



Design & Construction Brief Homes for Rent

June 2022

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Introduction

Compliance

This Design and Construction Brief detail's Flagship's requirements for new-build residential developments to both designers and contractors.

All developments must be designed and constructed to achieve the following minimum standards/certification levels:

- Planning Authority requirements
- Highway Authority requirements
- Building Regulations
- Independent accreditation (eg. NHBC)
- Party wall robust details
- Nationally described space standards
- Minimum SAP rating of 86
- Minimum EPC rating of B
- Minimum following U values:
 - Floor - 0.11 W/m²K
 - Walls - 0.14 W/m²K
 - Roof - 0.09 W/m²K
 - Windows - 1.2 W/m²K
- Air permeability <4m³@Pa
- Lifetime Homes (to bungalows and ground floor flats only)

Specification

This Design & Construction Brief is not a full technical specification. The brief is to be read in conjunction with Employers Requirements and other tender/contract documentation relevant to a specific project.

Where applicable, Scheme Supplementary Briefs, which are to be read in conjunction with this document, will be prepared by Flagship and issued accordingly.



This Design and Construction Brief is to be complied with in its entirety. However, if a designer or contractor considers for any reason, including those of health and safety or other statutory compliance, that any item required or technique specified cannot be complied with for a particular project, then they should identify such item to Flagship in writing, requesting a relaxation and proposing an alternative.

Proposals for alternatives to the materials referred to throughout this brief may be considered by Flagship where required to enhance the aesthetics of a scheme, to ensure statutory compliance or where onerous lead-in times would have a significantly detrimental impact on the delivery of the dwellings.

Proposed alternatives must be submitted to Flagship for approval prior to implementation, including a cost-benefit analysis of the proposed alternative against the brief requirement.

In achieving the environmental credentials listed above, Flagship wishes to adopt a 'fabric first' approach, with the primary focus on improving the building envelope before considering add-on renewable technologies.

Where this brief is included as a contract document under a JCT Standard Form of Agreement, then it shall apply in its entirety, save insofar as an item is relaxed by agreement as prescribed above.

Contractors shall be required at all times to ensure that works, both internally and externally, are fully protected from the elements and the work of other trades. Homes under construction should also be regularly cleaned.

Sections

Section 1 – Design

This section is intended for designers and should be followed in its entirety, save insofar as an item is relaxed by written agreement as prescribed above.

Section 2 – Construction

This section provides additional requirements for contractors beyond the requirements in Section 1. The requirements should be followed in their entirety, save insofar as an item is relaxed by written agreement as prescribed above.

Appendices

Appendix A – NHF Schedule of Furniture

All schemes are to be designed to accommodate the National Housing Federation’s Schedule of Furniture as outlined in Appendix A.

Appendix B – Communal area requirements

Schemes including communal areas either internally or externally must comply with Appendix B, save insofar as an item is relaxed by written agreement as prescribed above.

Appendix C – Manufacturers and suppliers

The manufacturers and suppliers listed within Appendix C are to be used within all developments, save insofar as an item is relaxed by written agreement as prescribed above.



Section 1 Design

Design

1.1 External layout design

- 1.1.1 Developments are to be integrated with surrounding streets, areas and aspects, to avoid the feeling of isolated estates.
- 1.1.2 Site layouts are to encourage natural surveillance, minimise hiding places and potential areas of crime.
- 1.1.3 Designs shall seek to keep changes in levels to a minimum, avoiding any sharp inclines or declines, negating the need for steps and/or hand railings. Design should focus on ensuring accessibility for wheelchair users.
- 1.1.4 Where external areas of public open space are to be provided, these are to be integrated as a central feature within the development and overlooked, providing natural surveillance.
- 1.1.5 Design should avoid bungalows being situated immediately adjacent public open space areas.
- 1.1.6 Flats without private gardens should be designed in close proximity and sight of public open space areas.
- 1.1.7 Preference is for areas of public open space to be unequipped, except where planning policy dictates they must be equipped. In these instances, the equipped areas must be fully designed to adoptable standards.
- 1.1.8 If benches are to be provided as part of the equipped area they should not be positioned directly outside of windows to homes.
- 1.1.9 Dog waste bins should only be allowed for where it is prior agreed that a 3rd party will empty and maintain them.
- 1.1.10 Orientation and dwelling grouping are to enhance occupant privacy and noise protection, as well as achieve good day lighting and solar gains to living areas.
- 1.1.11 Dwelling orientation should focus on rear gardens being south facing.

- 1.1.12 Clustering of affordable homes on mixed tenure developments shall be as follows:

Overall Development Size	Maximum Affordable Housing Cluster
Up to 30 Homes	8 Affordable Homes
Up to 200 Homes	15 Affordable Homes
Over 200 Homes	25 Affordable Homes

- 1.1.13 One and 4+ bedroom homes should be dispersed across a development and avoid being concentrated together in clusters.
- 1.1.14 Developments incorporating flats should focus on providing blocks with individual, non-communal entrances and private garden spaces.
- 1.1.15 Developments incorporating flats, where it is not feasible to provide individual private gardens must provide:
 - An external, enclosed bike store, capable of storing a minimum 1.5 bikes per flat, positioned close by and overlooked.
 - An external, enclosed bin store, capable of storing the refuse requirements of the relevant Local Authority. Refuse stores are to be located a minimum 6 metres from any residential dwellings but close enough that they can be overlooked and provide natural surveillance.
 - A brick-built, enclosed store within the communal garden area, subdivided to provide an individual space per flat for storage.
 - An external drying area providing rotary drying lines at a ratio of 1 per every 2 flats, that is overlooked, is not immediately adjacent car parks or trees, but is accessible to encourage use.

1.2 External drainage

- 1.2.1 Sustainable Urban Drainage Systems (SUDS) should be designed with a focus on limiting cyclical maintenance requirements and maximising durability.
- 1.2.2 Surface water lagoons, where required as part of surface water drainage strategies, should be designed to incorporate a 1000mm tall perimeter picket fence with picket gated entry for restricted access.
- 1.2.3 Pumped drainage systems are not to be permitted without the prior written consent of Flagship.
- 1.2.4 Permeable surfaces requiring onerous future maintenance are to be avoided wherever possible.
- 1.2.5 Adequate falls and drainage channels must be provided to avoid areas of water collection and egress to any part of a property.
- 1.2.6 Aco (or similar) drains are to be incorporated and properly attenuated between paving slabs and all level thresholds.
- 1.2.7 Gullies complete with grates are to be provided beneath outside taps and positioned so that water falls to the gully when the tap is operating at a regular flow.
- 1.2.8 Guttering and downpipes, including to all front porches, is to be provided for all dwellings and positively attenuated. The colour will be selected by Flagship.
- 1.2.9 Water butts are to be provided within the rear garden of each dwelling, complete with downpipe filters/diverters, and taps. Downpipe design should make allowance for this and an overflow be incorporated for any excess water collected to be redistributed through the rainwater pipe network and avoid overflow discharge on to paths, patios and other areas.
- 1.2.10 Feeding downpipes shall be from the dwelling to which each water butt is attached only and not from any neighbouring properties or communal feed.

1.3 External services

- 1.3.1 Existing overhead services should be diverted or run underground as part of any proposed development.
- 1.3.2 Super-fast fibre broadband (FTTP) is to be installed within all developments.
- 1.3.3 Where non-housing structures such as substations and pumping stations are required, these should be situated in non-prominent positions on the development as far from dwellings as possible and suitably screened.
- 1.3.4 Sub-stations shall be enclosed structures of brick construction with tiled roof, double opening doors and appropriate rainwater guttering and downpipes. Design is to be compliant with the respective statutory authority requirements to enable adoption/transfer.
- 1.3.5 Public spaces and footpaths within the development are to be connected via well-lit routes.
- 1.3.6 Low level bollard lighting is to be used across developments, served from a separate landlord's electric meter supply.
- 1.3.7 Separately metered water supplies are to be provided to each individual dwelling.
- 1.3.8 The use of 'Intex' water meter boxes is to be avoided and wall meter boxes provided instead. However, if their use cannot be avoided, secondary internal brass stopcocks are to be installed.
- 1.3.9 An external cold water tap is to be provided within the rear garden of all dwellings.
- 1.3.10 Areas of public open space shall incorporate a below ground tap with separate landlord's water metre supplied.
- 1.3.11 All service meters and boxes should avoid being situated on the front elevation of dwellings wherever possible, whilst avoiding the need for sub-mains to be provided within dwellings.
- 1.3.12 Air source heat pumps should be positioned as far away from the patio and rear doors to dwellings as possible, preferably at the side of dwellings.

