



EAST AYRSHIRE COUNCIL

Local Development Plan 2

Knockroon Design Code

Non-statutory Planning Guidance

2024

Knockroon Design Code



The Prince's Foundation
FOR THE BUILT ENVIRONMENT

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1.0 Introduction

1.1 Vision

Knockroon will be both familiar and distinctive; familiar in that the architecture will draw upon the finest precedents of urban design and architecture in East Ayrshire and the West of Scotland; distinctive because of the level of care and attention to detail in the design of both the buildings and public spaces. These factors combined will create a beautiful place. Knockroon will be an exemplar of design quality and sustainable development for East Ayrshire, Scotland and beyond in terms of urban extensions or new neighbourhoods.

The masterplan for the neighbourhood extension of Knockroon and supporting key strategies relating to issues such as landscape, land use and massing, were generated from a comprehensive Enquiry by Design (EbD) collaborative planning process involving residents, community groups, local businesses, and local authority members and officers. A careful study of the region's history, architectural and urban traditions as well as present needs and conditions was also produced from this process. An intensive effort to marry local intelligence to international expertise resulted in the creation of the masterplan. A blueprint for the new neighbourhood which can be elaborated upon and taken forward through to the development phase. At the EbD, various principles concerning architectural character, massing, materials and landscape treatment, as well as treatment of urban design, street layout, accessibility issues and sustainable features were drawn out and tested by the design team. These findings have been collated in the Knockroon Design Code.

The Code should be read in conjunction with the masterplan, regulating plan and other plans and key strategies contained in the Knockroon Masterplan Report and Design Statement, submitted with the outline planning application. These plans and strategies provide the context for the detailed instructions within the design code.

It was not intended for the masterplan and associated strategies to provide fixed solutions but instead to establish a clear and resolute overall vision for future development that is also flexible enough to accommodate changing economic, social and environmental considerations

over the long-term course of the development, given the difficulties associated with attempting to predict the future. The plans and strategies provide an adaptable framework that is based upon the time-tested principles of design and community building yet also incorporate the best of contemporary thinking and technology, especially with respect to ecology and commerce. The evolution of Knockroon will be an iterative process, with lessons learned incorporated into the designing and construction of future phases of Knockroon. There may be subtle changes to the original plans over time but key components of the original vision such as layout of streets, mix of uses and the public realm will remain constant.

Key features, Details and Typologies

Knockroon will have different character areas focused around a neighbourhood civic and commercial centre at Adam Square. Each character area takes precedent from attractive places across the West of Scotland.

Adam Square

The market square, named as Adam Square after the Adam brothers who designed Dumfries House, is the primary neighbourhood centre for Knockroon, whilst being a secondary centre to those in Auchinleck and Cumnock. Its form takes precedent from the traditional Scottish tollbooth market square where the tollbooth sits within the square, whilst being connected to its adjacent building by a pend.

The tollbooth building sitting within Adam Square is a public building, which may be used for a variety of events and functions, including a café and a waiting area for buses. This will ensure that constant activity will be generated within the square, thus creating a lively atmosphere.

The square will be formed by buildings, predominantly two to three storeys in height, designed to accommodate changes of use, so that housing may be transformed into shops and offices organically as demand requires over the course of time.

The masterplan incorporates precedents from the immediate areas. Examples are described in the following section.

Introduction

Town edge towards main road (image 1)

The road facing Auchinleck is composed of a terrace 1½–2 story housing forming a defined edge to the town and based on a precedent in Lanark.

Town edge facing the countryside (image 2 and 3)

This road condition is very informal, with a pavement only found on the side of the road where the houses exist. Large detached houses front the countryside, although this architectural typology can be divided into flats. Precedent is drawn from Mauchline.

Town Edge facing the countryside and along Main road (image 4)

This road condition contains larger houses and is based on typologies at the edge of Mauchline. Houses are set back from the road and have boundary treatments such as stone walls and fences which define plot edges, ensuring a clear division between public and private space.

Internal Streets (image 5)

These areas are characterised by rather large 2–2½ storey detached houses, with relatively small setbacks or rows of terraced houses. Boundary treatments tend to be stone walls, fences and/or hedges which define plot edges, ensuring a clear division between public and private space whilst also working in harmony with the architecture of the buildings. Precedent is again taken from areas within Mauchline.

Core area housing (image 6)

These areas of housing are more urban, with minimal setbacks and predominantly 2–2½ storey terrace housing. This housing is more appropriate to higher net density areas closer to the civic core of the neighbourhood.

Park Edge (images 7 and 9)

The edge condition at the greens in the north west and north east areas of Knockroon take precedent from housing at park edges found at both Maybole (refer to images 9, 9a and 9b opposite) and Sanford, near Strathaven. These both form well defined and clear edges to the proposed green spaces, working with proportions and the landscape to present attractive streetscapes.

Auchinleck Road (image 8)

The character of this area is largely urban, with relatively high densities for a small town, edged by two to three storey buildings creating appropriate proportions of space. This adds to the sense of arrival within an area of character

and with an attractive streetscape. It is a mixed-use area, with terraced housing and possibly apartment blocks, with commercial uses at the ground floor. Shops and flats open directly onto the pavement at the front of block. The image is taken from Eaglesham.

1.2 Code instructions

What is a design code?

Design Codes are a distinct method of detailed design guidance that have been used successfully by generations of planners, architects and builders dating back centuries to deliver some of the most beautiful and enduring communities nationally and internationally. A design code can be described as a document containing a set of rules for the design of a new development, prescribing its three dimensional components. Design codes are both a process and document, a mechanism which operationalise design guidelines or standards which have been established through a masterplan process. The design code is the regulatory document that ensures the aspirations and visions that emerged out of the EbD engagement process are delivered through development. The Code will ensure that the architecture, urban design, organisation of the public space and the greenery within the neighbourhood is distinctive. It ensures that not every house is identical to all the others, but that individual homes and groupings of other uses and buildings can be identified as a part of coherent whole.

Application

This Code should be used by planners, urban designers and architects when designing Knockroon, with the potential to extend the influence of this document to other developments as determined appropriate by East Ayrshire Council and through the appropriate planning protocol. The code will work most successfully when designers balance an understanding of the mandatory elements with the indicative or suggestive elements. The code comprises both mandatory and suggestive elements and are differentiated by the instruction.

When the word **'shall'** is used in this code, it implies compulsory action.

When the word **'should'** is used, the solution is strongly advised.

When the word **'may'** is used the solution should be considered.

Introduction



2.0 The Urban 'Ingredients'

2.1 Walls, railings, fences and hedges

Formal

1

Walls



Railings / Fences



2



3



Informal

4



Hedges



Dimensions

Boundary walls between private gardens and thoroughfares shall be between the 1.6m - 2.1m high.

Garden gate and pergola piers shall be at least 450mm wide.

Materials

Boundary walls intended to be used for privacy shall be formed from natural stone or wetdash finish.

For formal front gardens

Boundary walls intended to demarcate a boundary between a public highway and a private garden shall be formed from a stone base, and should have the addition of a metal railing and /or hedging above if the garden is formal. Hedges shall be uniform colour and species.

For front gardens at the edge of the settlement

Picket fencing may be permitted on boundaries in this location.

Within domestic back gardens

Timber palisade fencing may only be used between back domestic gardens. Timber palisade fencing shall be no less than 1650mm high and of vertically lapped 175x25mm feather edged boards on timber posts, with three horizontal rails. Woven wooden panel fencing is not permitted.

Open stock proof fencing, 1200mm high and of three rails on timber posts, shall be used at the edges of farmland.

Gates

Garden gates shall be built from painted timber, painted mild steel or wrought iron. All garden gate designs to be approved by PFBE.

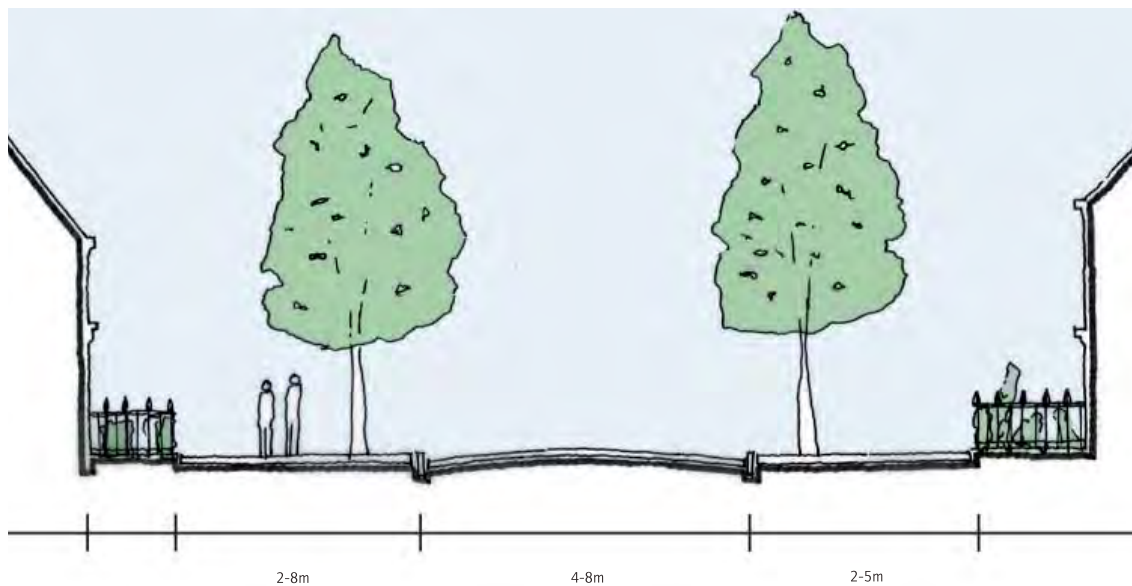
Garden gate and pergola piers shall have a natural stone or wetdash finish.

