gardens or balconies flowing into indoor living areas.
- Good outlook from main living areas.
- Bedrooms are located to protect privacy.
- A well-formed communal garden area private from the street.

what can this do for our city?

- Achieves a good density at a comfortable scale.
- Using walkup access rather than lifts keeps the height of the building to only three storeys, and avoids external access decks.
- Creates positive street corner frontage, with good overlooking of the street.

success factors

- Use dual-aspect apartments, with consistent orientation of bedrooms and living rooms in adjacent units.
- The stairs and landings should be internal to create a quality environment in the approach to people's homes.
- Carefully arrange access into stairs located at the corner of the site, to avoid access routes passing close to private spaces in apartments.
- Generous main balconies should overlook the street.
- Planting in the parking area must be high quality and extensive, using vertical elements to help ensure that drivers move slowly.
- A central bin and cycle storage area in this example are located within the main ground floor, off a stair well. Care should be taken to create nuisance towards adjacent units, or to create large areas of blank elevation.
- All apartments should have generous internal storage spaces.

walk-up corner | 9

street frontage

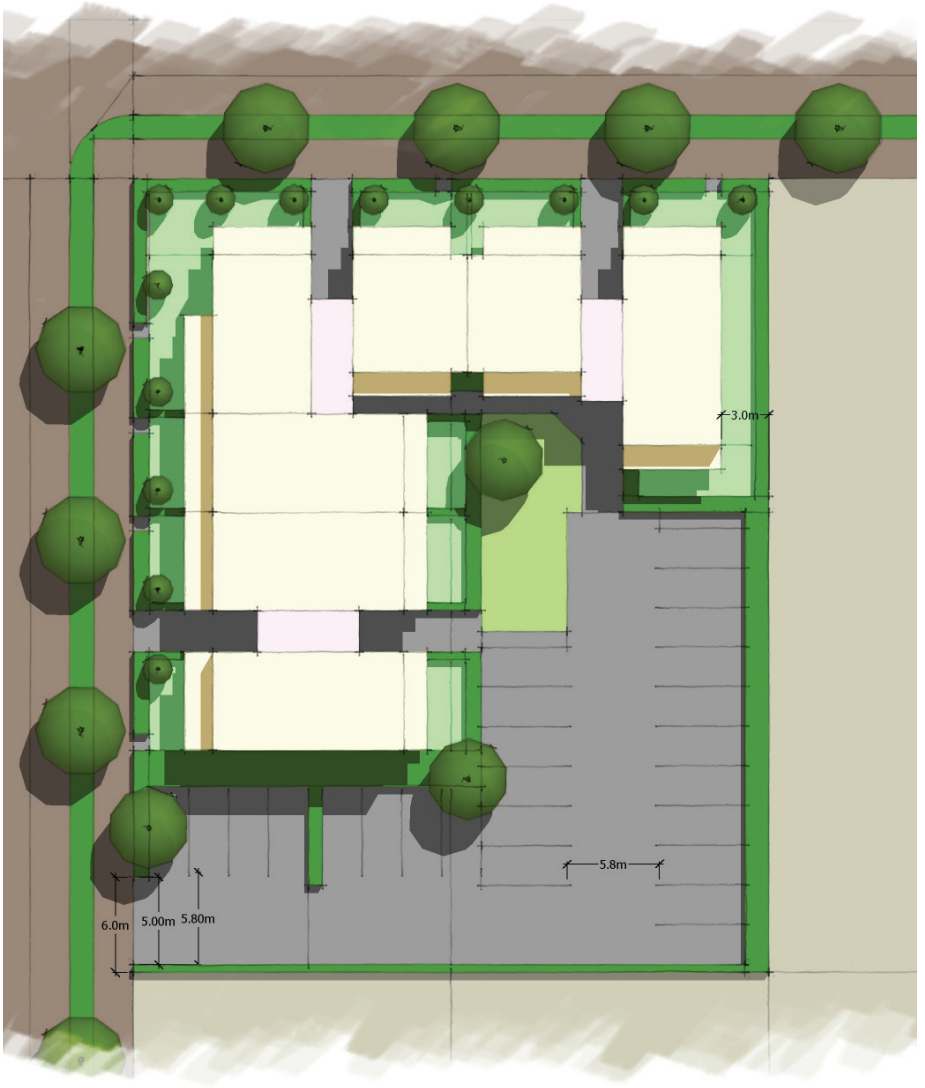
Front gardens are given privacy using hedges and small trees rather than just fencing. Balconies to upper floors create visual interest and create positive overlooking of the street.

stairs & entrances

The use of similar floor layouts for units creates a rhythm to the elevation which is varied using setback stairs. The setback entrances create a 'front door' space which mediates between the street and the building. Ground floor units have their own street entry.

typology

9 walk-up corner



illustrated example

This layout features three stair cores, accessing two dual-aspect apartments at each floor. At the corner the plan needs to use single-aspect apartments to resolve privacy issues between the access routes and apartments. Ground floor apartments have direct access to gardens wherever they have an outlook.

L4 district plan zone

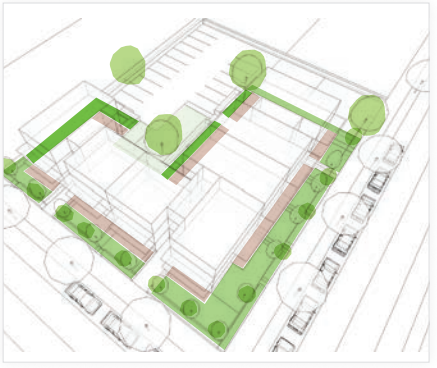
80 households per hectare

Site: two sections 20 x 50m
Twenty homes: 1-bedroom and 2-bedroom apartments : 0.77 Floor Area Ratio
Five dual-aspect 1-bedroom apartments: 54m² + 1 external car park
Fifteen dual-aspect 2-bedroom apartments: 74m² + 1 external car park
Ground floor binstore, cycle store

walk-up corner

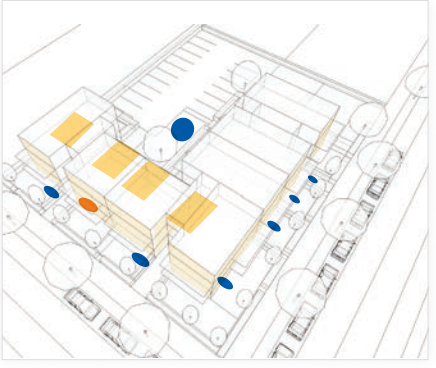
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



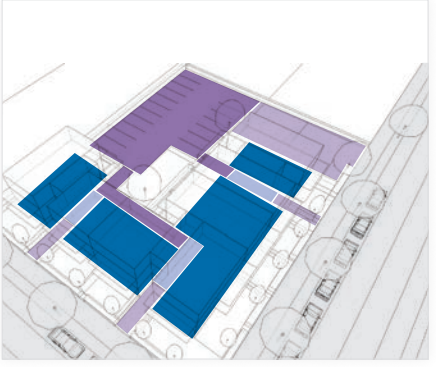
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