1.4 Roads and footpaths

- 1.4.1 Roads designed to adoptable standards should be used as fully as possible within scheme designs, reducing the need for private roads and drives.
- 1.4.2 Road designs and layouts should be planned to restrict vehicle speeds and should:
- Accommodate the needs of pedestrians, cyclists and vehicles.
 - Consider the integration of new and existing routes through the site into adjacent residential areas.
- 1.4.3 Road sign positions are to be shown on site layouts and ensure no conflict with access to dwellings, vehicle parking and bin collection points.
- 1.4.4 Paths within the development, including those serving the front and rear of properties, shall be a minimum 900mm wide.
- 1.4.5 Public and communal paths are to be provided to enable front and rear access to properties, comprising maximum cross falls 1:40.
- 1.4.6 Steps within paths should be avoided wherever possible. Where steps are unavoidable to access rear gardens, enclosed bin storage for the dwelling must be provided that is not served via steps.
- 1.4.7 Where steps are unavoidable to provide, their design should seek to avoid the need for handrails to be provided where possible.
- 1.4.8 Refuse collection areas are to be provided in convenient locations and of sufficient space to accommodate the requirements of the Local Authority. Design should look to minimise the length of travel from rear gardens to bin collection points.



1.5 Parking

- 1.5.1 'In-curtilage' parking is to be provided to all houses and bungalows.
- 1.5.2 'In curtilage' parking is to be provided to flats where feasible. Flats that cannot be served by 'in-curtilage' parking are to be served by parking courts of no more than 10 spaces per court. More than 1 court per block can be provided where necessary.
- 1.5.3 All parking spaces should be a minimum dimension of 2600mm x 4800mm and be served by an adjacent 900mm wide non-slip, even pathway including between car parking spaces of adjacent properties.
- 1.5.4 All parking spaces should include 'T' marks to demarcate individual spaces.
- 1.5.5 The following car parking provisions shall be accommodated within developments, unless otherwise required by local planning policy:

Property Type	Property Size	Garage Requirements	Parking Space Requirements
Flat	1-2 Bedrooms	N/A	2
Flat over garage	1-2 Bedrooms	Single	1
House	1-3 Bedrooms	N/A	2
House	4 Bedrooms +	N/A	3
Bungalow	1-3 Bedrooms	N/A	2
Bungalow	4 Bedrooms +	N/A	3

- 1.5.6 Parking space requirements listed are in addition to carport requirements and not inclusive.
- 1.5.7 Visitor car parking spaces are to be provided in addition to the carport and parking space requirements listed, in accordance with planning policy requirements applicable to the project. These should be located further away to dwellings they serve than private parking spaces for the dwellings.
- 1.5.8 Hard structures, such as knee rail fencing, should not be used to delineate parking spaces, but can be used to protect landscaping areas at the rear of parking bays.

1.6 Hard & soft landscaping

- 1.6.1 Soft landscaping schemes should enhance the development aesthetically and comprise species that are native to the local area, provide a mix of colours and will thrive within the particular ground conditions.
- 1.6.2 Non-communal planting is to be easily demised to individual dwellings with small, irregular shaped pockets of planting avoided.
- 1.6.3 Hedges should be used to delineate individual front gardens.
- 1.6.4 Hedge and tree lined roads are to be used within the development.
- 1.6.5 New trees are to be set at least 5m from each other and adjacent buildings, or further if specialist advice requires.
- 1.6.6 Trees should not be located within the rear garden of dwellings.
- 1.6.7 Plants that will exceed 1 metre in height when fully grown should not be positioned beneath ground floor windows of dwellings.
- 1.6.8 Climbers and wall plants, or plants that are poisonous or have milky sap (skin irritant) will not be permitted.

1.7 Ecology

- 1.7.1 Soft landscaping should focus on species that are good pollinators for bees and will attract other wildlife, such as birds.
- 1.7.2 Whether required to satisfy minimum planning requirements or not, all developments should look to provide a positive physical contribution towards local and regional species in decline.
- 1.7.3 Bird and bat boxes are preferred to be located away from individual properties, ideally within areas of new or existing landscaping.
- 1.7.4 Where bird and bat boxes are required to be attached to properties, they should be integrated within the wall rather than add-on type where possible.
- 1.7.5 In no circumstances will bat roosting areas within roof spaces be permitted as ecological mitigation.
- 1.7.6 Hedgehog highways are to form part of fencing garden design throughout developments.

1.8 Dwelling design (External)

- 1.8.1 Dwellings shall be designed to optimise the benefits of passive solar, but prevent overheating.
- 1.8.2 Where cladding is to be used it should be designed to be laid horizontally only.
- 1.8.3 Where render is to be partially returned on a side elevation, the return end and expansion joint should be positioned behind the rainwater downpipe.
- 1.8.4 Flat roof designs are not permitted.
- 1.8.5 Roof coverings and porches are to be of concrete or clay interlocking tiles, or composite slates.
- 1.8.6 All properties are to be provided with a front porch to provide protection from the elements, ensuring no gap between the back of the porch and the dwelling.
- 1.8.7 Porches should be designed to withstand heavy snowfall to a level of 20lbs per square foot.
- 1.8.8 Flat blocks up to 2 stories in height shall have individual accesses provided. Communal entrances are only to be provided in blocks of 3 storey or greater.



1.9 Gardens

- 1.9.1 Rear gardens to dwellings, including flats over garages and two storey flats, shall be not less in size than the footprint of the dwelling to which they relate.
- 1.9.2 Communal gardens are only to be permitted where developments include blocks of flats of 3 storeys or greater. In all other instances private gardens are to be provided.
- 1.9.3 Where communal gardens are provided, they should be accessible, overlooked and not directly adjacent trees or parking areas.
- 1.9.4 Rear garden paths should be 900mm wide, abut fencing lines and not be central through the garden.
- 1.9.5 Path gateways are to provide minimum 900mm clear opening, with no step at the gateway.
- 1.9.6 Bin storage areas are to be located adjacent rear garden gateways, accommodating all refuse provisions required by the local authority.
- 1.9.7 Patio areas are to be provided as follows (patio area excludes the adjacent path):

Property Size	Minimum Patio Area
2 person dwellings	5.4m ²
3-5 person dwellings	7.2m ²
6+ person dwellings	9m ²

- 1.9.8 Sheds within rear gardens are not required, unless required by local planning policy. In these instances, a pre-treated timber shed measuring 4 foot x 6 foot is to be provided. Sheds are to be located as far away as possible from the back of the dwelling and be served by a 900mm wide path connecting to the main path leading from the back of the dwelling to the rear gate. Locations should be adjacent boundary fences but leave sufficient space for future maintenance access.
- 1.9.9 Rotary clothes dryers are to be provided with a minimum of 40m of line to each dryer, positioned so accessible from garden patios.
- 1.9.10 Fencing to site perimeters and intermediate boundaries between dwellings is to be 1800mm high impregnated close boarded fencing with concrete posts and concrete gravel boards.
- 1.9.11 Timber gates with a galvanised ring latch are to be provided to each dwelling to match the fencing used for the same dwelling.
- 1.9.12 Knee rail fencing to demarcate front gardens is to be avoided.



1.10 Dwelling design (internal)

- 1.10.1 Internal layouts of the same house type across a development should incorporate a range of ground floor layout options within dwellings as follows:
- Kitchen-diner and lounge
 - Open plan kitchen-lounge-diner
- 1.10.2 Organisation of rooms shall minimise kinks or chamfered walls in order to ease construction, future maintenance and practicality of living.
- 1.10.3 Hallways should provide straight runs from the front entrance to the room situated at the rear of the dwelling.
- 1.10.4 Ceiling heights throughout dwellings shall be 2.4 metres.
- 1.10.5 Utility rooms are to be provided in 4+ bedroom homes.
- 1.10.6 Beyond kitchen storage, the following storage areas are to form part of the dwelling design:
- Under stair storage
 - Over stair bulkhead storage
 - Airing cupboard storage
 - Space within the hallway to situate a fold up-pram (500mm x 600mm)

- 1.10.7 In homes of 2 bedrooms or greater, a space suitable for situating a desk for use as a home office within the dwelling shall be provided.
- 1.10.8 Airing cupboards are to be located above the ground floor on 2 storey or greater dwellings.
- 1.10.9 All roof spaces are to be provided with a preformed insulated access hatch with draught and moisture proof seals.
- 1.10.10 Where blocks of flats are to be provided, 2 and 3 bedroom flats should not be located above ground floor level where possible.