Capping

Masonry and wet dashed walls shall be capped with a natural stone coping.

The Urban 'Ingredients'

2.2 Trees



1



2



3



4



5



8



9



10



11



12

The Urban 'Ingredients'

On Streets

Species

The preference is for fastigate species to minimise future maintenance concerns.

Species 8-14 below shall be planted on streets.

Setting out

The trunks of the trees within pavements shall be no closer than 900mm from the back of the road kerb. The location of trees within parking bays / low speed lanes shall be agreed with the Senior Arboricultural Officer.

Tree pits shall include a drainage layer, watering tube (accessed at ground level) and backfilled with 'Urban Tree Soil' or other approved by the Local Authority landscape consultant. Above tree protection will be permitted at specific locations (eg parking areas). All tree planting shall be carried out in accordance with best practice guidance.

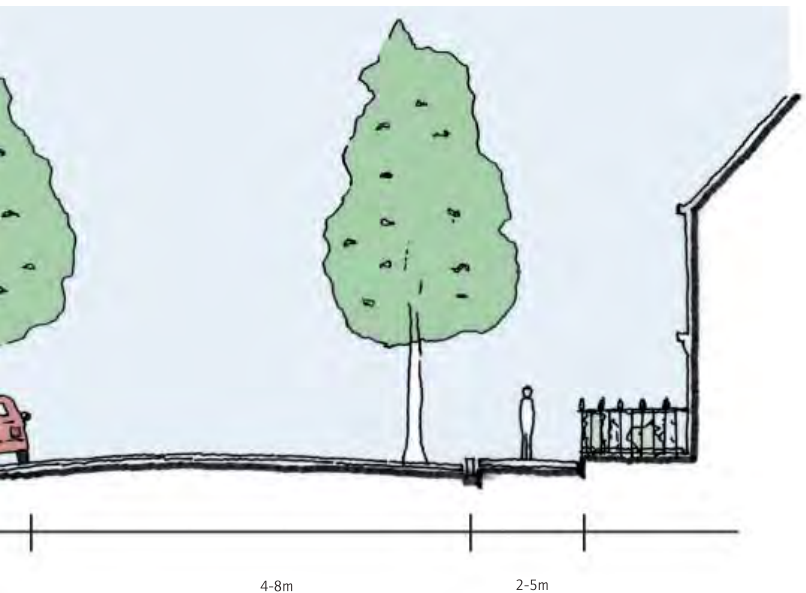
Surface treatments

Appropriate surface treatments around street trees shall be either:

- Tree grilles (stone or metal, only in Adam Square and the primary street)
- Arboresin porous asphaltic tree surround colour to suite, on raised stone surround detail at tree base (Greenleaf or other approved supplier)
- Resin bonded gravel on secondary and tertiary routes
- Stone paving (associated with surrounding surface treatment)

Tree pits shall have rooting zones no less than 4 cubic meters (2m x 2m x 1m or equivalent) unless agreed otherwise with the Local Authority landscape consultant.

Tree pits within 5m of a utility corridor will include a root barrier to prevent conflict with the service corridor.



6



7



13



14

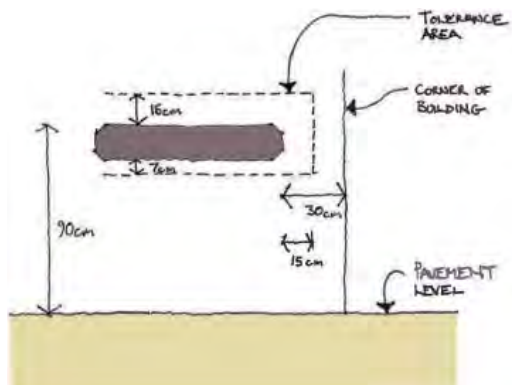
- 1 Honey locust (*Gleditsia triacanthos inermis*)
- 2 Black locust (*Rubinia pseudo-acacia*)
- 3 Norway Maple (*Acer platanoides*)
- 4 Beech (*Fagus sylvatica*)
- 5 Silver Birch (*Betula pendula*)
- 6 Scotch (Wych) Elm (*Ulmus carpinifolia*)
- 7 Plane Tree (*Platanus* spp.)

- 8 Rowan (*Sorbus*)
- 9 Hornbeam (*Carpinus betulus*)
- 10 Whitebeam (*Sorbus aria*)
- 11 Birch (*Betula* species)
- 12 Italian Alder
- 13 Alder
- 14 Wych Elm (*Ulmus glabra*)

The Urban 'Ingredients'

2.3 Signage and shopfronts

Street signs

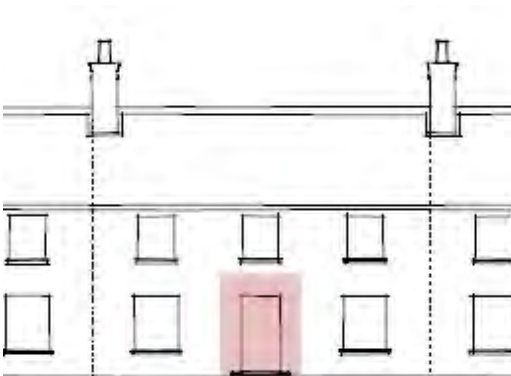


Shopfronts



The Urban 'Ingredients'

Home name and number



Home name and number and position

Home names and numbers shall be kept within the front door 'frame'.

A home name or number may be sign written, or formed from lettering in cast metal.

Lettering style

Lettering styles may vary. Typical examples may include:

- Baskerville
- Trajan Roman Capitals
- Rockwell expanded
- Bembo italics
- Perpetua capitals and lower case
- Garamond capitals

Size

Letters shall be a maximum of 8cm high. The total area of the house name or number shall not exceed 900 sq cm.

Street names

The typeface for street names shall be Baskerville, and shall be 4 cm high.

Street signs shall be 90cm above pavement level, and the distance from the corner of the building is 30cm, Tolerances, as illustrated in the diagram opposite are permitted to accommodate irregularities in wall surfaces.

If a corner has a street sign on each of its walls, then these signs shall be set out at an equal height and width from the corner.

Shop fronts

Shop fronts shall be constructed from a palette of materials consisting of wood, cast iron and cast aluminium (the latter to be used above the plinth). The fascia should not visually divide the facade in half. There shall be space between each end of the fascia and the party walls. The front door, window and fascia should form a composition, where the front door is part of the shop front window, but may be stepped back.

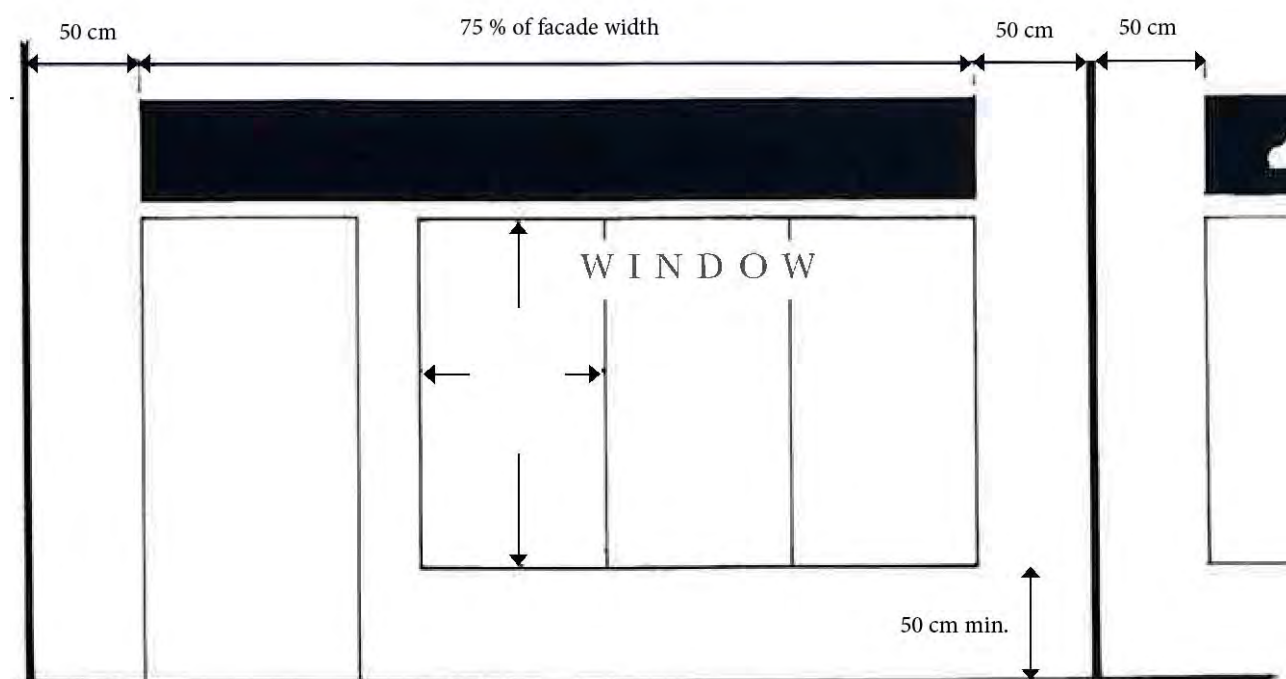
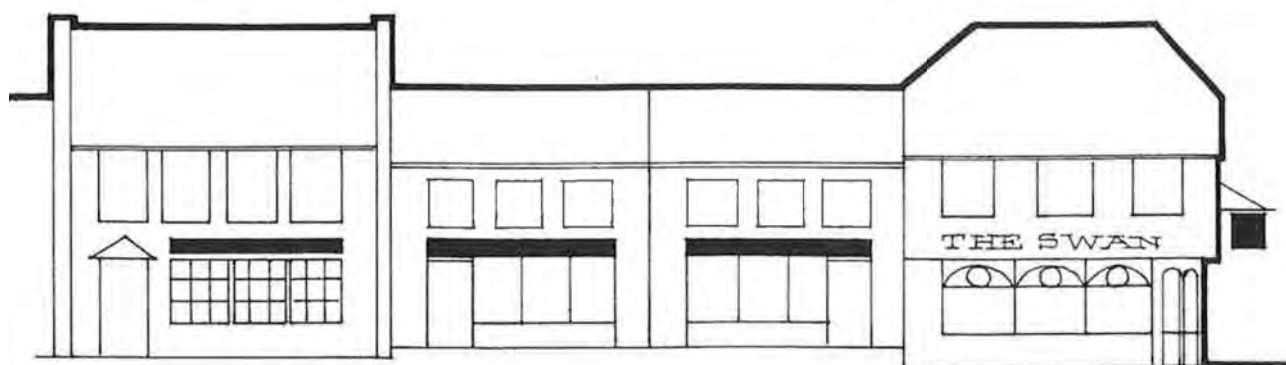
Commercial fascias shall be proportionally 1:8 with the height of the shop front. Fascias should preferably incline at 10 degrees from the vertical towards the street.