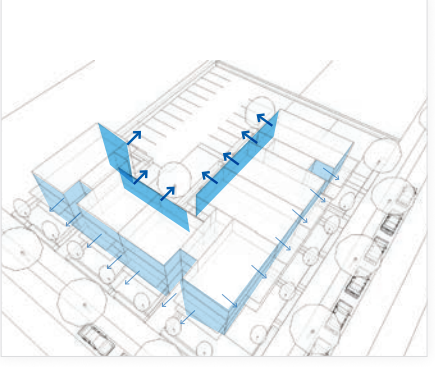
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

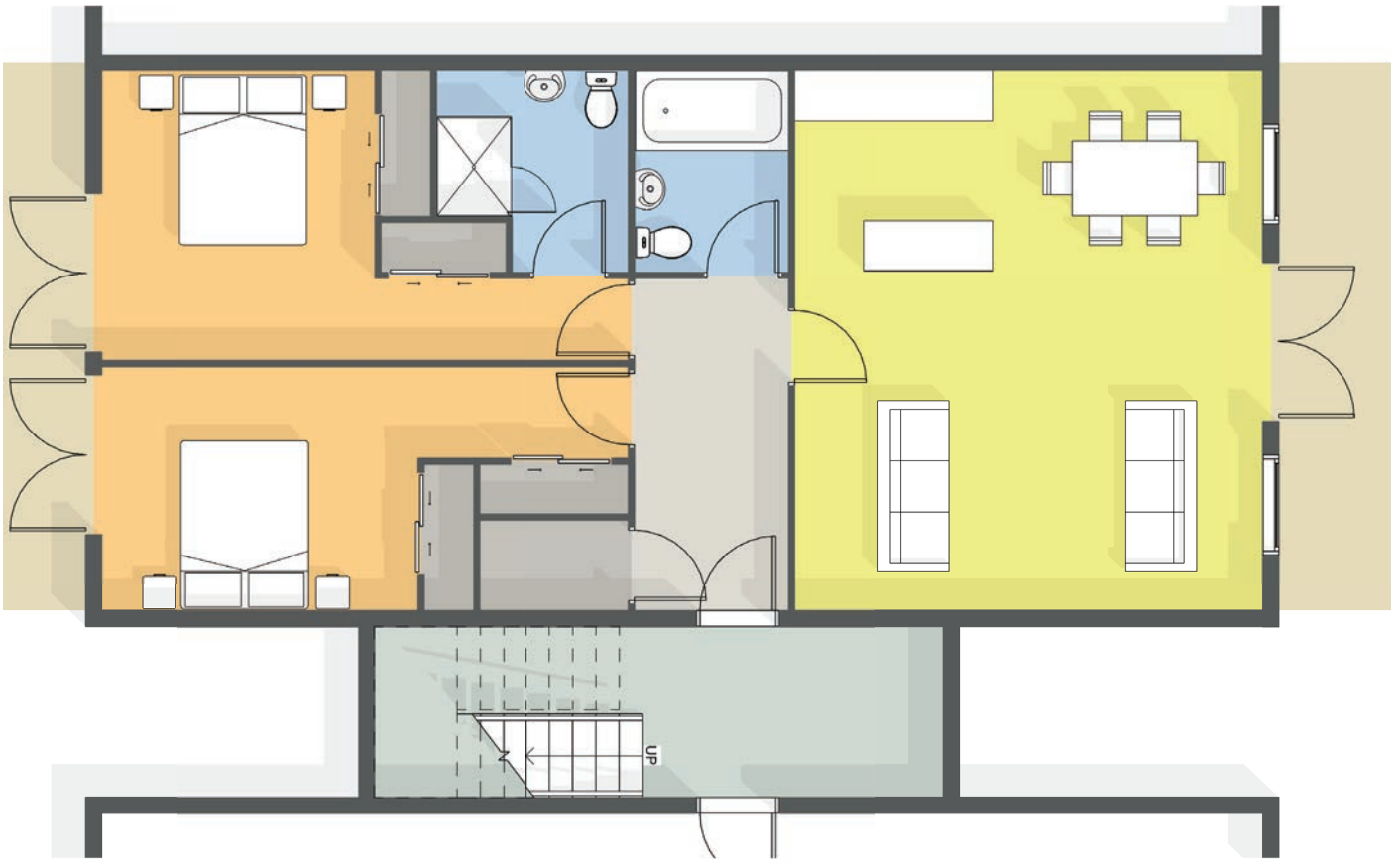
9 dual-aspect apartment

- Dual-face apartments provide a choice of outlook, and choice of location for bedrooms and living spaces.
- Balconies on two sides create access to sun throughout the day, and help to create privacy thresholds to bedrooms.
- Windows on two sides of the building allows passive cooling of the apartment in hot weather.
- The relatively small amount of external wall helps to keep the apartment warm in winter.

typical features

- Kitchens and bathrooms are best located in the centre of the unit, where they help to insulate bedrooms from living areas.

dual-aspect apartment | 9



apartment layout

example design

The apartment has an internal width of at least 6.1 metres, allowing two bedrooms to be located on one elevation. Widths greater than this can enable much more flexibility in the plan. Locating bathrooms and kitchens in the centre of the plan allows for simple provision of plumbing.

88 m²

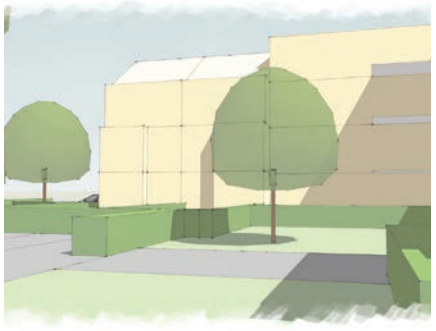
The external walls facing the front and rear can be extensively glazed to maximise daylighting, and a tall stud height will assist penetration of daylight. Glazing areas should be more limited on the south side, where it is more appropriate to locate the bedrooms.

typology

10 mixed unit corner

what can this offer as a place to live?

- Mixed apartment and terraced house living in a moderately sized building group.
- A choice of unit sizes and layouts, all with well proportioned private outdoor space as gardens or balconies flowing into indoor living areas.
- Some two-storey apartments, offering interesting living spaces and enabling cost-effective four-storey development which does not need expensive lifts.
- Good outlook from main living areas.
- Bedrooms and other private areas are located to protect privacy.
- A well-formed communal garden area private from the street.



what can this do for our city?

- Achieves a good density at a comfortable scale.
- Mixing apartments and houses optimises development intensity while avoiding complex access arrangements to apartments.
- Creates positive street corner frontage, with good overlooking of the street.
- Rear parking does not dominate the site.
- Potential for ground floor commercial or retail uses, in appropriate locations and sites in the city.

success factors

- Locate apartments on street frontage, access corridors towards the rear.
- The stairs and landings should be internal to create a quality environment in the approach to people's homes.
- Using single-aspect apartments avoids bedrooms next to access routes.
- Generous main balconies should overlook the street.
- Planting in the parking area must be high quality and extensive, using vertical elements to help ensure that drivers move slowly.
- Bins and cycle storage should be located in a fully enclosed service building away from apartment outlook, but with easy access to the street.
- All apartments should have generous internal storage spaces.
- Do not provide more than one car park per unit.