1.11 Floors

- 1.11.1 Block and beam floors are to be utilised.
- 1.11.2 Insulated floating floors are not permitted.

1.12 Windows

- 1.12.1 Windows are to be provided to all rooms and circulation areas abutting an external wall within a dwelling, including bathrooms and WC areas.
- 1.12.2 All windows should be continuous casement type. Split casement windows will not be permitted.
- 1.12.3 Trickle vents are to be provided and must be integral to the window frame.
- 1.12.4 Windows exceeding 20% of the floor area are encouraged to maximise solar gain and natural light within dwellings.
- 1.12.5 Window design, including glazing and sill heights shall avoid the requirement to provide non-climbable guarding to windows.
- 1.12.6 Where windowsill heights are below 600mm, a glazing panel beneath the window shall be designed to resist forces and loads and avoid the need for a non-climbable guard.
- 1.12.7 All windows are to open outwards from the dwelling. Window openings are not to be obstructive or hazardous (for example, not to open directly over paths or conflict with other windows or doors).
- 1.12.8 If a winder is utilised as part of the stairwell design, no window should be designed to sit directly above the winder.

- 1.12.9 Sun-pipes are to be incorporated in rooms (excluding storage rooms), landings or hallways (in bungalows) that do not directly benefit from natural light and the following positions noted:

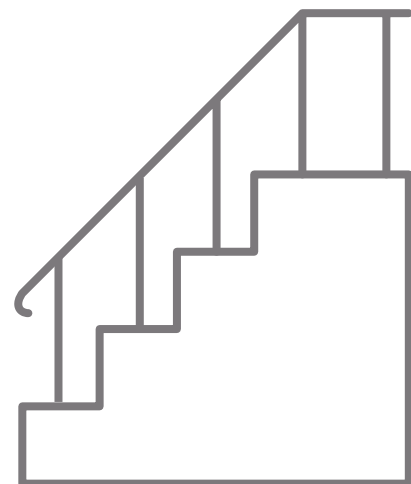
- Where utilised in bathrooms, the positioning of the sun-tube should not be directly above the bath/shower area.
- Where utilised above landing areas, the positioning of the sun-tube should not be directly over the stairwell.

Note: In the case of a landing or hallway, direct benefit of sunlight includes hall or landing windows directly accessible from the landing/hallway, but not windows from other connected rooms.

- 1.12.10 Roof windows are to be incorporated within the top floor of three or more storey properties. Windows should be accessible for opening and cleaning from a standing position without the need for a long handle opening device.

1.13 Stairs

- 1.13.1 Stairs and steps are to be safely negotiable, with no fixed structures inhibiting access, eg. radiators.
- 1.13.2 Handrails shall be continuous and extend 300mm beyond the top and bottom of the stairs.
- 1.13.3 Straight flights of stairs are preferred.
- 1.13.4 Winders on stairs are to be avoided where possible.



1.14 WCs

- 1.14.1 Downstairs WCs should not be located beneath the stairwell or accessed directly from the kitchen or lounge. Access from a utility area, hallway or rear lobby is permitted.
- 1.14.2 Bungalows of 2 bedrooms or greater should include an additional WC, separate to provision within the main bathroom.
- 1.14.3 Basins to WCs are to be a minimum of 450mm wide.
- 1.14.4 Corner basins will not be permitted.
- 1.14.5 Wash hand basins are not to be located beneath windows.
- 1.14.6 In 4 bedroom dwellings and above, an 800mm x 800mm x 8mm separate shower cubicle is to be provided within the downstairs WC, in addition to provision within the main bathroom.
- 1.14.7 Shower cubicles are to be low level access and anti-slip.

1.15 Bathrooms

Baths & showers

- 1.15.1 Baths are to be a minimum of 1700mm x 700mm and incorporate a shower over the bath.
- 1.15.2 Void areas between bath ends and walls should be boxed in.
- 1.15.3 Bath shower screens (non bi-fold) are to be incorporated of a minimum 1500mm x 800mm and ensure that their swing does not conflict with other sanitaryware installed.
- 1.15.4 In developments incorporating bungalows:
 - 50% shall be provided with a shower over the bath.
 - 50% shall be provided with an 800mm x 800mm shower cubicle and no bath.
- 1.15.5 Shower cubicles where provided are to be low level access and anti-slip.

Basins

- 1.15.6 Bathroom basins are to be a minimum 550mm wide.
- 1.15.7 Wash hand basins are not to be located beneath windows or be corner type.

1.16 Bedrooms

- 1.16.1 All bedrooms shall be individually accessed from a hallway or landing.
- 1.16.2 Bedroom shapes shall be either square or rectangular.
- 1.16.3 L-shaped bedrooms are to be avoided.
- 1.16.4 All bedrooms are to be able to accommodate beds in more than one position.
- 1.16.5 All double bedrooms are to be capable of accommodating double or twin beds.

1.17 Doors

- 1.17.1 Door positioning should seek to eliminate clashes with other doors and light fittings when opened fully.
- 1.17.2 Double patio doors should be provided to rear garden spaces, accessed from either the lounge or dining area. These doors shall be outward opening.
- 1.17.3 Additional doors from kitchens or utility areas to rear garden spaces or side accesses are to be single doors and may open inwards or outwards.

1.18 Kitchens and utility areas

- 1.18.1 Kitchens are to be designed to allow for the following:
 - Sequence of storage – prep – cook – serve – waste – wash up.
 - Work surfaces that are uninterrupted by circulation or tall fittings.
 - A single bowl sink.
 - 1200mm minimum distance between the cooker and sink.
 - 500mm clear put down space on either of the cooker space.
 - A lockable cupboard beneath the kitchen sink.
 - Wall and base units.
 - Drawers of varying depth.
 - A stainless steel 930mm single bowl sit on style sink.
 - A single chrome 140mm lever tap.
 - Tall storage (except in 1-2 person dwellings) at the end of a worktop run and not located in front of a window.

1.18.2 Kitchen designs should allow for the following appliance spaces to be incorporated:

- A minimum 600mm fridge freezer space at the ends of worktop runs. This space should not be beneath a window, or covered with a worktop.
- A minimum 600mm cooker space.
- A minimum 600mm washing machine space.

1.18.3 In 4+ bedroom properties, a separate utility room accessed from the kitchen shall be provided, including the following:

- Kitchen base units and worktop matching the kitchen selections.
- A stainless steel 930mm single bowl sit on style sink.
- A single chrome 140mm lever tap.
- A minimum 600mm washing machine space, negating the need for this to be provided in the kitchen.
- A minimum 600mm tumble drier space, complete with external extract and bung.
- A lockable cupboard beneath the sink, negating the need for this to be provided in the kitchen.

1.18.4 Provision of washing machine or tumble drier spaces within small, limited or non-ventilated cupboards will not be accepted.

1.18.5 The following minimum volumes (m3) of kitchen and utility storage cupboards are to be provided, with alternative configurations agreed with Flagship if these requirements cannot be achieved:

Property Size	Base Units	Wall Units	Broom Unit	Drawer Pack	Total
1-2 person dwelling	0.65	0.38	0.00	0.21	1.24
3 person dwelling	0.39	0.27	0.50	0.21	1.37
4 person dwelling	0.52	0.38	0.50	0.21	1.61
5 person dwelling	0.65	0.38	0.50	0.21	1.74
6 person dwelling	0.78	0.49	0.50	0.21	1.98
7+ person dwelling	0.91	0.60	0.50	0.21	2.22

1.19 Plumbing and heating

1.19.1 Primary heating and hot water provision shall be via an air source heat pump, with radiators used as the means of heat distribution.

1.19.2 Radiator positions are to be beneath windows and in all cases shall not conflict with practical use of the property.

1.19.3 Kick-space heating is permissible in kitchens in lieu of radiators where it would be impractical to provide a radiator.

1.19.4 Dual heating zones are to be incorporated in properties greater than single storey, with the downstairs heating zone incorporating any upstairs landing radiator.

1.19.5 High recovery cylinders are to be incorporated as part of the heating design and installation.

1.19.6 Cylinders are to be thermostatically controlled and include an immersion switch.

1.19.7 Heating systems are to achieve the following room temperatures when the outside temperature is -1°C:

- Living/dining rooms: 21°C
- All other rooms and circulation areas: 18°C

1.19.8 Where renewable technologies are required to aid achieving the required SAP and EPC ratings required, waste water heat recovery (WWHR) should be used as the primary renewable technology.