Shop awnings shall be constructed from canvas on a retractable frame with a blind box fitted as an integral part of the shop front design.

The Urban 'Ingredients'

Signage and shopfronts (...continued)

Shopfronts



The Urban 'Ingredients'

Lettering on external walls of any premises

Height from ground to top edge of letters or fascia panel should not normally exceed 2.5m.

Fascia panels or applied letters of business name

Length should not exceed 75% of the width of the building. Fascia panels or applied letters should not come closer to the sides of any facade than 50cm.

Lettering

Maximum capital letter height 18cm.

Hanging Signs

Height from ground to top edge of sign should not normally exceed 3.3m extending 75cm maximum wall to front edge. Capable of being contained in a square 75cm x 75cm.

Lighting

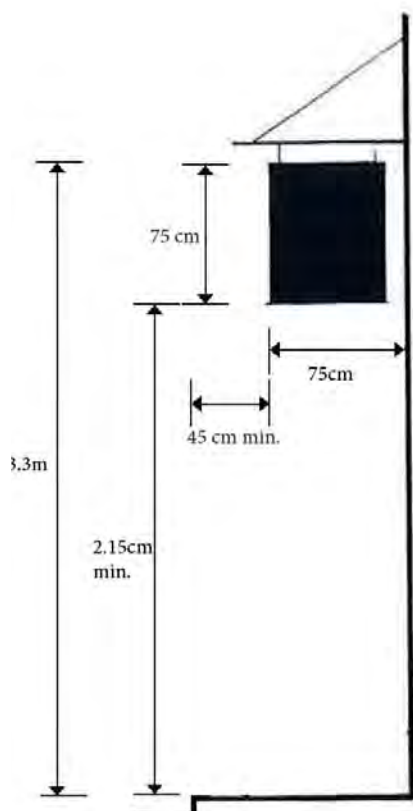
Lettering must be externally illuminated.

Glazing

Maximum area for any single pane of glass shall be 2.0 sq m.

Stall risers

Stall risers shall have a minimum height of 50cm.



The Urban 'Ingredients'

2.4 Street furniture

Lighting



Lighting



The Urban 'Ingredients'

Street furniture



Adam Square and Main Street

Street furniture shall be used sparingly, to avoid a 'cluttered' public realm.

Lights

The following light fittings are permitted:

- Wall mounted heritage style light fittings on heritage style brackets
- Facade luminaires that are visually unobtrusive
- In ground luminaires in the square, used to highlight the community building
- In ground luminaires shall be flush with ground level

Secondary Streets

The following light fittings are permitted:

- Wall mounted Heritage Light fittings on heritage style brackets (see photos adjacent)
- Heritage style external wall mounted lamps to be positioned within the front door 'frame'

Back of Blocks

Primary lanterns shall be heritage styled and may be either wall mounted or fixed to a tapered lighting columns. These will be adopted by the Council.

Heritage style external wall mounted lamps shall be no higher than door 'frame'. These will be domestic private lights not adopted by the Council.

Bins

Bins shall have recycling compartments and shall be of a traditional design, equal or approved to Broxap's "Derby Quad Recycling Unit".

Benches

Benches shall be of a traditional design. The bench's cast iron shall be finished in black gloss paint.

Bollards

The use of bollards will be minimised and used only in exceptional circumstances.

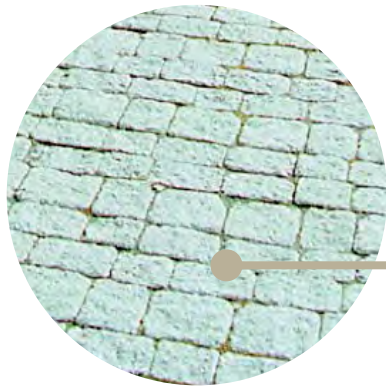
Tree grilles

Tree grilles shall be cast iron, finished with gloss black paint, equal or approved to Broxhap's 'Calais'. Gravel infill to surface level.

The Urban 'Ingredients'

2.5 Thoroughfare finishes

Footpaths



The Urban 'Ingredients'

Shared surface in Back of Blocks



Shared surface Adam Square



Carriageways

All carriageways shall be finished with Hot rolled Asphalt or other appropriate surface treatment to be agreed with the Council as Roads Authority and The Prince's Foundation for the Built Environment.

255x205mm conservation kerb, or equal and approved, may be used as an intermediate material between the carriageway and footway. Footway upstand shall be 100mm with 25mm at vehicular access points.

Footways

Either:

Footways shall be finished with 100x100mm, 100x150mm, and 150x150mm concrete block conservation setts, and laid in random course, except at the footway edges, at which there should be 2 stretcher courses of 100x100mm setts.

Footway detail at shared surface and tertiary route junctions shall utilise raised platforms with contiguous footway surfacing and conservation setts to indicate changed priorities.

Footways may be formed from Macadam bound river aggregate with wearing course sandblasted to expose aggregate. Alternatively to achieve the desired finish use river washed aggregate clear bonded and rolled into hot rolled asphalt.

Shared surfaces

Shared surfaces in courtyards to be finished using footway techniques with alternative aggregates to be approved.

100x100mm, 100x150mm, and 150x150mm concrete block conservation setts, or equal and approved may be used to delineate vehicular movement.

Back of blocks

Utility routing shall be located in predominantly back of block adopted shared surfaces, positioned in ducting as agreed with affected utility companies.

Road drainage shall be by trapped road gullies in channels connected to SUDS system.

Shared surface run off shall utilise site perimeter swale to transmit water to the SUDS pond. Underground pipework shall convey surface water collected in trapped gullies to the swale from constrained areas. Conservation kerbing shall form drainage channels as required.

The Urban 'Ingredients'

2.6 Block types

Block design

Perimeter blocks shall be formed from plots that either back onto other plots or back onto a courtyard or alley, and should not exceed circa 100m in length or breadth.

Access

All residential units within the block shall have rear access to the parking courtyard or alley, apart from back to back plots forming a block.

Courtyard blocks may be secured with gates accessible only to residents of the block.

Access to the courtyard or alleys shall be arched or beamed over with appropriate gate pillars where suited to building type. The width of all rear block access ways shall be minimised and agreed with The Prince's Foundation for the Built Environment.

Apartment buildings within the block shall have dual access allowing all apartments access to the communal facilities within the courtyard or the alley.

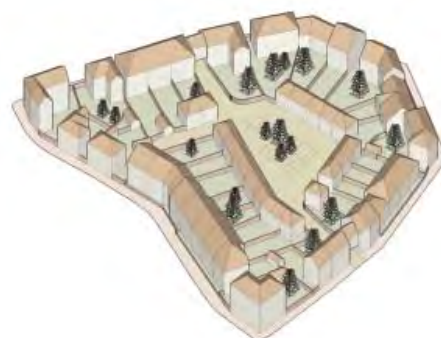
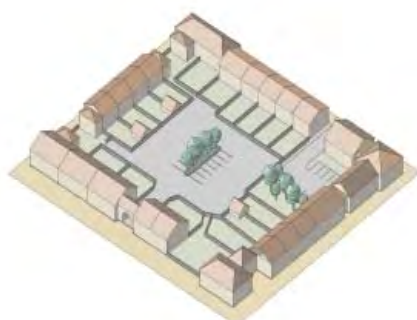
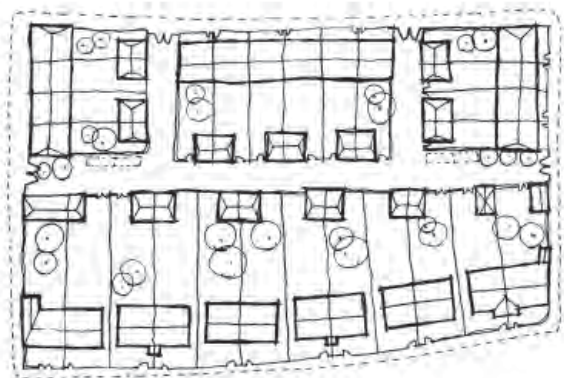
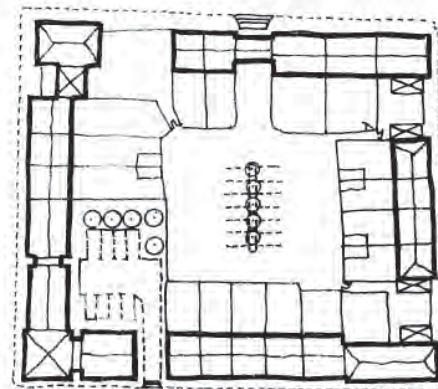
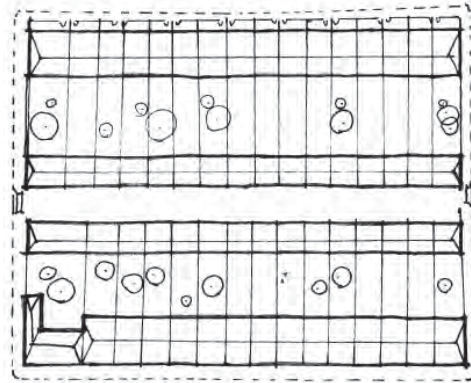
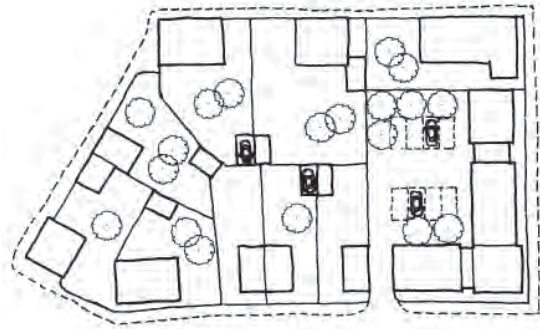
All residential units within the perimeter block shall have direct access from the surrounding streets, apart from residential units above shops, which may be accessed from back courtyards. Access to ground floor apartments shall be directly from the surrounding streets. Upper floors shall be accessed through shared entrances directly from the street and courtyard.