typology

mixed unit corner | 10

roof gardens

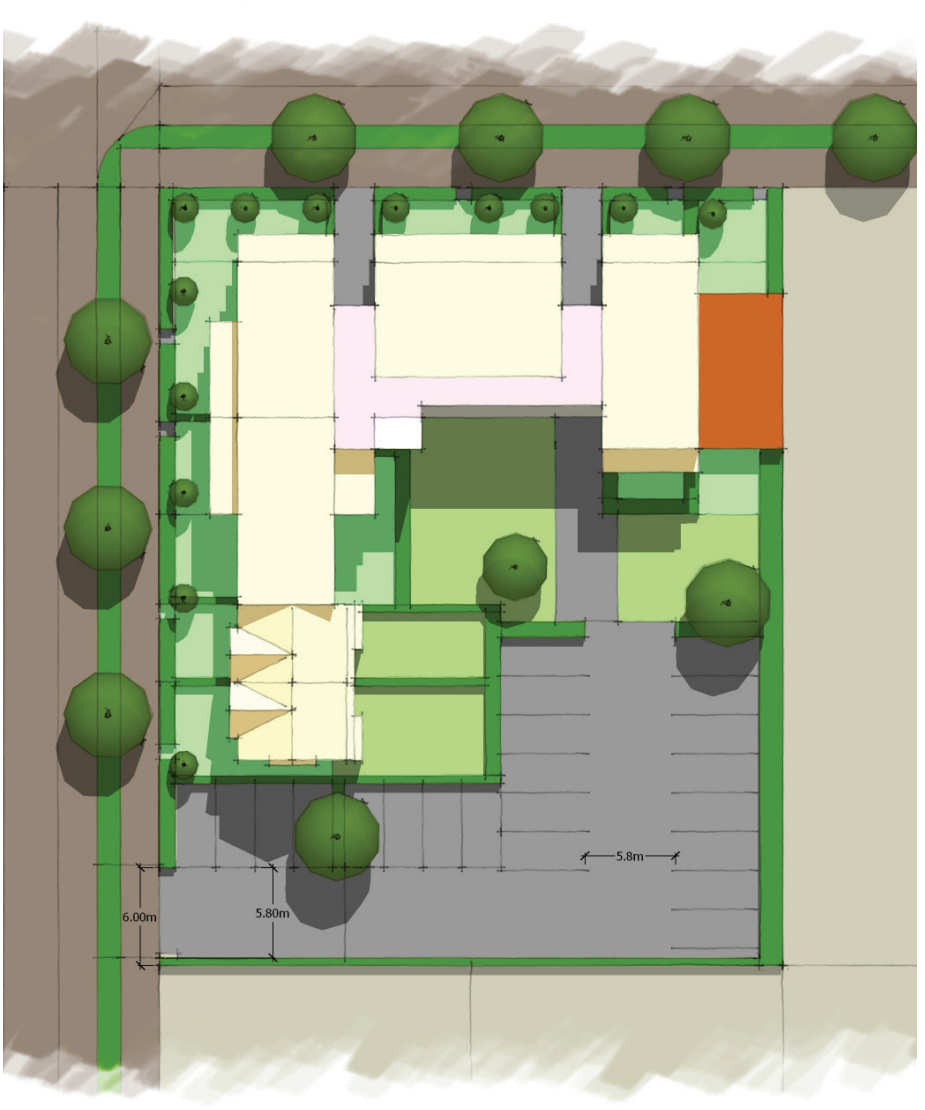
A roof garden can be relatively easy to provide, and can add a great deal to apartments when site areas are limited. They can also provide significant insulation and biodiversity effects, and help reduce summer temperatures in urban areas. Paving and planting should be simple to maintain and robust.

housing choice

The inclusion of 3-storey terraced houses next to 4-storey apartments creates choice, a more efficient site layout and more varied building form. The use of some two-storey apartments also avoids the need for lifts, which are expensive to provide at this scale of development.

typology

10 mixed unit corner



illustrated example

Providing apartments at four stories without a lift requires two-storey apartments to occupy the upper two floors. The car park includes an area for visitor parking before the main secured parking entry is reached. Bin and cycle storage is located in a building adjacent to the main apartment block, with direct access to the street and the gardens.

L4 district plan zone

56 households per hectare

Site: two sections 20 x 50m
14 homes: apartments, houses:
0.88 Floor Area Ratio
Four two-level 2-bedroom apartments: 140m² + 1 car park
Eight 2-bedroom apartme
Two 4-bedroom 3-storey terraced houses: 120m² + 1 external car park

typology

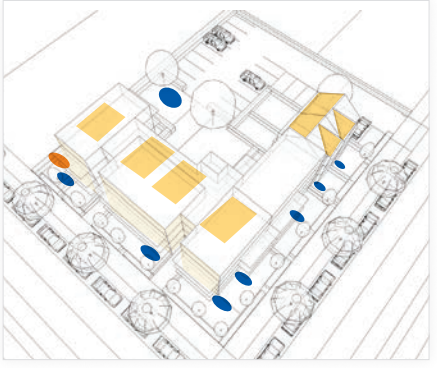
mixed unit corner | 10

garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden

sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling

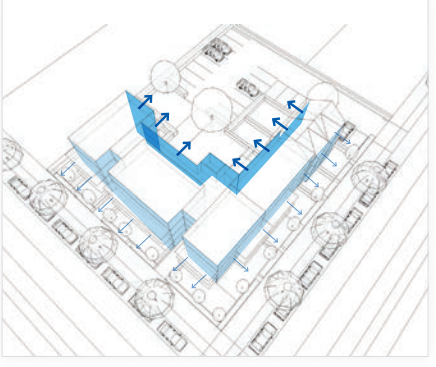


access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch

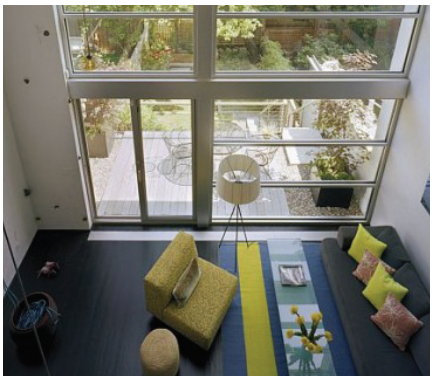
outlook and privacy

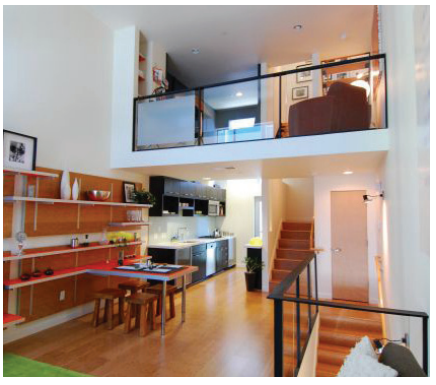
- Private orientation
- Public orientation