- 1.19.9 Photovoltaic cells (PV) may be used as a secondary renewable technology where further required to achieve the required SAP and EPC ratings.
- 1.19.10 Pipework runs at the back of appliance spaces shall not restrict the installation of standard size appliances.
- 1.19.11 Soil and vent pipes, with or without air admittance valves fitted, are to be located within the corners of rooms. All are to be vented to air.
- 1.19.12 Condensate drains are not to run externally to the property and always be separate from the kitchen sink drainage.

1.20 Electrical installations

- 1.20.1 Consumer units are to be located within hallways. Units must allow convenient access and be positioned so not to clash with any door swings.
- 1.20.2 The use of sub-mains within dwellings is to be avoided. If their use is unavoidable they are to be located in enclosed stores.
- 1.20.3 All lighting provided internally and externally is to be LED compliant and switch controlled.
- 1.20.4 Design is to ensure lighting positions, once accompanied with a standard light shade, do not clash with door swings throughout the dwelling.
- 1.20.5 Light switches shall be in consistent locations, close to room entrances.
- 1.20.6 All hallways, landings and rooms with dual access points are to be furnished with two-way switch lighting.
- 1.20.7 Kitchen lighting is to be surface mounted batten lighting and cover.
- 1.20.8 Switched controlled, circular bulkhead lighting with cover is to be provided in all under stair and over stair bulkhead storage areas, as well as loft spaces.
- 1.20.9 External light fittings are to be provided adjacent to front and rear doors, with internally operated isolator switches.
- 1.20.10 All socket outlets are to be switched double sockets.
- 1.20.11 Double sockets are to be provided in the dwelling as follows:

Persons	Kitchen	Dining Room/ Area	Utility Room	Living Room	Double Bedroom	Single Bedroom	Hall-way	Landing
2	2	1	-	3	3	-	1	1
3	3	2	-	4	3	2	1	1
4	3	2	-	5	3	2	1	1
5	3	2	1	5	3	2	1	1
6	4	2	1	5	3	2	1	1
7+	4	3	1	6	3	2	1	1

1.20.11 Within living rooms, 2 double sockets are to be provided adjacent the tv point, included as part of the above requirement.

1.20.12 USB charging points are to be integrated to electrical sockets within the following rooms:

Room	USB Outlet provision
Kitchen	2
Main bedroom	2
Other bedrooms (each)	1

1.20.13 Within the dwelling of homes of 2 bedrooms or greater, 1 double socket is to be situated to accommodate a desk for home working. This socket shall incorporate 1 USB outlet. Where this provision is included for within a bedroom, this shall not be an additional requirement to the provisions above.

1.20.14 The following items are to be provided for within the dwelling:

- A mains transformed 12V operated door bell.
- Mains powered smoke alarms with battery back-up upstairs and downstairs (away from the kitchen door). Alarms are to be located within principal habitable rooms.
- A mains powered carbon monoxide alarm with battery backup is to be provided within the dwelling. The model is to radio frequency link with the smoke and heat detectors.

- A mains powered heat detector within the kitchen.
- A mains powered outlet with isolation switch, suitable for connecting an electric cooker, within the cooker space of the kitchen.
- A shaver socket (240/115V) within the bathroom (240/115V), positioned adjacent the mirror over the wash hand basin.
- A digital tv compatible aerial within the loft space and connected to co-axial cable.
- A TV signal booster in locations of poor signal/reception.
- A TV aerial point in the living room and all bedrooms, all connected to co-axial cable.
- A telephone point in the living room, adjacent the TV aerial point.
- Cat 6 ethernet wiring throughout.

1.20.15 The following items are to be provided for externally to the dwelling:

- A fuse spur and all supporting cabling and infrastructure capable of connecting a future electrical car charging wall unit, situated on the external wall closest the parking space/s for the dwelling, where in curtilage parking is provided.
- An electric socket with cover situated in the rear garden of the dwelling.

1.21 Ventilation

1.21.1 Controllers/programmers are to be conveniently located in a restricted area, eg. loft space.

1.21.2 All roof spaces are to be fully ventilated and utilise products to enable adequate air flow.

1.21.3 Trickle vents or other similar means of passive ventilation system are required in all dwellings, except where Mechanical Ventilation Heat Recovery (MVHR) is used and negates the requirement for this.

1.21.4 An extractor fan (not cooker hood) is to be provided within the kitchen space.

1.21.5 A combined timer extractor fan and humidistat is required in all bathrooms or shower rooms.





Section 2

Construction

2.1 Floor construction

- 2.1.1 All structural timbers are to be from sustainably managed sources, with either FSC or PEFC certification.
- 2.1.2 Ground floors are to be screed finished.
- 2.1.3 Moisture resistant flooring shall be used throughout the upper floor.

2.2 External walls

- 2.2.1 All airbricks are to be non-combustible and positioned to ensure protection from flooding, debris and gravel infill using edging kerbs, or being raised.
- 2.2.2 Facing bricks are to be 'through colour' (not sand faced). Flagship shall select the type and colour of bricks to be used.
- 2.2.3 Close attention must be given to ensure no brick banding occurs, including mixing bricks from a minimum 3 packs.
- 2.2.4 Flagship shall select the mortar colour to be used to accompany the selected brick/s and there shall be no visible differentiation in colour between batches of mortar.
- 2.2.5 Cavity wall ties are to be stainless steel and HRT type. Butterfly ties are not permitted.
- 2.2.6 Render is to be monocouche type and applied in full accordance with manufacturers recommendations. Flagship shall select the colour/s.
- 2.2.7 Render is to be applied to a full elevation at the same time and not in stages, to prevent colour differentiation or banding.
- 2.2.8 If damage is caused to part of a rendered elevation during construction it will be necessary for the full elevation to be rendered again. Patch filling and painting will not be permitted.
- 2.2.9 Cladding is to be fibre cement composition. Flagship shall select the colour.
- 2.2.10 Softwood timber cladding will not be permitted.
- 2.2.11 Cladding joints should be avoided wherever possible. Where joints are unavoidable, they should be flush and neatly aligned.

- 2.2.12 Expansion joints are to be located behind rainwater pipes.
- 2.2.13 Boundary walls are to be constructed above a 150mm ground level damp proof course (or 50mm above the highest level if varying levels), with weep holes provided and finished with two course crease tiles and brick on edge.
- 2.2.14 Balconies are to be constructed from non-combustible materials and incorporate appropriate floor and edge protection.
- 2.2.15 Party walls are to be constructed in accordance with Robust Details.

2.3 Roof

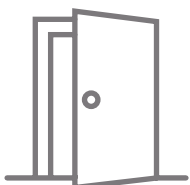
- 2.3.1 All timbers must be preservative treated by vacuum or pressure impregnated process (all of which is to be evidenced by a supplier's certificate).
- 2.3.2 All structural timbers, including roof trusses, are to be from sustainably managed sources, with either FSC or PEFC certification.
- 2.3.3 Where concrete tiles are used, they are to be 'through colour' (not granular faced).
- 2.3.4 All porches are to be wall fixed with no gaps between the porch roof and wall over the main entrance door.
- 2.3.5 Bargeboards and fascias are to be provided in UPVC. Flagship shall select the colour/s.
- 2.3.6 All flashings, aprons and soakers are to be of Code 4 lead.
- 2.3.7 All valley linings, gutters (to chimneys, etc) and saddles are to be of Code 5 lead or GRP and adequately supported.
- 2.3.8 Loft hatches are to incorporate drop down hinges to one edge and lockable key mechanism.
- 2.3.9 Fixed down 'walk-way boarding' is to be provided from the roof access hatch to any equipment located within the roof space only.
- 2.3.10 Breathable felt is not to be used within roof spaces.
- 2.3.11 Where the roof is to house photovoltaic cells, these should be installed at an angle of 37°.

2.4 Windows

- 2.4.1 All windows are to be composite and installed in accordance with manufacturer's instructions.
- 2.4.2 Window fittings are to be in accordance with the following:
- Casements – all windows are to be continuous casement type and not split casement type.
 - Hinges – all side hung casements are to be hung on fire egress easy clean friction hinges.
 - Operating handles – cranked key locking handles to be utilised throughout the dwelling. All fire escape windows are to have a non-locking green push button handle.
 - Restrictors – all windows (including ground floor) to be fitted with child safety opening restrictors.
- 2.4.3 All window frames, casements and components must be fully protected during construction to avoid damage.
- 2.4.4 All joints between masonry and windows are to be pointed neatly externally with silicone sealant to match the colour of the window finish.
- 2.4.5 Obscure, patternless glazing is to be provided to front doors, WCs and bathrooms.
- 2.4.6 Clear glass should be used within rear doors, but not front doors.