Parking

Residents' parking shall be located within the courtyard, or in garages or hardstanding surfaces in private plots.

A maximum of 2.5 parking spaces per dwelling shall be provided. One space for use by residents shall be provided within the secured courtyard, or within the boundaries.

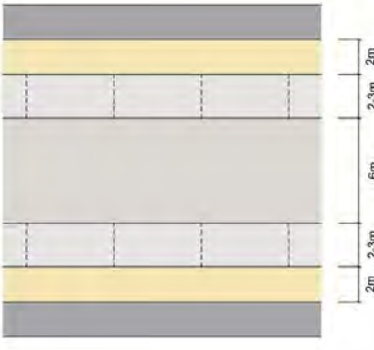
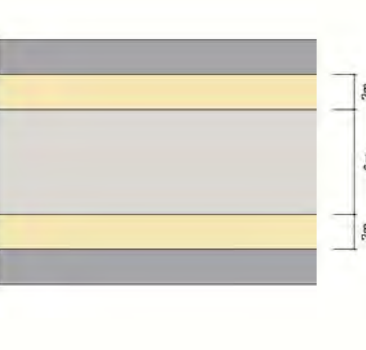
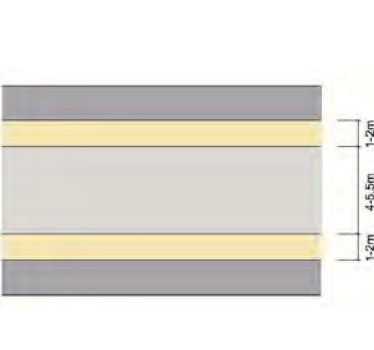
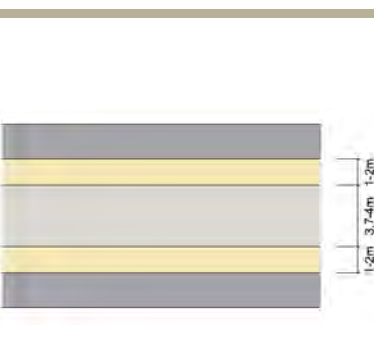
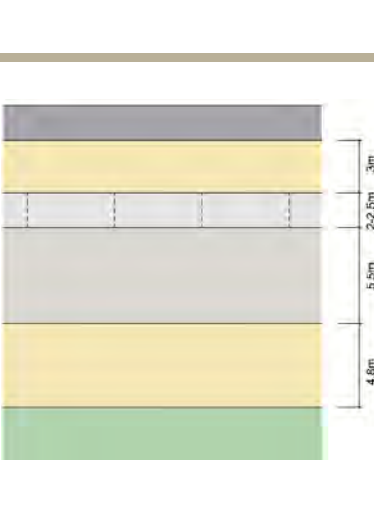
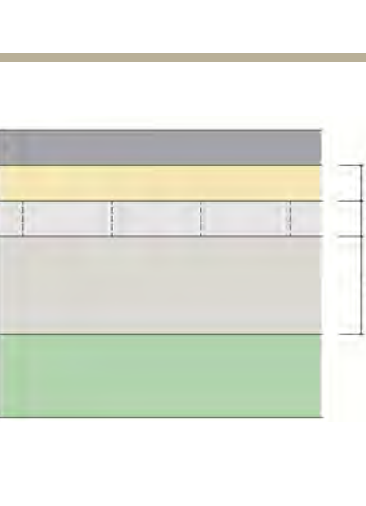
At least 1 secured cycle parking space shall be provided per dwelling unit. Garages shall be designed to accommodate a vehicle and cycle parking.



The Urban 'Ingredients'

2.7 Public thoroughfares

Illustrations provided are indicative and are shown to establish matters of principle in relation to thoroughfares. Street widths will be varied throughout the development as appropriate at the detailed design stage.

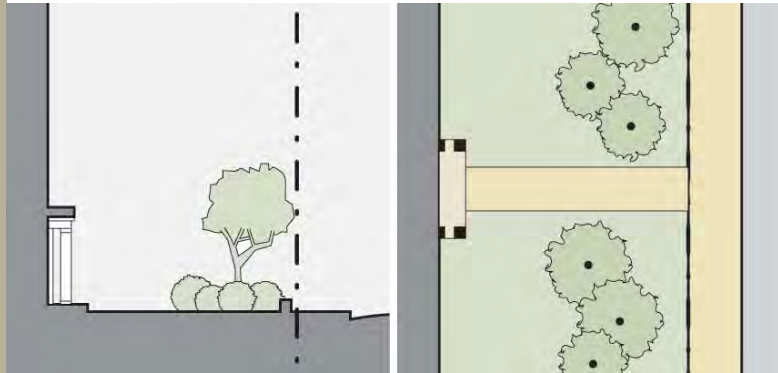
		<p>Principle Streets</p>
		<p>Secondary Streets</p>
		<p>Tertiary Streets</p>
		<p>Streets into open spaces</p>

The Urban 'Ingredients'

2.8 Private frontage types

Front Garden

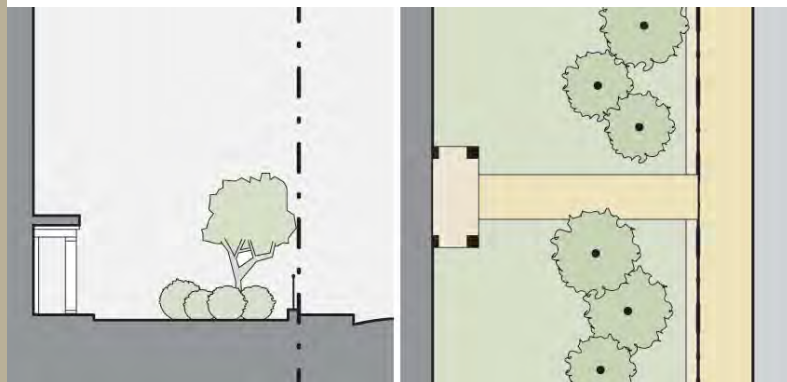
A generous front garden shall be situated between the plot line and the building edge. The garden shall be delineated by a garden wall of between 450-1100mm and have substantial gate posts to individual or paired properties at least 300mm above the height of the garden wall. The front garden (or slip lane where required) for mansion blocks or substantial terraces should have a depth of between 5-14m. Walls should be generally stone and render or mixed. Planting along the property line is encouraged but shrubs shall not reach a height greater than 1500mm.



1

Fenced Front Garden

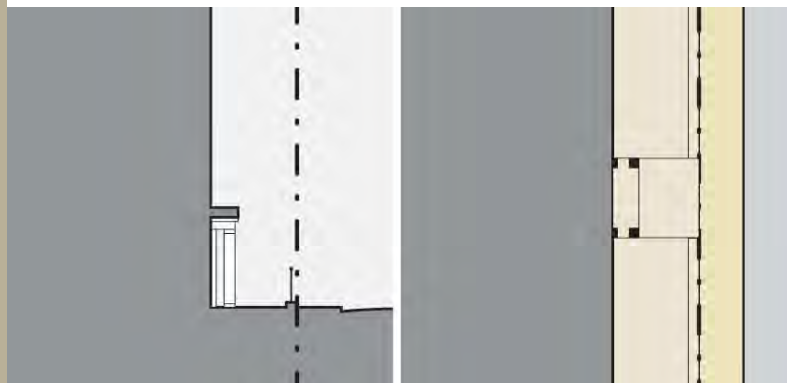
Bay windows or porches may protrude into the garden. A boundary railing or wall of stone or render shall be between 1100 -1500mm (with 300mm stone or render plinth optional) shall maintain the demarcation of the private garden (or communal garden where a slip road is required as above) with planting on the plot boundary line to reinforce it. The fenced front garden should have a depth of between 4-14m.