house example

10 two level apartments



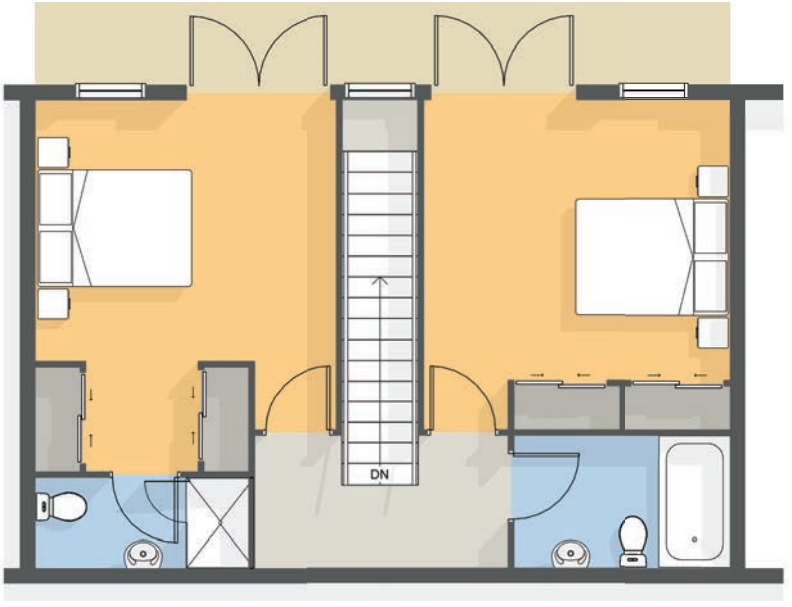


- Two-level apartments can be arranged in a number of ways. Living spaces are generally on lower levels, to provide convenient access, but can be on upper levels for views and outlook.
- Designs can include double-height spaces, especially over living rooms, with mezzanine balconies.
- Upper floors may need additional escape routes, either using the main stair access for the overall building, or an alternative route.
- Where access to the apartment is provided using a corridor, the second level of the apartment may be able to sit above this corridor and gain access to additional outlook.

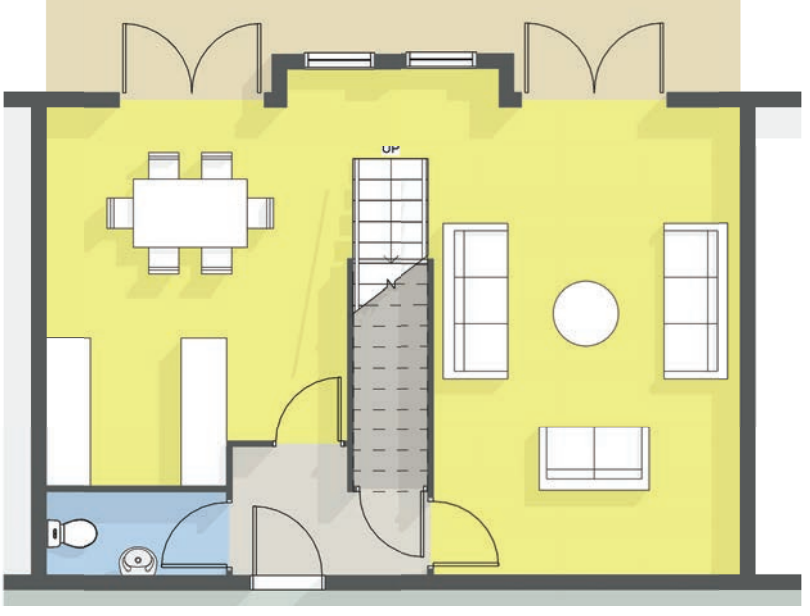
typical features

- Bathrooms and kitchens are generally best located at the inner side of the plan, leaving external walls to be fully glazed if desired.

two level apartments | 10



upper floor layout



lower floor layout

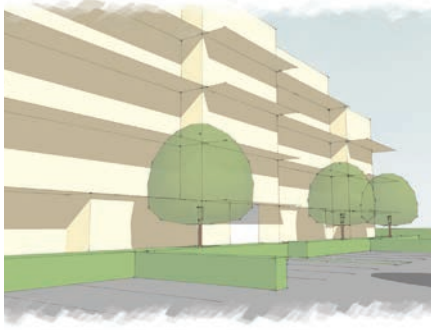
example design

112 m²

This design uses a wide-frontage layout, with a central stair providing a division of open plan space. This also allows the upper floor circulation to be small, leaving maximum floor area for bedrooms. The stairway creates a feature within the apartment, and benefits from daylight falling on it from two levels. Alternatively the stair could be located along the rear wall, enabling a fully open-plan living space along the front elevation.

typology

11 5-storey court



what can this offer as a place to live?

- Urban apartment living with a large garden court area and internal facilities.
- A choice of unit sizes and layouts, all with well proportioned private outdoor space as gardens or balconies flowing into indoor living areas.
- Good outlook from all living areas, into the street or 20m from boundaries.
- A well-formed communal garden area private from the street.

what can this do for our city?

- Achieves a high density at a comfortable scale.
- Number of lifts and apartments is optimised to reduce maintenance costs.
- Creates positive street frontage, with good overlooking of the street.
- Rear parking does not dominate the site.

success factors

- Stairs and landings should be internal to create a quality environment in the approach to people's homes.
- Locate the main entrance and access from the car park in prominent locations, connected at the main foyer to encourage social interaction.
- Generous main balconies should overlook the street.
- Planting in the parking area must be high quality and extensive, using vertical elements to help ensure that drivers move slowly.
- A central bin and cycle storage area in this example are located within the main ground floor. Care should be taken to create nuisance towards adjacent units, or to create large areas of blank elevation.
- Provide high quality landscaping and internal leisure facilities. Design internal facility rooms so that they can be converted to units if desired.
- All apartments should have generous internal storage spaces.
- Do not provide more than one car park per unit.

alternative layout option

The view on the left shows an alternative layout, with the orientation of the court reversed to suit a different site orientation. This creates a more continuous street frontage elevation, which should be carefully articulated to avoid being excessively dominant. The court benefits from being located on the private side of the building.

typology

5-storey court | 11

garden court

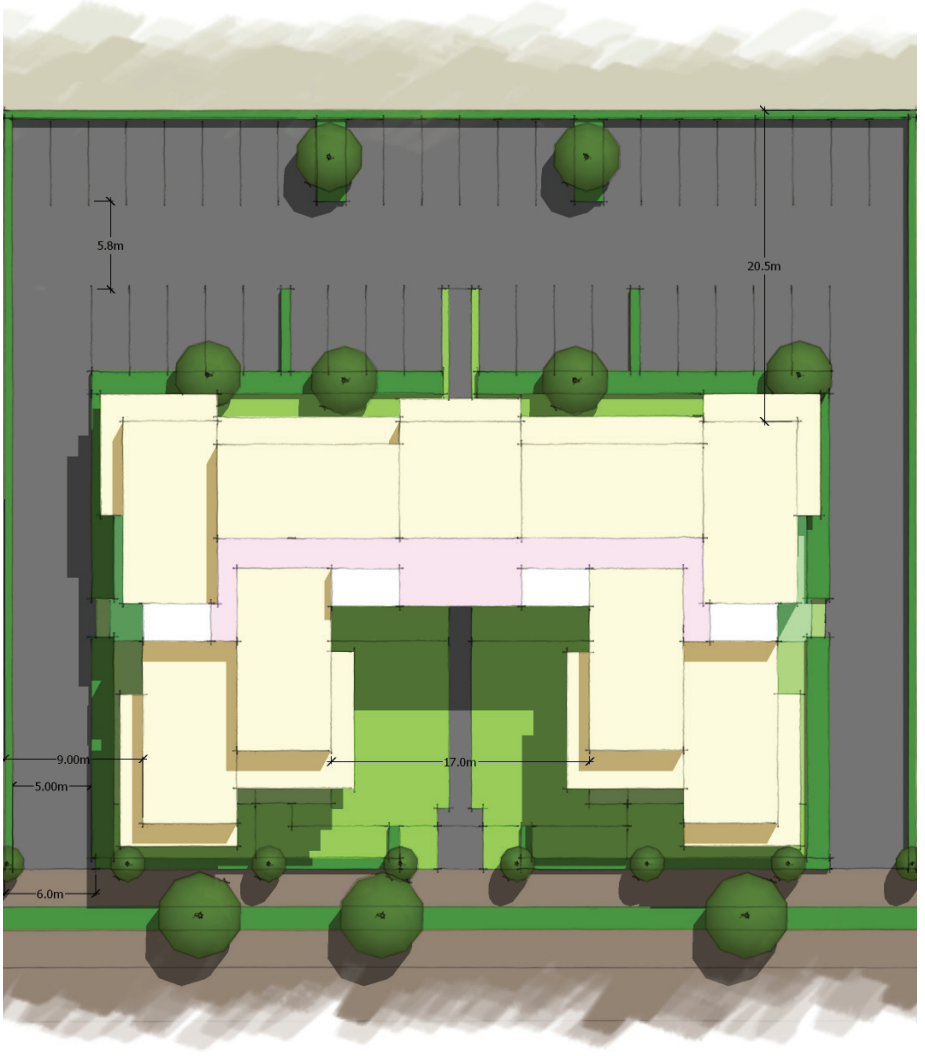
This space should be designed and constructed with high quality materials and planting. It provides visual outlook for the surrounding apartments, and in this configuration forms the entrance to the overall building. Ground floor rooms around the court could contain shared facilities, with carefully arranged overlooking of the space.