2.5 External doors

- 2.5.1 All front external doors to dwellings are to be composite GRP or metal, installed in accordance with manufacturer's instructions.
- 2.5.2 External doors are not to be automatic closing type.
- 2.5.3 Where rear or side doors are to open outwards, 90° stainless steel restrictors must be fitted.



- 2.5.4 Door furniture is to be Satin Stainless Steel (SSS) in accordance with the following:
- Locking system – multi-point deadlocking system, but not self-locking.
 - Hinges – 1.5 pairs of 100mm rust-proofed hinges.
 - Cylinder and cylinder guard – incorporating anti-pick and anti-drill resistance to front and rear doors.
 - Door handles (front & rear doors) – lever handle.
 - Threshold – low level threshold.
 - Letter plate – 1No. sleeved draught proof letter plate and internal flap/tidy.
 - Door chain – 1No. security chain and stay fitted to front door only.
 - Door viewer – 1No. 180 degree viewer positioned appropriately to meet the needs of the end user.
 - Door numerals – 50mm wall mounted, acrylic numerals, clearly denoting the house number or name, positioned on the wall adjacent the front door.
- 2.5.5 Thumb turners on external doors are not permitted.
- 2.5.6 Porches are to be timber canopy.
- 2.5.7 Rigid, skirting mounted rubber ended door stops in metal casings are to be provided to all inward opening external doors. Plastic door stops or ends will not be permitted.

2.6 External services

- 2.6.1 All mains service meters are to be installed by and registered in the name of the contractor prior to practical completion of dwellings.
- 2.6.2 All service meters are to be permanently labelled/marked with the appropriate postal address.
- 2.6.3 All meters will be read on the day of practical completion and arrangements made for responsibility of the meters to be transferred to Flagship.
- 2.6.4 Service manhole covers are to be cleaned and painted prior to practical completion.

2.7 Internal walls and partitions

- 2.7.1 Traditional masonry or timber frame construction are permitted forms of construction.
- 2.7.2 Where traditional masonry construction is used, internal partitions are to be of 100mm block work, except in non-load bearing situations above ground floor, where timber stud partitions may be used.
- 2.7.3 Metal stud partitions may be used only if vertical studs are at maximum 400mm centres.
- 2.7.4 Sound proofing between timber stud partitions must achieve a minimum 10% greater sound efficiency than the minimum Db level required within Building Regulations.
- 2.7.5 Reinforced moisture resistant MDF or WBP plywood is to be installed to walls carrying additional load on walls.
- 2.7.6 Moisture resistant plaster board is to be used in all wet rooms, including WCs.
- 2.7.7 Suitably concealed patress boxes are to be provided where appropriate.
- 2.9.4 Pipework is not to be buried in screed floors.
- 2.9.5 Pipework waste bungs are to be neatly set within screed floors so as below the finished flooring level.

Heating

- 2.9.6 Air source heat pumps shall be suitably protected to avoid entry of foreign objects.
- 2.9.7 Cylinders are to be thermostatically controlled and include an immersion switch.
- 2.9.8 A corrosion inhibitor and magnetic system filter is to be added to the central heating system.
- 2.9.9 Radiators are to be white, fitted with white thermostatically controlled valves and white valve caps.

Plumbing

- 2.9.10 Cold water services with suitable connectors/ stop valves are to be provided to the washing machine space in the kitchen/utility room.
- 2.9.11 Baths are to incorporate a Thermostatic Mixing Valve (TMV) with suitable access panel incorporated.
- 2.9.12 Bath TMVs are to be set to regulate hot water between 43-48C.
- 2.9.13 All sanitary appliances and individual items of equipment are to have isolating valves fitted to supply pipework and be accessible.
- 2.9.14 All valves and stopcocks should be easily accessible and clearly labelled to show their function.
- 2.9.15 Lever taps are to be fitted as standard throughout.
- 2.9.16 Rear garden taps are to be provided with a non-return valve and hose union.
- 2.9.17 In the event that a tap cannot be provided within a private space, the tap is to be fitted with a removable head.
- 2.9.18 Below ground taps located within public open space areas should incorporate a lockable cover with removable tap head.

2.8 Stairs

- 2.8.1 Hardwood (FSC or PEFC certified) handrails and balusters shall be provided.
- 2.8.2 Handrails shall be provided as 'pigs ears' within houses and 'mop sticks' within flats and communal areas.

2.9 Plumbing and heating installations

General

- 2.9.1 Where multiple mechanical, electrical and renewable technologies are utilised, they are all to be interfaced and operated via a single programmer.
- 2.9.2 Unobtrusive copper piping and ductwork is to be provided. Plastic push-fit pipework may only be used in concealed locations and any bends supported, with joints being a minimum of 100mm from joists so accessible.
- 2.9.3 All pipework is to be neatly boxed in and easily accessible with inspection and maintenance hatches provided.

2.10 Electrical installations

General

- 2.10.1 All switches must be clearly labelled and blanks included as necessary.
- 2.10.2 All lighting and electrical socket outlets are to be white plastic, switched double sockets, with screw heads finished horizontally.
- 2.10.3 All electrical installations are to be tested and left in full working order at practical completion, with the relevant testing certification provided.
- 2.10.4 All wire installations must be suitably sealed with fire protecting materials. The use of polyurethane foam filler in this respect is not permitted.

Lighting

- 2.10.5 All lighting provided internally and externally is to be fitted with warm white, LED bulbs.
- 2.10.6 The use of 3 pin light fittings is not permitted.
- 2.10.7 Lightning conductors are to be installed for schemes incorporating dwellings of three storeys or more.

Sockets

- 2.10.8 Spur switches are to be engraved denoting the appliance they relate to. Adhesive labels will not be accepted.

2.11 Ventilation installations

- 2.11.1 Services are to be readily accessible for inspection, routine maintenance and repair.
- 2.11.2 All ventilation installations are to be configured to maximum running time settings.
- 2.11.3 Doors to airing and storage cupboards are to be ventilated both top and bottom with white ventilation grills/covers fitted to both sides of doors.
- 2.11.4 All extractor fans within the dwelling are to be fitted with suitable condensation traps and terminated appropriately.
- 2.11.5 Flagship shall select the colour/s of all external ventilation extract covers.

2.12 Wall finishes

- 2.12.1 Internal walls shall be finished with either two-coat plaster, or plaster-board and skim coat plaster finish.
- 2.12.2 Ceilings are to be skim coat finished.
- 2.12.3 **White 150 x 150mm glazed wall tiles with white grout and white edge trim are to be provided. Glazed wall tiling is to be provided as follows:**

Kitchens & utility areas:

- 450mm high above all worktops and sinks (including windowsills, re-turns into reveals and fridge spaces). Attention should be given to wall cupboard positions to ensure their positioning prevents partially cut tiles needing to be used.
- Full width and depth in cooker spaces from skirting level up to **ceiling level**.

Bathrooms:

- 450mm high above wash hand basin.
- Full height above baths and both ends (as applicable), including tiling to any horizontal surrounds to baths.
- Windowsills, where the window is over the bath.
- Bath box ends (top and face) where boxing is installed between the bath end and the wall.

Note: Where individual areas of bathroom tiling would be separated by small non-tiled areas, tiling is to be extended to provide continuous, well set out tiled areas.

WCs:

- 300mm high above wash hand basins.
- Windowsills, if the window is over the sink.
- Full height to both sides within any shower cubicles provided.

- 2.12.4 The junction of glazed wall tiling with worktops and sanitary appliances is to be neatly sealed with white, mould resistant, silicone mastic sealant, including all bath corners.

2.13 Sanitary appliances

2.13.1 All sanitaryware is to be white.

Baths & Showers

2.13.2 Baths are to incorporate steel feet, front panel, an anti-slip bottom, a pair of lever taps and a plug on chain.

2.13.3 Voids beneath baths are to be insulated with mineral wool insulation.

2.13.4 Showers over baths are to be thermostatically controlled surface mounted, mains hot and cold supplied, complete with flexible hose, rail and shower head.