2

Fenced Front Strip

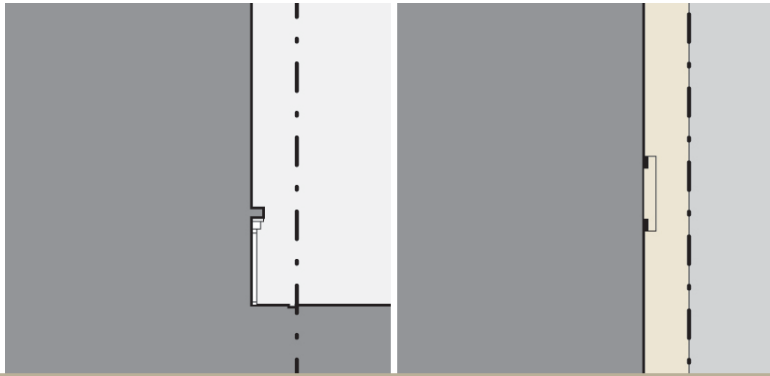
The plot line shall be delineated by a railing or wall 1100mm high. The finished ground floor level of the building should be elevated to provide a level of privacy for building occupiers. The entrance may be a stair / ramp or landing. The fenced front strip should have a depth of between 1.5 - 4m. The front strip may be planted but no higher than the 1100mm boundary.



3

The Urban 'Ingredients'

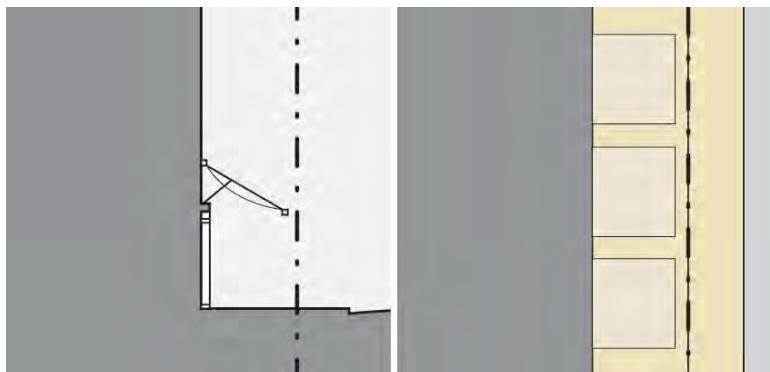
4



Front Strip

A narrow strip of land shall separate the building edge from the plotline and there shall be no fence but a slight level change is encouraged. The finished ground floor level shall be accessible from pavement level. The front strip should have a depth of between 0.6 - 1m and be either delineated from the pavement by using higher quality materials or planted with low shrubs or climbers.

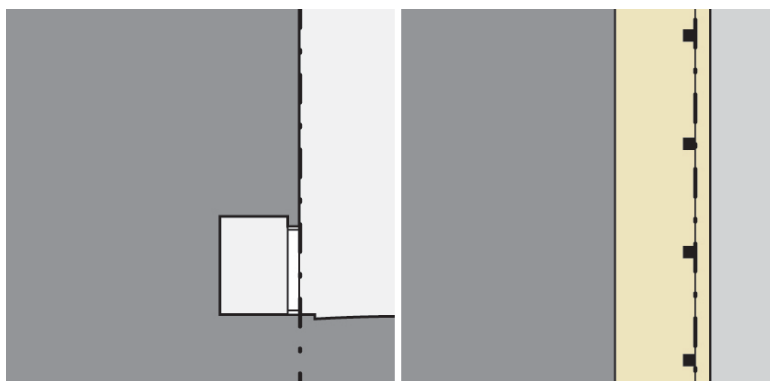
5



Shopfront and Awning

The building line shall be situated 0 - 1.5m from the plot line with the building entrance at the pavement level, and shall be used primarily for retail. There shall be substantial glazing at ground level and there shall be an awning, with a minimum clearance of 2.3m from footway level, which may overlap the pavement potentially to the plot line. The awning should have a depth of between 1.5 - 3m.

6

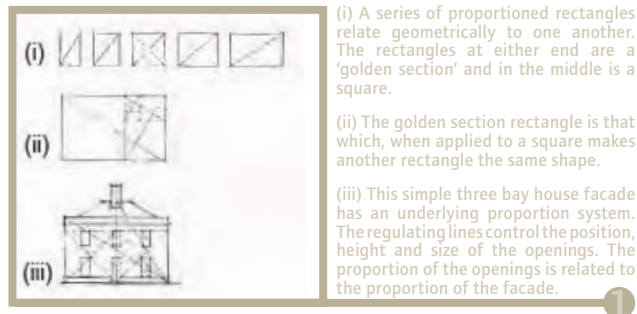


Arcade

The arcade shall be open and accessible to pedestrians. The building line shall sit along the plot line. The arcade shall be 2 - 6m deep. This type shall be used primarily for mix-use buildings. The building may rise directly above the columns or be set back to rise from the building frontage line at ground floor level.

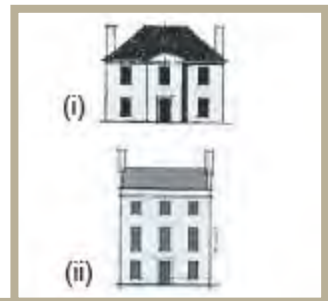
3.0 The Architectural 'Ingredients'

3.1 Building character and materials

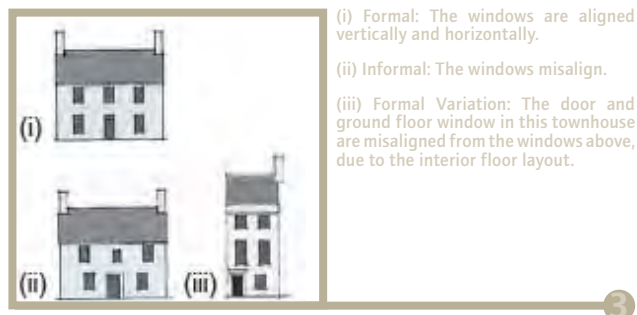


Proportion

- (i) The front door is emphasised by its central location and by the small pediment.
- (ii) The first floor, which contains the living room and principal accommodation, traditionally therefore called the 'piano noble', is emphasised with the tall ceiling height and windows.

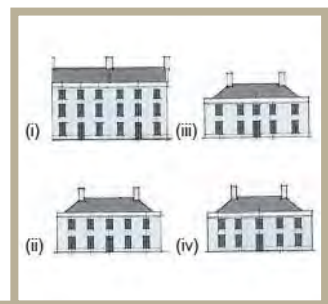


Hierarchy

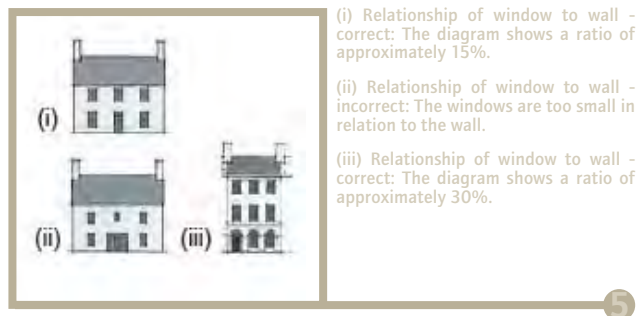


Uniformity of openings

- (i) Regular Openings: Regular openings on three bay terraced houses.
- (ii) Regular Openings: The openings on this five bay facade are equally spaced.
- (iii) Variation - inflection: The centre is emphasised.
- (iv) Variation - deflection: The wings are emphasised.

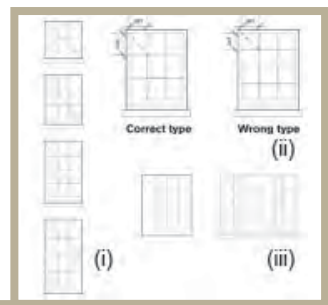


Regular spacing of openings



Relationship of window to wall

- (i) Proportion of openings from square to double square: The windows also reflect a hierarchy of ceiling height and importance within the facade.
- (ii) Pane proportion: Panes are always taller than they are wide.
- (iii) Variation - Wider openings: Wider windows can either have an extra pane width, or for very wide openings, must be a tripartite arrangement with central sash and sidelights. Sidelights and central panes must match in size.



Proportion of openings

Building Character: Formal

1. Proportion

Designers should demonstrate the underlying proportioning system of the composition based on squares and parts of squares.

Systems of geometric proportion underlie much of formal design. Proportion is simply a system of relating each part to its neighbour and to the whole, with a shared series of common shapes and relationships. Most elegant proportions are based on squares and parts of squares (double square,

routes 2, 3 & 5 or golden mean are good rules of thumb for openings and pane ratios).

2. Hierarchy

Designs should demonstrate a sense of logical 'hierarchy' within buildings.

Ceiling heights increase:

- In the most prominent floor
- In more important/larger building types

Hierarchy is a system of grading the importance of each part of a building relative to another part. Hierarchy is imparted both by composition (i.e. placing a door in the centre of a symmetrical building) and by use of enrichment.

3. Uniformity of openings

Openings should align both vertically and horizontally in a formally composed façade.

Aligned openings are a characteristic of formal design.

Variation: Smaller townhouses often show misalignments between ground and first floor windows reflecting internal staircase/hall layouts.

4. Regular spacing of openings

Openings must be regularly spaced.

Variation: For more complex façades (5 bay, 7 bay or more), the device of inflection or deflection can be adopted to emphasise the centre or the wings

Regular spacing of openings is a characteristic of formal design, particularly in terraced architecture.

5. Relationship of window to wall

Windows should occupy no less than 15% and no more than 35% of main elevations.

Variation: Where designers want to vary these rules, either use a space such as a sunroom or solar lobby or a suitable architectural precedent, such as large bay window, in order to justify a meaningful variance.

On a regional and national scale, most formal architecture has a fairly consistent relationship between window/wall openings. Orientation, design of interior layouts and specific architectural style may dictate variations from the norm, but in all cases the size of openings must relate coherently to the wall to create a harmonious balance between solid and void.