stepped massing

The form of the building needs to be articulated to create an attractive massing and avoid dominating the site. The height of the building has been varied, stepping down towards boundaries, and the plan has been stepped. The roof forms shown are relatively simple, but are broken into different parts.

typology

11 5-storey court



illustrated example

Parking is a key issue at this scale of development; here it has been located entirely at the rear of the site to avoid affecting the streetscape. A single lift bank serves central corridors, with escape stairs at each end. Ground floor units have at least 4m wide gardens between them and the street, access drive or parking areas.

L4 district plan zone

124 households per hectare

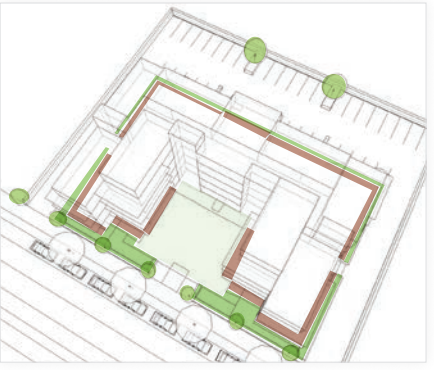
Site: three sections 20 x 50m
31 homes: 1-bedroom and 2-bedroom
apartments: 0.65 Floor Area Ratio
22 corner-aspect 2-bedroom
apartments: 74m² + 1 external car park
6 single-aspect 2-bedroom
apartments: 74m² + 1 external car park
3 single-aspect 1-bedroom
apartments: 61m² + 1 external car park

typology

5-storey court | 11

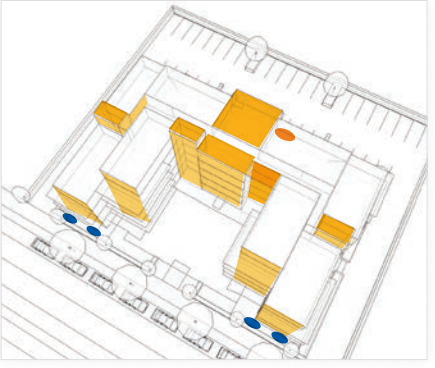
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



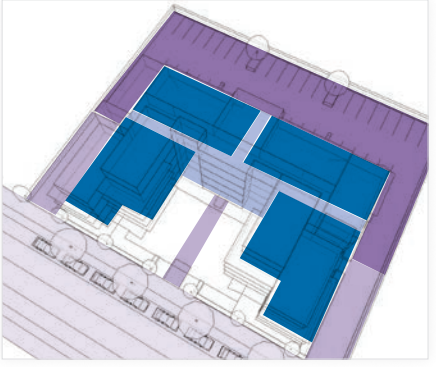
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



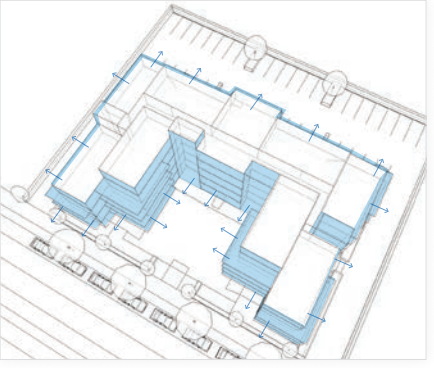
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

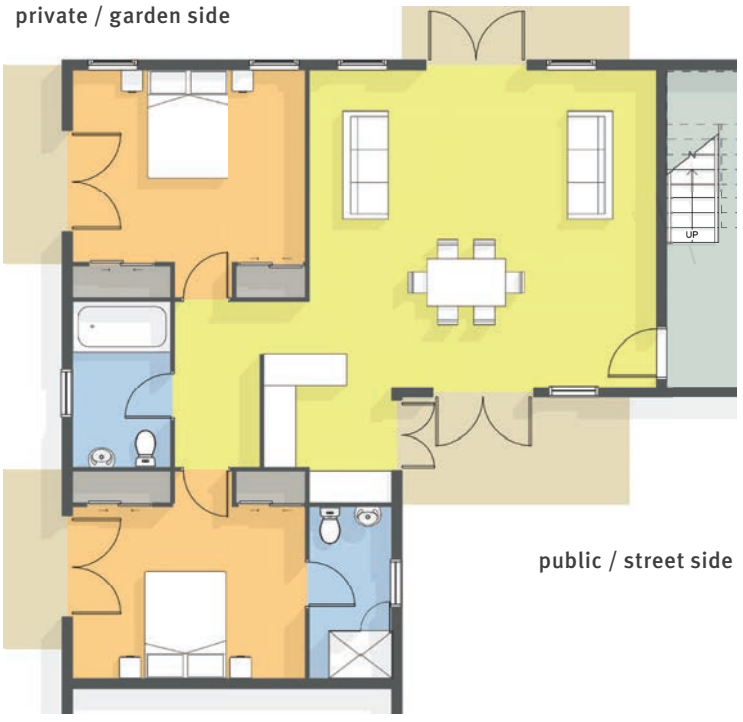
11 corner apartments

- Corner apartments offer opportunities to create good building forms, and create internal spaces which benefit from outlook in two or more directions.
- It is often best to locate an openplan living area at the extremity of a convex corner, to benefit from corner outlook.

typical features

- They can be awkward to plan internally, due to the typical location of entrances and corridors in relation to building corners.
- Concave corner locations can be more difficult to plan, but help to create good continuous building forms.

corner apartments | 11



concave corner

convex corner

example design

- Both of these units are designed within a 6-8m building width, assuming they are accessed from walkup stairs.
- Both locate bedrooms away from main public frontages, entering into living spaces from the stairs.