2.13.5 Showers provided in ground floor WCs to 4+ bedroom homes are to be electric.

Basins

2.13.6 Basins to bathrooms are to be glazed vitreous china with pedestal (securely fixed to floor and mastic jointed to basin) with a pair of lever, aerated taps.

Toilets

2.13.7 Toilets are to be wash-down glazed vitreous china with glazed vitreous china dual flush cisterns.

2.13.8 Plastic seats with 'wrap over' type covers and metal hinge fixings are to be provided.

2.14 Fittings

Kitchens & Utility Areas

2.14.1 Pipework beneath kitchen sinks is to be kept unobtrusive with a full width and depth shelf provided within the cupboard..

2.14.2 Connections are to be provided for an electric cooker, fridge/freezer and washing machine, including hole cut-outs where needed for inlet/waste connections to be made beneath sinks.

2.14.3 Where a tumble dryer space is provided, all connections are to be provided and this is to be completed with an external extract and bung.

2.14.4 Kitchens and utility areas are to be fitted with a range of base (cupboard and drawer units) and wall units. Flagship shall select the colour/s.

2.14.5 Cupboards and spaces within the utility area are to comprise carcasses, cupboards and worktops identical to kitchen selections.

2.14.6 Fridge freezer spaces within kitchens should not be covered with a worktop.

2.14.7 Kitchen and utility sink tops are to be thick gauge non-deforming stainless steel sit-on type single bowl and single drainer.

2.14.8 Kitchen and utility sink drainers are to be provided with a support batten fixed to the worktop.

2.14.9 Sinks are to be provided with a single lever mixer tap and chromium plated slotted waste, overflow and plug and chain.

2.14.10 Drawers are to have steel drawer boxes.

2.14.11 Hinges are to be openable 160°.

2.14.12 Worktops are to be minimum 38mm and post-formed.

2.14.13 Worktops are to be neatly joined using a masons mitre joint.

Wet Areas

2.14.14 Wet areas are to be fitted with the following robust fittings, comprising stainless steel unless otherwise stated and to be approved by Flagship prior to installation, installed using appropriate fixings for the wall/construction type:

2.14.15 Bathrooms

- A toilet roll holder
- A hand towel ring
- A hinged 1500mm x 800mm single shower screen over the bath
- A 450mm x 600mm glass mirror

2.14.16 WC's

- A toilet roll holder
- A hand towel ring
- A 450mm x 600mm glass mirror
- In 4+ bedroom properties only, a hinged outward opening shower door comprised of 6mm toughened clear glass, with chrome frame and chrome handle.

Airing cupboards & bulkhead storage cupboards

- 2.14.17 Airing cupboards and bulkhead storage cupboards are to be fitted with two rows of full cupboard width, accessible, removable slatted shelving of a minimum 600mm in length/depth. Shelves are to be no higher than 1500mm above finished floor level.
- 2.14.18 Within the airing cupboard incorporating the hot water tank, the requirement for two rows of full cupboard width, accessible, removable slatted shelving shall be relaxed where this is unachievable to provide. In these instances, the contractor is to propose what shelving can be provided above the hot water tank for Flagship's approval.

Under stair storage cupboards

- 2.14.19 Under stair storage cupboards are to be fitted with two rows of full cupboard width, accessible, removable slatted shelving of a minimum 600mm in length/depth. Shelves are to be no higher than 1500mm above finished floor level and not obstruct the hanging of coats.
- 2.14.20 6 no. robust 'double' hat and coat hooks are to be provided fixed to a softwood rail painted to match the wall colour. These are not to be located directly above any heater and installed using appropriate fixings for the wall/construction type. Their location should enable access to be maintained to fitted slatted shelving. If no under stair cupboard is provided to the dwelling, Flagship shall select an alternative location for coat hooks to be fitted.



Skirtings

- 2.14.21 Skirtings, architraves and window boards are to be of softwood or medium density fibreboard (MDF) as follows:
- Skirtings: 19 x 100mm moulded (Torus)
 - Architraves: 19 x 50mm moulded (Torus)

Window boards

- 2.14.22 Window boards are to be:
- Softwood, except in WCs, bathrooms and ensuites where they are to comprise laminated, moisture resistant medium density fibreboard (MDF).
 - 25mm thick, rounded edged with returned ends
 - Where windows boards are over bath areas these are to be tiled and finished neatly with moisture resistant silicone. Flagship shall select the colour.

Curtain battens & blinds

- 2.14.23 50mm x 25mm wrought softwood curtain battens with smooth edges are to be provided over all external door and window openings, to extend 150mm each side of opening and painted to match the wall colour.
- 2.14.24 Batten heights are to be positioned to accommodate standard curtain drop sizes of 54" (137cm), 72" (183cm) or 90" (229cm) depending upon the size of the window or door.
- 2.14.25 Blackout roller blinds are to be fitted within window reveals to all windows throughout the dwelling. Flagship shall select the colour.

2.15 Internal doors

- 2.15.1 Internal doors are to be 40mm pressed six panel doors, painted white using a water-based gloss..
- 2.15.2 Rigid, skirting mounted rubber ended door stops in metal casings are to be provided to all internal doors. Plastic door stops or ends will not be permitted.
- 2.15.3 Rubber pips are to be used where potential damage by door swings cannot be avoided with door stops.
- 2.15.4 Internal doors are to comprise high quality Satin Stainless Steel (SSS) door furniture as follows:
- 1.5 pairs of 75mm plated finish hinges.
 - 1 No. mortice latch.
 - 1 pair lever handles (with bolt through fixings).
- 2.15.5 Rigid, skirting mounted rubber ended door stops in metal casings are to be provided to all internal doors. Plastic door stops or ends will not be permitted

2.16 Painting and decorating

External Joinery

- 2.16.1 External joinery is to be fully prepared and either stained or painted using an exterior quality system.
- 2.16.2 External doors are to be provided in a full range of colours. Flagship will select colours for individual dwellings.

Internal Joinery

- 2.16.3 Internal joinery is to be fully prepared, including knot treated and decorated white with a water-based gloss paint system.
- 2.16.4 Planed door stiles and the heads of any cut down doors (to cupboards, etc) are to be sanded smooth and stained/decorated.

Wall & ceiling decorations

- 2.16.5 Matt emulsion is to be used for all walls within the dwellings and 2 coats of emulsion provided. In all instances, Flagship will select the colour/s.

- 2.16.6 Manufacturer's instructions in relation to preparation and application of all paint systems are to be fully adhered to

Ceilings

- 2.16.7 Ceilings are to be decorated with 2 coat emulsion. Flagship shall select the colour/s.

2.17 Floor finishes

- 2.17.1 Anti-slip vinyl floor covering with R11 slip resistance and minimum 2mm depth is to be provided in all wet rooms, including kitchens, utility rooms, bathrooms and WCs. Flagship shall select the colour/s.
- 2.17.2 Luxury vinyl tile (LVT) floor covering of minimum 2.5mm depth and 0.55mm wearing layer is to be provided in all remaining ground floor rooms and circulation areas of houses, including under stairs cupboards and stores, as well as all non-wet rooms, stores and cupboards within bungalows and flats of any floor. Flagship shall select the colour/s.
- 2.17.3 Vinyl floor coverings are to be continuous under worktop end panels adjacent to appliance spaces. They are also to be laid in all appliance spaces and extended well under plinths in kitchens and bath panels in bathrooms.
- 2.17.4 Junctions and joints between flooring covers and furniture are to be neatly sealed with clear silicone mastic.
- 2.17.5 Mould resistant silicone is to be used in all wet room areas. Flagship shall select the colour.
- 2.17.6 All non-wet rooms, stairs and circulation areas (including cupboards, stores and bulkhead stores) above ground floor in houses shall be carpeted, using extra heavy carpet of minimum 11mm pile height and incorporating a minimum 9mm underlay and grippers. This includes any private stairwells within flats. Flagship shall select the colour/s.
- 2.17.7 Low rise, stainless steel threshold strips are to be provided as required and securely fastened.

2.18 Hard landscaping

Preparation

- 2.18.1 All areas are to be appropriately treated with weed killer and protected from future weed growth with a suitable protective membrane utilised, eg. Terram.