6. Proportion of openings

Windows in formal buildings should be vertically proportioned, and never less than square.

Variation: If wide windows are desired in formal buildings then tripartite windows with sidelights (matching the proportion

of the central panes) must be used.

Window size should reflect a logical hierarchy within the façade as a whole.

Within each window, glazing bars must be designed to ensure that the larger panes are always taller than square.

Windows in formal buildings have a vertical 'portrait' emphasis. The principal floor, ground or first, typically has the largest windows, which diminish in size in upper storeys.

7. Degree of enrichment

Degree of enrichment should reflect local and regional precedent, with enrichment typically limited to string course, eaves cornice, door surround and parapet wall at eaves.

Classical orders or details where applied must be based on local or historic precedent.

Buildings are given more or less formality according to the degree of architectural enrichment used.

The range is from no enrichment to full application of the classical orders and a pediment, the characteristics of which shall reflect those in the region.

The building size and proportion do not change.

8. Materials

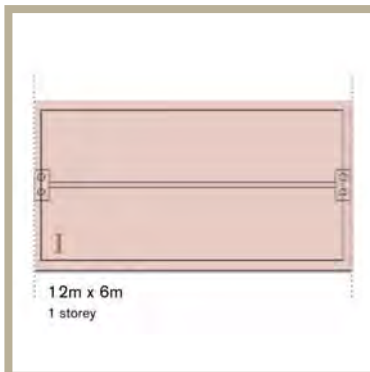
The following palette of materials are permitted:

Walls: principally colour washed wet dash harling with very limited use of local sandstone; limited use of sandstone door and window surrounds. Slate, sandstone or cast window sills (colour to match window surround if cast).

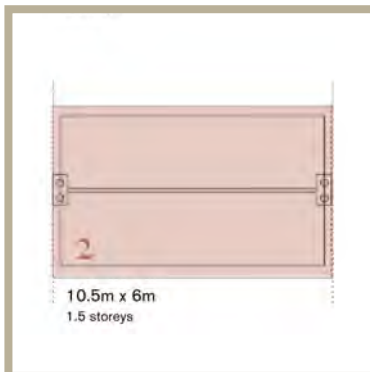
- Roofs: imported natural slate (ideally thicker rather than thinner), with varied use of red, black, buff, terracotta ridge tiles & lead mopstick ridge. Corrugated iron roofs to more humble building
- Painted timber doors and windows, generally coloured. Vertical timber boarding to some walls at rear
- Painted aluminium r/w goods; galvanised zinc r/w goods to some buildings at rear and to workshops

The Architectural 'Ingredients'

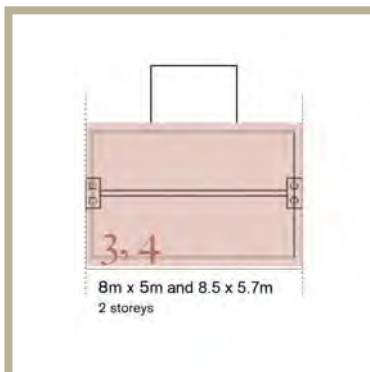
3.2 Building types



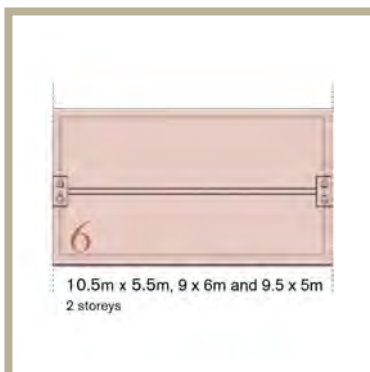
Wide front - 12 x 6m



Wide front - 10.5 x 6m

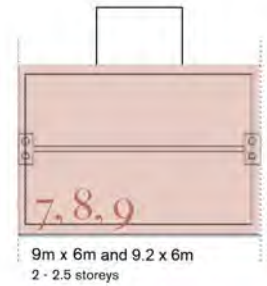


Wide fronts - 8.5 x 5m and 8.5 x 5.7m

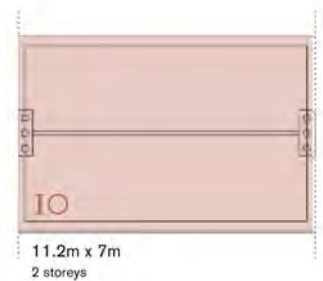


Wide fronts - 9 x 5m, 10.5 x 5.5m and 9 x 6m

The Architectural 'Ingredients'



Wide fronts - 9.2x6m



Wide fronts - 11.2x7m



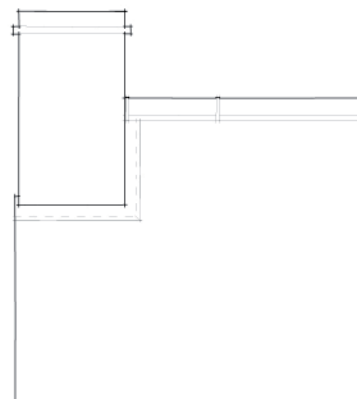
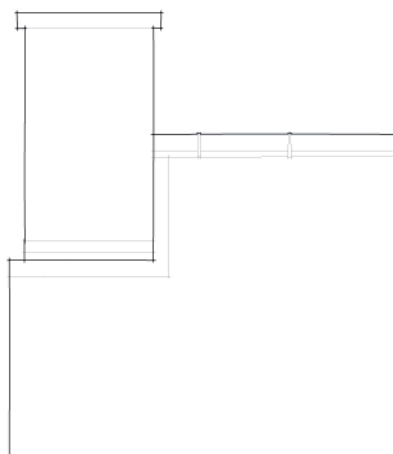
Narrow fronts - 5m x8.5m



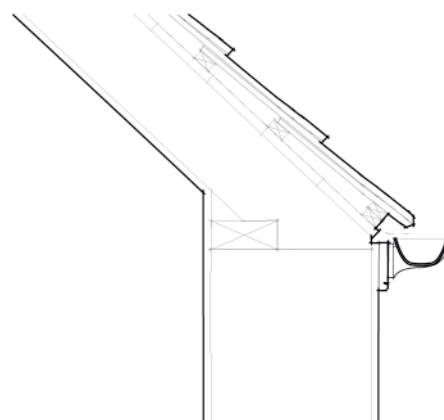
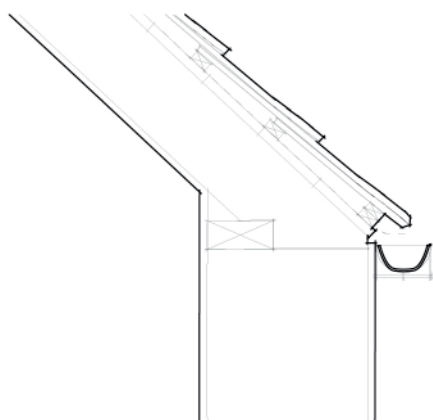
Narrow fronts - 6m x9.5m

The Architectural 'Ingredients'

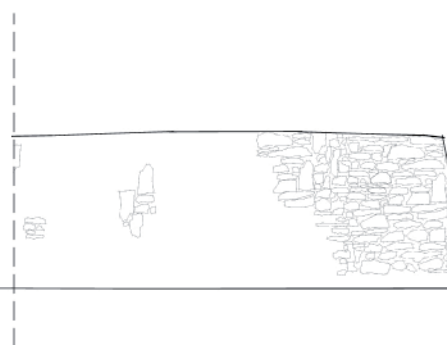
3.3 Details and critical profiles



Chimney Types

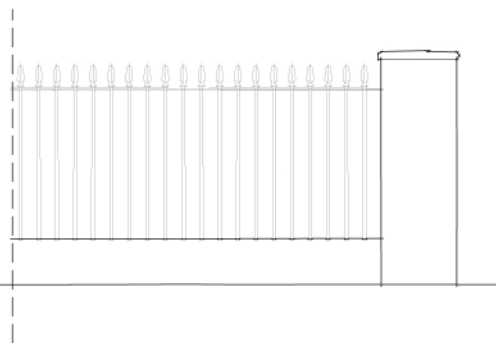
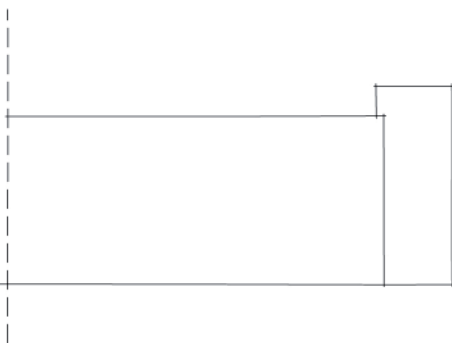
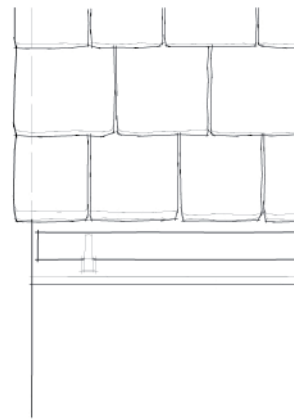
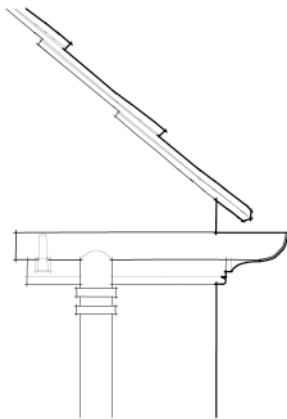
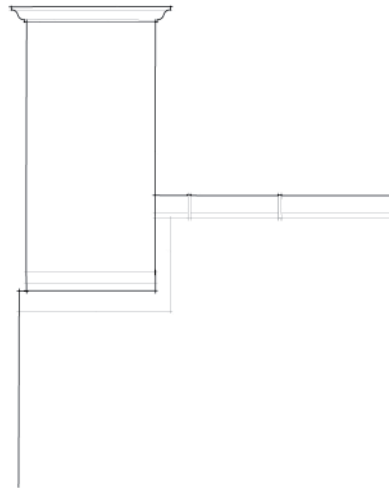
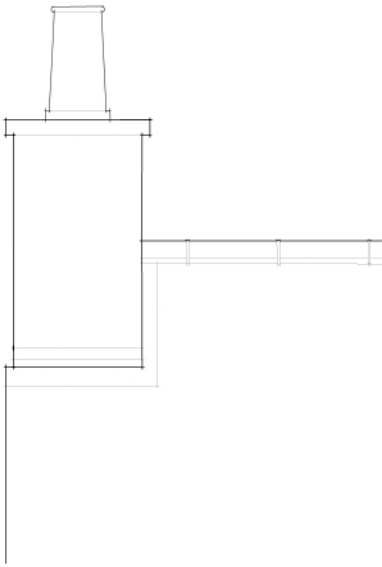