96 m²

- Both enable cross-ventilation in summer, with dual outlook from living and dining areas.
- Both locate opportunities for balconies in a variety of positions to suit solar orientation.

typology

12 | 6-storey corner

what can this offer as a place to live?

- Urban apartment living for a central location.
- A choice of unit sizes and layouts, all with well proportioned private outdoor space as gardens or balconies flowing into indoor living areas.
- Good outlook from all living areas, into the street or 20m from boundaries.
- A well-formed communal garden area private from the street.
- Secure basement parking.
- Opportunity for shared leisure facilities and external gardens.

what can this do for our city?

- Achieves a high density at a comfortable scale.
- Provides a mix of unit sizes to cater for different needs.
- Number of lifts and apartments is optimised to reduce maintenance costs.
- Creates positive street frontage, with good overlooking of the street.
- Parking does not dominate the site.

success factors

- Provision of a central lobby on the ground floor, and small lobbies on each floor creates places to meet, helping to foster a sense of community.
- Stairs and landings should be internal to create a quality environment in the approach to people's homes.
- Locate the main entrance and access from car park in prominent locations, connected at the main foyer to encourage social interaction.
- Generous main balconies should overlook the street.
- High quality landscaping and internal leisure facilities are provided. Internal rooms so that they can be converted to units if desired.
- All apartments should have generous internal storage spaces.
- Do not provide more than one car park per unit.
- A central bin and cycle storage area in this example is located in the basement level, near to the vehicle entry and fire-separated.

typology

6-storey corner | 12

ground level

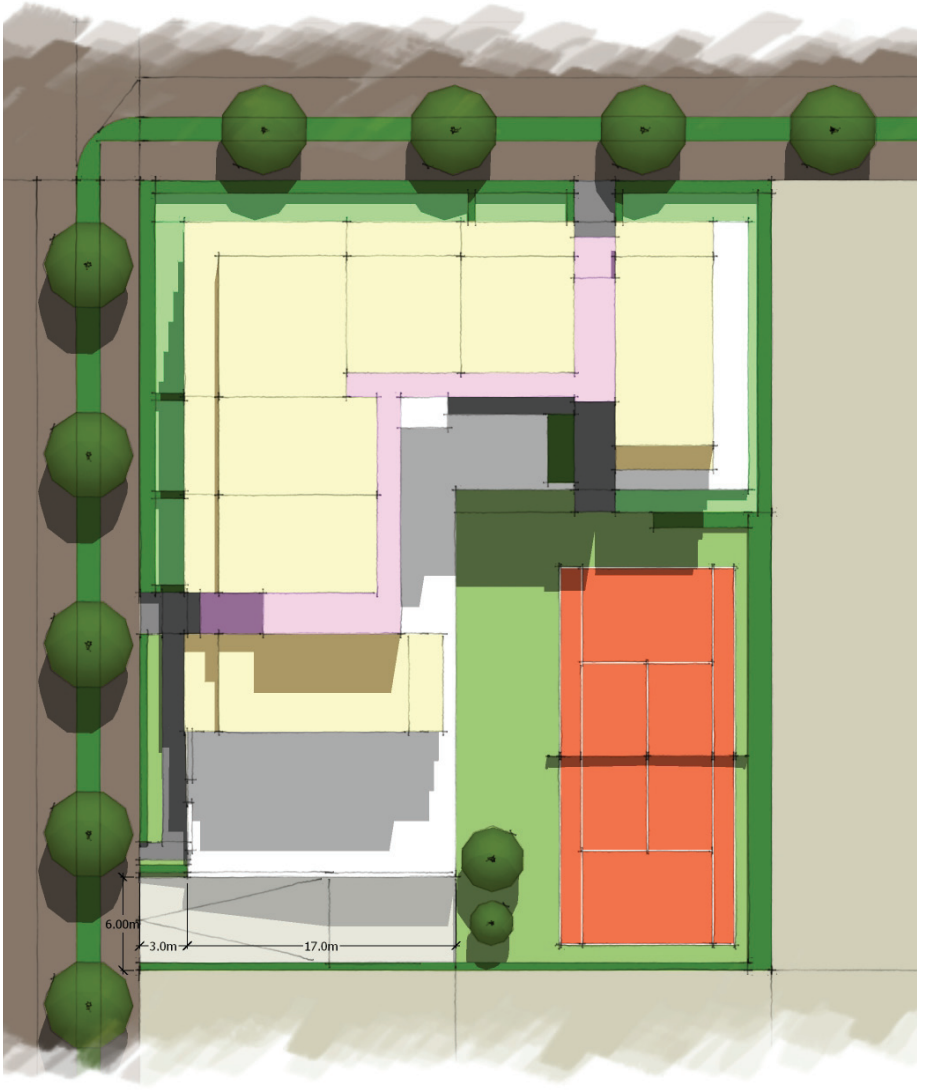
The ground level apartments are raised by approximately 1.5m from the external level. This allows ventilation to the basement car park, and provides enhanced privacy in a central city street.

basement parking

The provision of basement parking allows a high quality external environment for the apartments. This may only be possible only when buildings are higher and contain a larger number of residents.

typology

12 6-storey corner



illustrated example

Many of the units in this scheme need to be single-facing and should be orientated to the sun. End units can be dual-facing. The car park entrance is located as discreetly as possible at the end of the building, and only occupies the approximate building footprint. The rest of the site is retained for shared or private garden areas.

L4 district plan zone

148 households per hectare

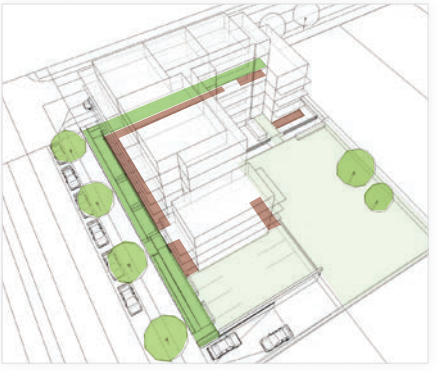
Site: two sections 20 x 50m
37 homes: 1-bedroom and 2-bedroom apartments : 1.95 Floor Area Ratio
13 dual-aspect 2-bedroom apartments: 74m² + 1 basement car park
24 single-aspect 1-bedroom apartments: 58m² + 1 basement car park

typology

6-storey corner | 12

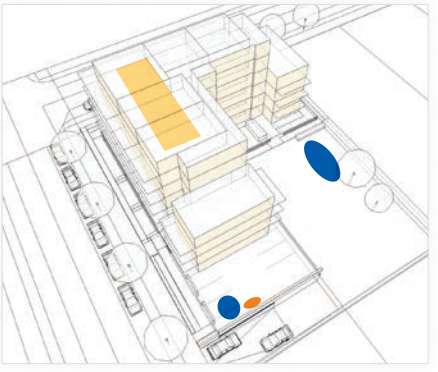
garden city spaces

- Private garden
- Semi-private front garden
- Shared
- Private balcony
- Roof garden