Hard landscaping

- 2.18.2 Communal footpaths are to comprise one of the following:
- smooth, 900mm x 900mm concrete slabs, set on a sand and mortar base.
 - hot rolled asphalt with pre-cast concrete edgings
 - block paviments
- 2.18.3 2.18.3 Footpaths serving the front and rear of dwellings are to be smooth, 900mm x 900mm concrete slabs, set on a mortar and sand base.
- 2.18.4 Half-cut slabs are to be avoided where possible.
- 2.18.5 Paths should be slip-resistant and smooth.
- 2.18.6 Dropped kerbs are to be installed at roadway crossings.
- 2.18.7 Protected edges to pathways where higher than adjoining levels are to be provided.
- 2.18.8 Contrasting textures or kerbs are to be used to distinguish between pedestrian and vehicular accesses.
- 2.18.9 Private driveways and parking areas are to comprise one of the following:
- hot rolled asphalt with pre-cast concrete edgings, with demarcation 'T' marks using a permanent, light grey marker
 - block paviments, with demarcation 'T' marks using a clearly identifiable alternative block pavement
- 2.18.10 No demarcation denoting house or plot numbers is to be provided.
- 2.18.11 Road signs are to be provided and installed in accordance with the respective Local Authority requirements.

- 2.18.12 Visitor spaces should incorporate a small sign/plaque denoting them as a visitor space and be securely fixed to the adjacent kerb, but not glued.

- 2.18.13 Perimeter fencing around surface water lagoons shall be 3 post & rail fencing. A locked access gate is to be provided for landlord/service access.

Play equipment

- 2.18.14 All equipment and areas must be installed to adoptable standards.

Garden spaces

- 2.18.15 Pre-cast concrete slabs of a minimum 900mm x 900mm are to be used for paths providing access from the property to the rear gate, set on a mortar and sand base. Steps and half-cut slabs are to be avoided wherever possible.
- 2.18.16 Any gaps between garden paths and fence lines should be filled with pea shingle.
- 2.18.17 Patios are to comprise 900mm x 900mm concrete slabs set on a mortar and sand base.
- 2.18.18 Where provided, sheds are to be positioned on 900mm x 900mm concrete slabs, set on a sand and mortar base. Shed doors are to be capable of adding a future padlock for security control purposes.
- 2.18.19 Rotary clothes dryer bases are to be concreted into the ground.
- 2.18.20 Water butts are to be mounted on concrete slabs to match the patio area.

Refuse

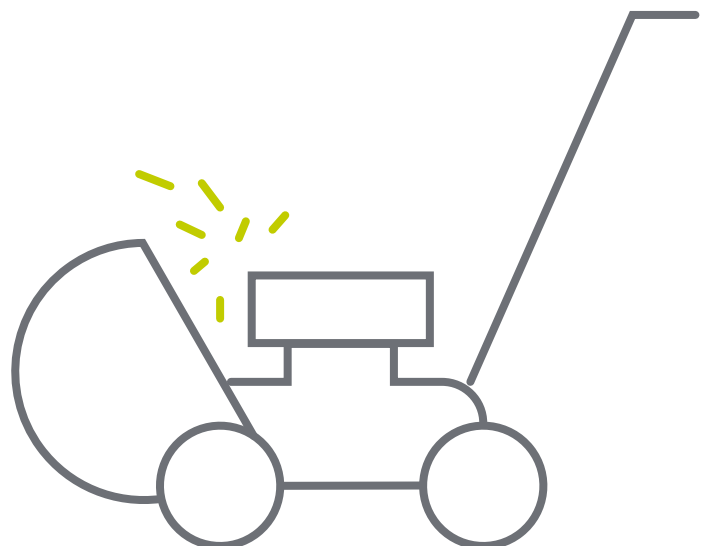
- 2.18.21 The contractor is responsible for the payment and supply of wheelie bins in accordance with the local authority's requirements. Where the Local Authority will not permit delivery prior to Council Tax registration, evidence of payment will be required.

Gates

- 2.18.22 Gates are to be provided with a single sliding bolt and ability to add a future padlock on the inside of the gate.

2.19 Soft landscaping

- 2.19.1 All weeds, roots and debris are to be removed from planting areas with weed killer. The soil is to be rotavated and not compacted.
- 2.19.2 Clean topsoil is to be supplied and spread over the entire planting area, ensuring gradients do not exceed 1:5.
- 2.19.3 In heavy clay areas, peat-free compost is to be added at a rate of 80 litres per 3m² of ground.
- 2.19.4 Grass turf is to be provided to front and rear gardens of dwellings and to communal areas which are neither hard landscaped nor planted. Seeding in lieu will not be permitted.
- 2.19.5 All turf and soft landscaping is to be watered in daily for a minimum 1 week prior to practical completion and the contractor should allow for watering the same for 1 week following practical completion during the months of April-August.
- 2.19.6 Turf is to be cut, healthy and well presented at practical completion.
- 2.19.7 In periods of extremely warm weather (25C and above) the Contractor should check with Flagship before proceeding to lay turf and/or soft landscaping and allow for returning to site from 1st September to complete, solely at Flagship's direction.
- 2.19.8 Turf surrounding underground tap covers within public open space areas should finish just above the cover level to avoid damage during cutting.
- 2.19.9 Soft landscaping is to be stopped 150mm from the external brickwork and replaced with a gravel board and gravel infill to prevent the breaching of the DPC. Landscaping is to be level with inspection lids.
- 2.19.10 Plants with a trailing habit should not be planted as ground cover next to footpaths.
- 2.19.11 No plants are to be positioned upon decorative timber detailing.
- 2.19.12 Existing hedges and trees to be retained must be adequately protected during construction. Additionally, they are to be pruned and/or cut to be neatly presented at practical completion.
- 2.19.13 New trees should be adequately staked and tied with appropriate tree guards to encourage growth and prevent bowing.
- 2.19.14 Ornamental and specimen trees supplied should have a minimum girth trunk of at least 8-10cm, straight leader and be over 2m tall above ground.
- 2.19.15 Hedging and trees may not be supplied as whips or feathered trees.



Appendices

Appendix A: NHF schedule of furniture

Type of Space	Furniture	Sizes	1P	2P	3P	4P	5P	6P	7P
Living space	Armchair	850 x 850	2	2	3	1	2	3	4
	Two seat settee (optional)	850 x 1300							
	Three seat settee	850 x 1850				1	1	1	1
	TV	450 x 600	1	1	1	1	1	1	1
	Coffee table	500 x 1050	1	1	1	1	1	1	1
	Occasional table	400 x 500					1	1	1
	Storage unit	500 x 1000	1	1	1				
		500 x 1500				1			
		500 x 2000					1	1	1
	Space for visitor's chair	450 x 450	2	2	2	2	2	2	2
	Focal point fire	150 x 500	1	1	1	1	1	1	1
Heat source (for example, radiator)	110 deep min	1	1	1	1	1	1	1	
Dining space	Dining chair	450 x 450	2	2	3	4	5	6	7
	Dining table	800 x 800	1	1					
		800 x 1000			1				
		800 x 1200				1			
		800 x 1350					1		
		800 x 1500						1	
		800 x 1650							1

Appendix B: Communal area requirements

The following is a list of requirements specific to the design of communal areas, in addition to the list of requirements contained within the main design and construction brief and must be complied with in full.

External signage

A wall mounted notice/sign displaying the postal numbering of communal flat dwellings is to be provided near the main entrance door in line with notified postal addresses, to identify individual dwellings served by the external communal door.

Internal signage

A wall mounted notice/sign is to be clearly displayed in the ground floor entrance denoting each floor level and the corresponding postal numbers to that floor.

Each floor beyond the ground floor shall include a wall mounted sign denoting the corresponding postal numbers to that floor.

The door to each individual flat shall be supplied with 1No. SAA security chain and stay, 1No. SAA, 180 degree viewer positioned appropriately to meet the needs of the end user and 50mm SAA door numerals (as postal number).

Roofs

Roof voids to flat blocks must be accessible via a communal area, stairwell or hallway with a lockable access hatch. .

Communal door dentry

Self-closing doors are to be provided for entry to all communal entrances, including flat blocks, bin stores and bicycle stores.

Communal entrance doors should ensure as a minimum the top 50% of the door is glass facing to aid natural light and visibility.

A fob-based, vandal-proof door entry system with separate coded keypad for Flagship staff entry is to be provided on communal blocks of flats. A minimum 2 fobs per dwelling are to be provided and all functioned to operate.

Each dwelling is to be provided with a handset linked to the main entrance system to enable remote opening of the main external door for visitors. A service entrant button for trades and deliveries should also be included.

Communal entrance doors to bin stores should incorporate louvered vents to any non-glass areas. Double opening doors should be provided, capable of manoeuvring 'Euro Bins' or large wheelie bins in accordance with the respective Local Authority requirements.