Eaves Types



Boundary Treatments

The Architectural 'Ingredients'

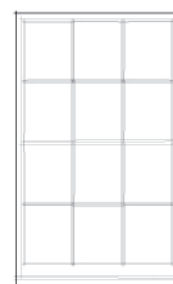
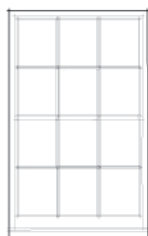
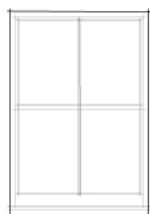


The Architectural 'Ingredients'

Details and critical profiles (...continued)



Dormer Window Types

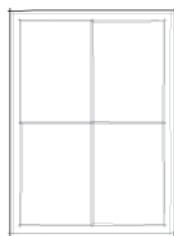
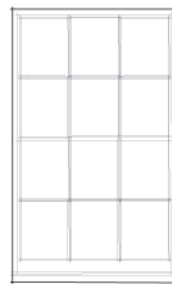
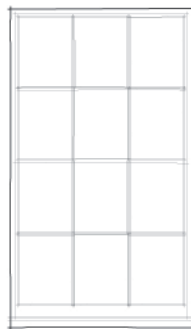
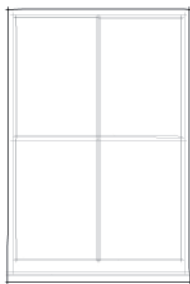
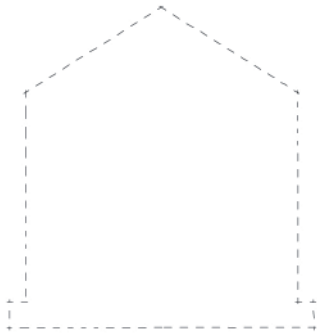


Traditional Sash and Case Window Types



Traditional Side Opening Casement Window Types

The Architectural 'Ingredients'

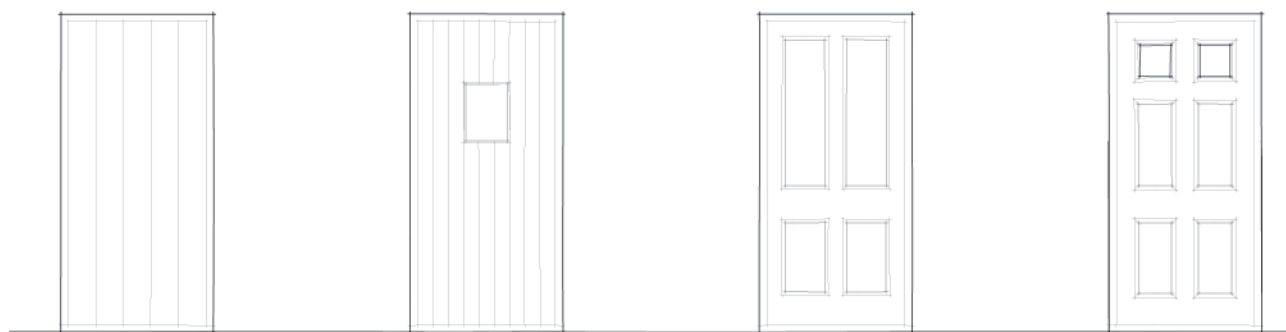


The Architectural 'Ingredients'

Details and critical profiles (...continued)

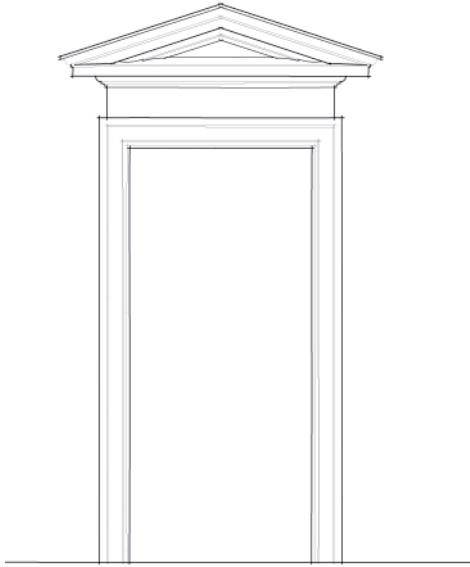


Door surrounds



Doors

The Architectural 'Ingredients'



The Architectural 'Ingredients'

3.4 Construction: Structure, sourcing materials

Construction technology will change through the project duration. Techniques should be derived to meet a range of parameters. These include the design and sustainability objectives of the code, financial viability in the housing market area, compatibility with local labour and supplies markets, site ground conditions, site topography and local climatic conditions. The following construction techniques should be employed.

Ground Floor

The ground floor should be designed as an insulated, reinforced concrete slab. This type of floor will allow the minimum height from finished ground to finished floor level to be achieved, as well as minimum ramped access and eliminates the need for sub floor ventilation. The overall effect will enhance the external view of the traditional fenestration.

External Walls

The external walls shall be formed using a traditional 'brick and block' cavity wall construction. From the outer face the construction will be 20mm wet dash render on 100mm dense concrete block, 50mm clear cavity, 75mm insulation on 100mm aerated concrete block with 12.5mm plasterboard on dabs on room face taped and filled for paint finish. In some instances the external leaf may be substituted by the use of natural stone. Traditional brick and block construction permits minimum vent insertion in the outer leaf, enhancing traditional aesthetics.

Clear cavity and rendered finish are suited to the local architectural character and have proven durability and weather proofing qualities.

A timber frame or composite timber inner leaf (SIPS) may be utilised if statutory requirements require a U value unattainable by cavity wall construction.

Mid Floor

The mid floor should be formed from timber.

Roof

Roof construction shall comprise a timber carcass made up of preformed roof trusses. This will be clad with sawn timber sarking, waterproof membrane and a slate finish. Vent, chimney and overflow penetrations shall have traditional finishes. Valleys and gutters shall be finished in lead.

Carcasses may be joiner built using a pole plate construction technique for roofs with complex forms or with several dormers.

Windows and Doors

Windows shall be manufactured from timber to fenestration details specified in this Code. Doors shall be made from timber. Composite doors may be used only in the instance where timber doors cannot provide durability and weather proofing. Doors shall be made in line with the door designs specified in this Code.

Chimneys

Each house shall have a working chimney that provides a Class 1 flue for wood burning appliances. Chimneys shall be constructed in line with the chimney designs specified in this Code.

Non operational chimneys may be used for flats and apartments.