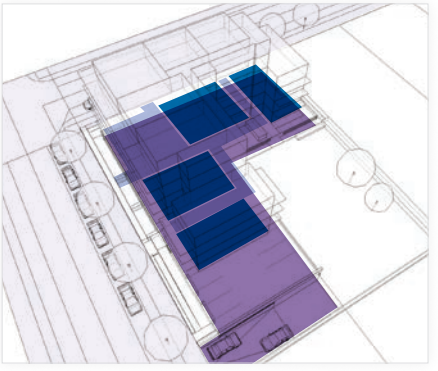
sustainability features

- Solar panels on roof
- Passive solar design elevations
- Rainwater storage
- Communal waste and recycling



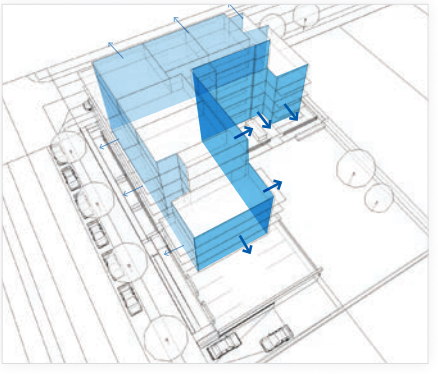
access and privacy

- Vehicle parking
- Vehicle or shared use accessway
- Public street
- Private internal space
- Semi-private threshold eg porch



outlook and privacy

- Private orientation
- Public orientation



house example

12 single face apartments

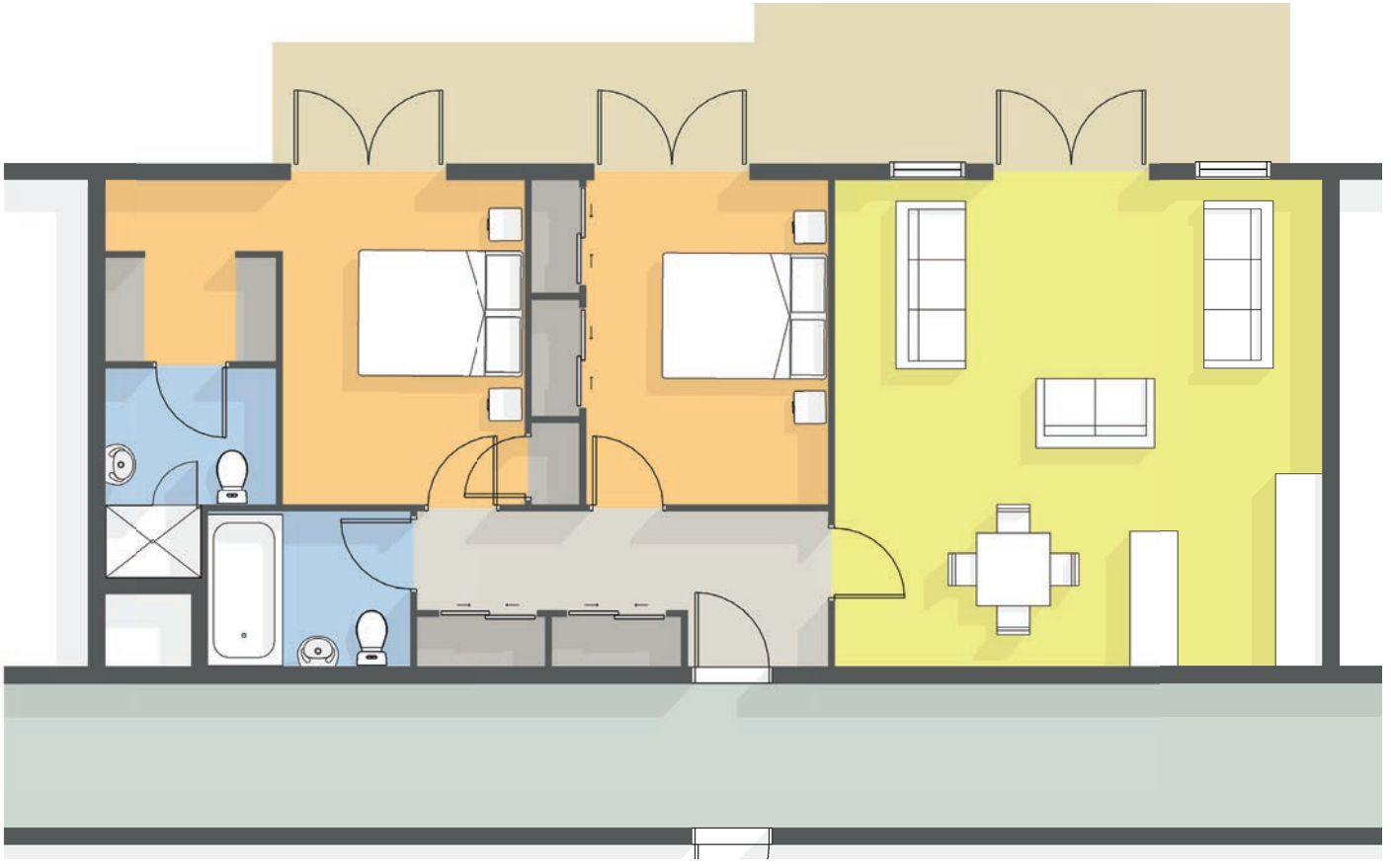
- Single-aspect apartments need good solar orientation, and should not be south-facing.
- The width of their frontage should be maximised, to ensure access to daylight and good ventilation.
- Kitchens, bathrooms and storage should be located along the rear adjoining wall, helping to minimise noise into bedrooms and living areas from communal corridors.

typical features

- Generous balconies across the entire frontage are possible, and can help offset the reduced outlook.
- Passive ventilation for summer cooling is more difficult to achieve than other apartment plans, but providing large opening doors to balconies can help to minimise this problem.

house example

single face apartments | 12



apartment layout

example design

86 m²

The layout of single-facing apartments can be difficult to vary. This plan divides the living and sleeping spaces, allowing bedrooms and bathrooms to remain private from the sociable areas. Alternatives could involve using the living space as main circulation, with bedrooms accessed directly off the social space. This plan also provides a continuous balcony, with increased width outside the living room to accommodate dining furniture.

housing group layouts

Good urban housing should be designed in a 'neighbourly' way - it should create good relationships with existing neighbours, and within new groups of housing.

Where lower-density housing is able to rely purely on distance to create attractive streets and private homes, housing in central areas should be laid out, and detailed, to ensure quality of life results from good orientation and spatial organisation.