Post boxes

Communal post boxes are not permitted. Each individual flat is to be provided with 1No. SAA sleeved draught proof letter plate and internal flap/tidy.

Key safes

A Supra C500 key safe must be installed adjacent the entrance to any storage or service cupboard enclosing a minimum 2 no. keys serving the respective building or store.

Stairwells

The bottom of stairwells are to be enclosed to avoid being used for unwarranted storage.

Handrails are to be provided as 'mop stick' type. Handrails are to be situated above a 1000mm high half wall for the duration of the stairwell.

Storage

One lockable, secure storage cupboard (in addition to Service Cupboards) for the landlord is to be provided within the communal space. An FB1 type lock is to be incorporated.

The store shall be suitably illuminated and ventilated.

Service Cupboards

Meter and other communal electrical installations
Meter and other communal electrical installations must be contained within a separate cupboard. All meters are to be individually labelled. An FB1 type lock is to be incorporated.

The cupboard/s shall be suitably illuminated and ventilated and of a size to avoid being used for storage.

Floor finishes

Communal entrances (all) are to be provided with a coir door mat (150mm deep x the width of the hall), incorporating a galvanised steel mat well adjacent the entrance door. Flagship shall select the colour.

Remaining hallways and stairs are to be provided with continuous vinyl flooring of a minimum 4mm thickness. Flagship shall select the colour.

Cycle stores

Fully enclosed communal cycle stores are to be provided utilising brick construction with tiled roof and appropriate rainwater guttering and downpipes provided.

Access is to be restricted by way of a keypad and doors must be self-closing.

Cycle stores must be suitably illuminated internally and externally, plus incorporate securely anchored cycle rings (or similar) sufficient to house a minimum 1.5 bikes per dwelling the store serves.

Refuse

Fully enclosed communal refuse stores are to be provided.

Access is to be restricted by way of a keypad and doors must be self-closing.

Stores are to be of brick construction with tiled roofs and appropriate rainwater guttering and downpipes provided.

Stores must be suitably illuminated and ventilated.

No internal bin shoots from flats to bin stores will be permitted.

Electrical Installations

A separate 'landlords' metered electrical supply for communal equipment and lighting, including external lighting, is to be provided.

For schemes incorporating communal flats of any configuration, a TV aerial point to living rooms and all bedrooms with satellite compatible twin co-axial cable (such as Sky), is to be taken to a communally accessible roof space or external elevation with communal aerial(s)/dish and signal booster provided.

The installation should be complete with a communally

accessible landlord's metered supply to ensure distribution of a sufficient television reception.

Any communal aerial/equipment located in the roof space must be fully accessible for maintenance, including the provision of boarded walkways and lighting.

Lighting within common areas is to be operated by movement sensor with switched override. When uninterrupted by motion sensors, a minimum light output of 10% is to be achieved in all communal areas at all times. When uninterrupted by motion sensors, a minimum light output of 50% is to be achieved in stairwells at all times.

Separate floor level emergency lighting is to be installed in accordance with fire safety regulations.

One key switch is to be installed per floor for testing emergency lighting.

A fuse spur should be provided within a secured

landlords cupboard capable of supporting future installation for CCTV equipment.

A lockable double electric socket is to be provided to each hall and landing.

Fire detection and alarm systems are to be 'open protocol' type.

Water installations

All communal bin stores must be serviced by a separately metered water supply with lockable tap head.

Suitable drainage must be installed to remove wastewater.

External works & hard landscaping

Communal rotary drying facilities are to be provided at a ratio of 1 rotary dryer for every 2 dwellings in communal gardens.

Appendix C: Manufacturers & suppliers - General

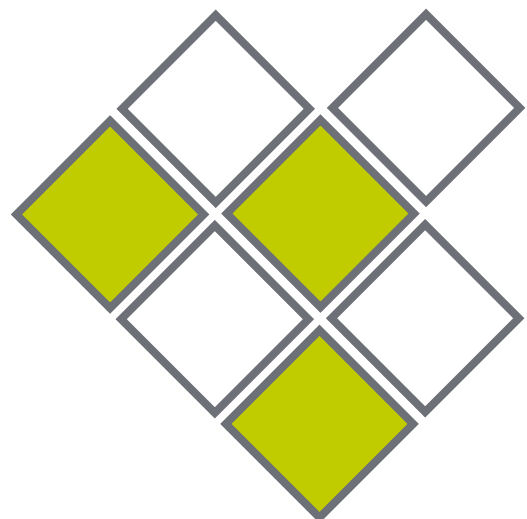
Material	Manufacturer / Supplier	Range / Model / Colour
External Materials		
Render	Weber	Weberpral M, Chalk, Ivory or Silver Pearl
Cladding	Cedral	Cedral Lap, Black, Silver Grey or Sage Green
Bricks	Weinerberger	New Red Multi Gilt Stock. Winchester Multi Stock Yellow Multi Gilt Stock
	Ibstock	Harpley Red Multi
	Vandersander	Drayton Cream
	AAB	Ventura Cream Multi Stock
	TBS	St Andrews Multi
Roof tile	Weinerberger	Calderdale Edge - Dark Grey Shire Pantile - Dark Grey Double Pantile - Terracotta Red
	Redland	Rosemary Clay Classic Fenland Pantile Smooth - Farmhouse Red Fenland Pantile Smooth - Black
	Marley Eternit	Artificial Slate Tile - Blue/Black
Windows	N/A	Colours (external); Anthracite Grey, Slate Grey, Chartwell Green, Cream or Grey Cedar (Non-wood effect) Colour (internal): White

Appendix C: Manufacturers & suppliers - General (cont)

Material	Manufacturer / Supplier	Range / Model / Colour
External doors		
Doors	Birtley	Styles; Bamburgh, Bede, Maple or Talbot Colours; Anthracite Grey, Black, Blue, Green, Red
Door handles	Hoppe	Atlanta
Communal doors	Warrior	
Plumbing & heating installations		
Air source heating	Vaillant	Arotherm Plus
Thermostat	Switchee	
Corrosion inhibitor & magnetic system filter	Adey	
Sink (kitchen/utility)	Bristan	Inox
Taps (kitchen/utility)	Bristan	Cinnamon Easyfit CNN EFSNK C
Taps (sinks)	Bristan	Vantage
Taps/shower (bath)	Bristan	Vantage
Showers (electric)	Redring	Pure
Sanitaryware	Twyfords	Alcona
Shower screen	Twyfords	Geo single panel bath screen
Shower cubicle	Twyfords	Geo walk in flat panel glass
Radiators	Stelrad	Savanna
Trvs	Honeywell	Home
Drainage		
Pumps	Flygt	
Ventilation installations		
Extractor Fans & Humidistats	Envirovent	
Positive Input Ventilation (PIV)	Nuaire	Drimaster Eco-LC
Electrical Installations		
External lights (front)	Knightsbridge, Nordlux Biard	Twin Fixed Wall Light GL WALL2BLK Fold 15 Wall Light 2019051003 Glass Aluminium Outdoor Wall Light
External lights (rear)	ASD Smile LED	SML/BL4LED600
Internal lights (general)	Hager	Ashley Rock
Internal lights (kitchen)	KSR	Navara X KSR9842
Internal lights (bathroom)	Robus	Golf R075 LED - 01
Fire alarms	AICO	E3000e
Carbon monoxide	AICO	EI208
Socket faceplates	Crabtree	Capital
USB Outlet	Crabtree	7091 Mounting Plate with 7073 USB
Consumer unit	Crabtree	Starbreaker

Appendix C: Manufacturers & suppliers - General (cont)

Material	Manufacturer / Supplier	Range / Model / Colour
Kitchens		
Kitchen cupboards	Benchmark	Richmond Colours; Urban Grey, Pebble Grey Grey Oak & Cashmere Grey or Options Colours; Cream & Light Oak
Kitchen worktops	Benchmark	Laminate
Floor finishes		
Vinyl (wet areas)	Tarkett	Safetred Universal Plus Colours; Jupiter, Mercury, Moon, Nebula or Venus
Vinyl (dry areas)	Lewis Abbott	Holland Park Colours; Dovewing, Heritage Oak, Loft Oak, Shadow Oak or Smoked Oak
Carpet	Victoria Carpets	Freedom Xtra Colours; Metal, Gunmetal, Soot, Fog, Doeskin, Morel or Nutmeg
Decoration		
Internal walls	Dulux/Crown	
External service covers	Hammerite	





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