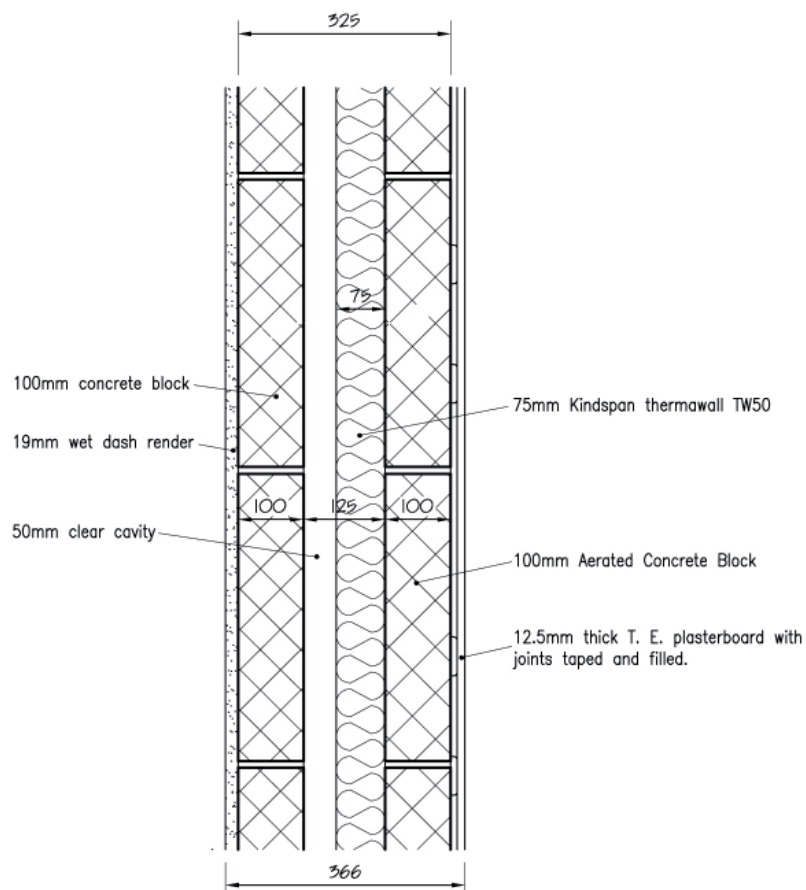
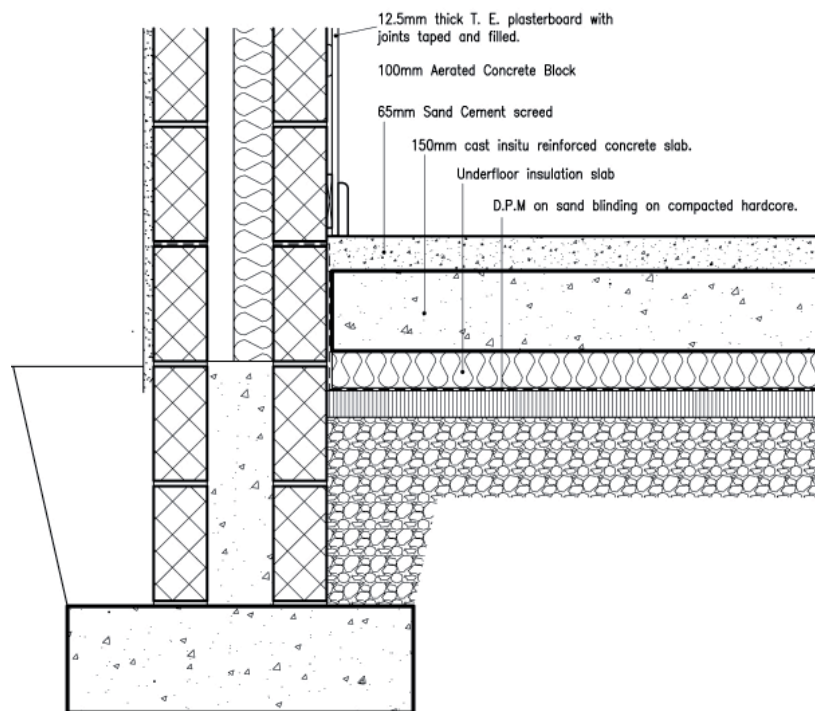
Supply of labour and materials

Local labour should be utilised where possible.

Local suppliers should be utilised where possible.

Opposite: Foundation and wall sections

The Architectural 'Ingredients'



4.0 Services

4.1 - 4.4 Utilities, communications, waste, renewable energy

The following shall be included in all homes:

- Water butts to collect rainwater for garden irrigation
- Aerated showers and taps
- Dual flush toilets
- Compost bin in each garden
- Recycling bins in kitchens
- Good natural daylighting and ventilation
- Dedicated low energy lighting installed throughout
- Display energy meter
- South-facing roofs to be wired for, but not with, solar PV; home generation ready
- Enhanced building envelope insulation
- Highly efficient condensing gas boiler
- Home user guide – a document to explain the management of the home (especially the sustainability features) and surroundings to the purchasers
- Cycle racks
- Landscaping to include planting of native species to encourage biodiversity and improve the ecology
- Natural materials (slate roofs, timber windows)

The following may be used:

- Sheep's-wool insulation
- Installing PV on the south-facing roofs
- Wood-pellet or log stove, possibly with back-boiler (will require class one flue)
- Solar thermal panels, if roof suitable, to compliment any biomass stove

4.1 Utilities

Surface water drainage, foul drainage, gas, water, electric, heat distribution mains, telecoms (including broadband) and satellite television shall be distributed throughout the site by underground conduits.

Surface Water

All surface water run-off shall be managed primarily in strategic swales incorporated in open space areas. The main secondary treatment and attenuation will be provided in a SUDs, which will be designed as a wetland area. This will be located at the south western area of the site close to the discharge point.

Existing underground culverts/drainage pipes shall be recognised and appropriately managed. The surface water drainage pipe network, swales and attenuation basins/ponds shall be designed for adoption by Scottish Water.

Foul Drainage

All foul drainage shall be designed for adoption by Scottish Water and connected to the public sewer network.

Gas

A gas main lies within the site adjacent to Auchinleck Road. Street design shall allow for this to be retained. An extended gas supply may be retained and shall be laid to meet statutory requirements for adoption by the appropriate supplier. This need will be governed by potential to supply an alternative renewable energy source.

Water

An extended water supply shall be provided throughout the site and shall be to Scottish Water's specification for adoption by Scottish Water.

Electric

An extended electricity supply shall be provided throughout the site and shall be designed to meet statutory requirements for adoption by an appropriate supplier.

Heat distribution mains

Heat distribution mains may be required in conjunction with a district biomass heat source.

4.2 Communications

Telecommunications shall be provided throughout the site for adoption by statutory provider. Satellite television and associated services shall be provided via discretely designed and located communal dishes linked to underground

distribution cabling.

4.3 Waste

Waste management on the site shall be considered in conjunction with East Ayrshire Council. The commercial collection system operated by the Council shall be adhered to. The system comprises a 3 bin and box system where a bin is provided for general household waste, paper and garden waste suitable for composting. A box is provided for glass and tin combined. The latter is separated and uplifted.

Bin and box storage may be located in perimeter block courtyards and back gardens. Bin collection vehicles will uplift rubbish via the courtyards.

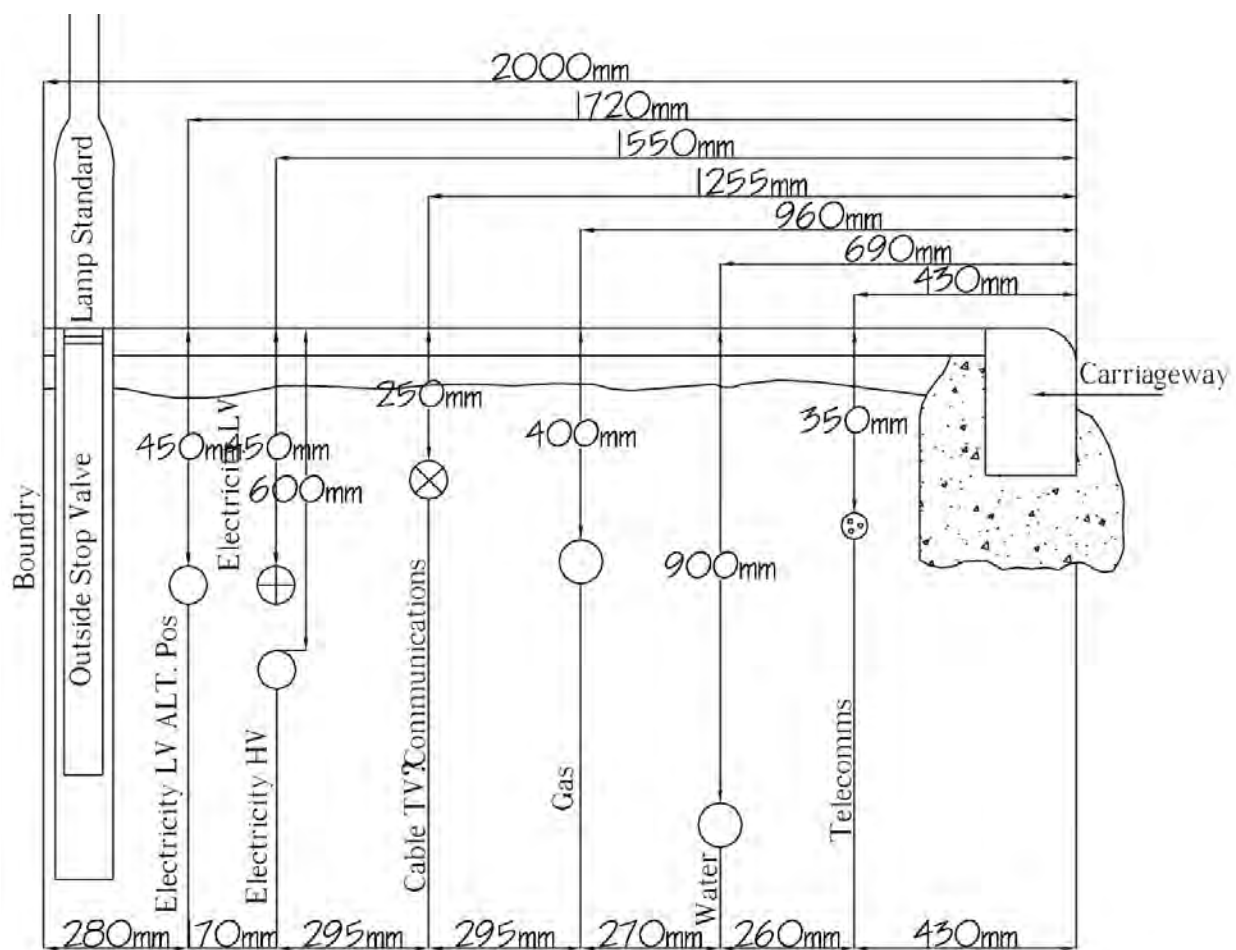
Recycling bins shall be provided to each home. This will provide flexibility in line with any adjustments to the Council's

waste management scheme.

Communal paper, glass and tin receptors should be considered in future adjustments to the Council's waste management.

4.4 Renewable Energy

The primary source for heat generation for Knockroon Phase 1 shall be natural gas. Natural gas shall be succeeded by district wood pellet boilers distributing heat to blocks. Natural gas during Phase 1 shall be and offset by high efficiency boilers with enhanced recycling of boiler exhaust flue heat. 10% open wood burning stoves utilising pre-installed chimney flues may further support sustainability. Allowances may be made to retrofit district biomass boilers.



Above: Services setting out



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Comhairle Siorrachd Àir an Ear

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