The illustrations here demonstrate diagrammatic principles, are are not intended to be adopted literally as shown. Designs should respond to the constraints of individual sites and development briefs.

front to back

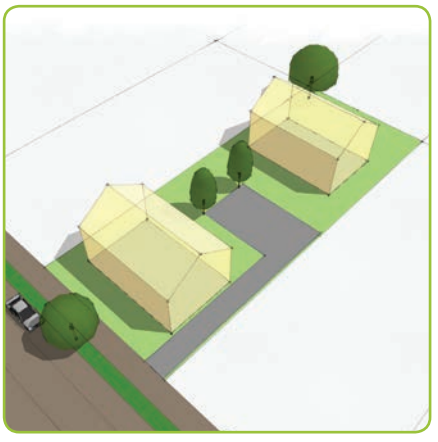
Housing layouts should create a clear hierarchy of space from public to private, where the character and needs of one does not compromise the other. The relationships made between buildings and public access routes by their location is critical to making secure and enjoyable housing. A site layout should clearly demarcate a sequence of spaces where public spaces clearly offer access to the public front of buildings where entrances are located, and where private spaces mainly adjoin other private spaces. Where 'fronts' do need to face 'backs', as is necessary on typically deep sections, there needs to be sufficient separation distance and a mediating treatment for any intervening public space.

public spaces

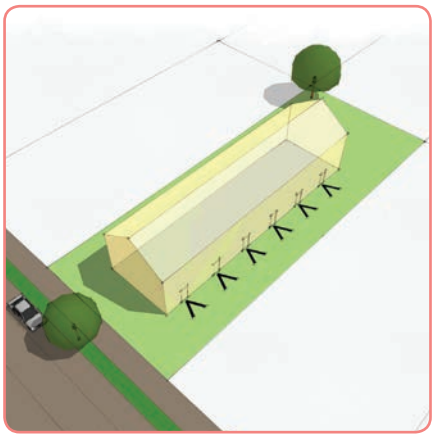
Public spaces - streets, reserves and the shared spaces on a site - are vital to a city. Layouts should strengthen streets by 'engaging' with them - buildings should positively shape the street space by aligning with the street edge, looking out over the street, locating main entrances towards the street and providing suitably formed front garden spaces to form a transition between the public and private realms.

Buildings will generally need to be parallel to the street, not perpendicular. 'Sausage blocks' should be avoided because they undermine rather than support good streets, and create overlooking and privacy problems towards neighbours.

good practice



poor practice



efficient, attractive access routes

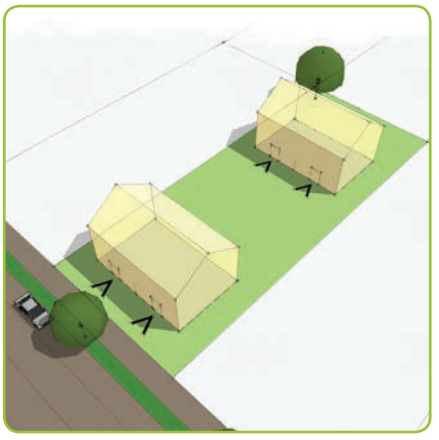
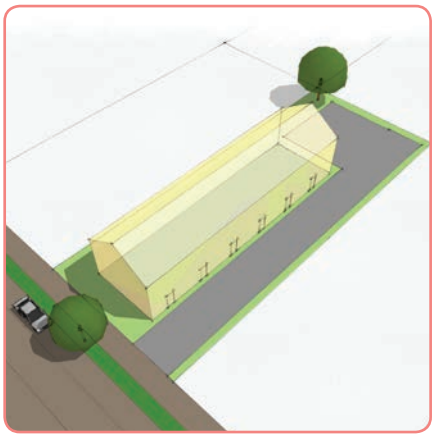
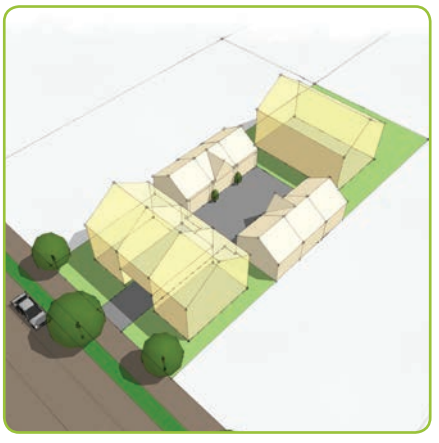
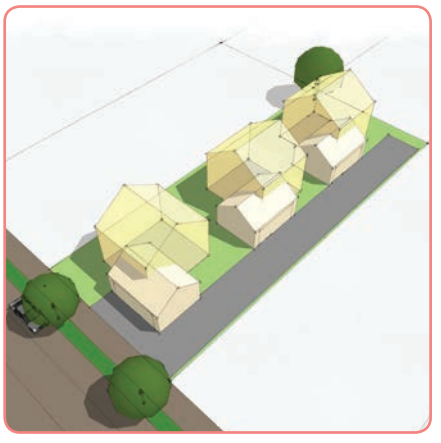
Cars are an essential part of modern life, and providing convenient access for them within housing layouts requires attention to spatial layout. Efficient designs for driveways and access paths can reduce the cost of housing, and make the spaces that cars have to use more attractive for other activities. Sharing and centralising access, and limiting individual driveways often makes more attractive arrangements.

effective parking strategies

Parking for urban housing should provide convenience, while not wasting space for other activities. Grouping parking and garages can be far more effective than using integral garages. In many cases, garaging and parking should be broken up into smaller groups and finished with attractive planting and materials, to reduce the dominance of garage doors and hard surfaces. Using several types of garaging can make the most of space on a site - standalone, tucked-under and integrated.

private spaces

Private outdoor spaces should be located away from public interfaces wherever possible, at the side or rear of homes. If this is a shady orientation then the front garden should provide an additional sitting out area, in a place which offers positive interaction with neighbours. Where private space needs to be near the street, hedges, shrubs and moveable screens should be used to provide balanced privacy. It the street is busy then single-aspect apartments should not be used on the ground floor frontage.

good practice	poor practice
	
	
	

housetype variety

mixing house sizes and types

Urban housing sites are often constrained in size. Having a mix of house types and sizes on a single site can bring many benefits. These include the opportunity to make best use of spaces such as corners and improving the attraction of the site to different residents.

Combining a mix of housetypes on a site works best when the dimensions and forms of the housetypes are thought about carefully. Varying housetypes will sometimes be joined together, in which case they should be of a similar depth. In other situations the use of housetypes with different depths creates visual interest and individuality.

repetition versus interest

Achieving visual interest is particularly important with terraced houses and apartment blocks, where the repetition of similar housetypes can be oppressive and unattractive.

This can be avoided in some cases by mixing housetypes to create different contrasts and emphases between housetypes. In other cases it may be best to use the same housetype throughout and introduce interest using another technique.

Many terraced houses and apartments around the world have employed features such as bay windows on the main front elevation. These elements are intended to create more interesting internal spaces and encourage residents to personalise the building with objects and decorations. The features should themselves be designed to create real visual interest.

flexible housetypes

The use of features such as bay windows and balconies can be considered as a customisation of a housetype, where elements are added to the core of the design. A further important technique for urban housing is the flexible design. This can relate to both flexibility for users to modify spaces over time - for example, using full-span structural floors in houses so that internal partitions can be moved or removed.

A core housetype design should anticipate flexible location of some key elements. The location of an entrance door, and the shape of rooms in location to their windows should be designed to be flexible in all terraced house designs. This enables the same core housetype to be varied for houses that are on the end of a row, and even for the house layout to be turned through 900 where this may help the site plan and flow of spaces.

housetypes to suit all situations

The use of flexible housetypes helps to achieve a varied range of building formations on different sites, and when the location of a building may need to respond to different neighbouring conditions. However, some conditions will need housetypes designed specifically for key locations.

Corner-turning houses, corner apartments, over-garage units and mews / laneway houses are essential options for creating good site layouts with varied housing arrangements.

The variations of orientation and street conditions also requires internal room layouts to respond to the location of a site. Housetypes such as terraced houses should be designed to provide varying internal layouts, so key areas such as ground floor street frontages and flow out to private garden areas can be varied. In some cases the living space should be located at the front of a house, and in other cases it may be more appropriate to have a kitchen or dining space overlooking the street.

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