3.0 FOUNDATIONS

The site is to be properly assessed and investigated. Foundations and substructure designs (inc retaining walls) shall be suitable for the ground conditions and where necessary the site shall be remediated and precautions taken in accordance with Environment Agency and Local Authority requirements, appropriate documentation and validation to be provided on request. Foundations shall be designed by a suitably qualified person. All cavity wall brickwork below DPC level is to be filled with weak mix concrete up to 150mm below the lowest DPC. Please refer to Civil Engineer's drawings for proposed external ground levels. Please refer to Civil Engineer's and Utilities Consultant's information for full details of all drainage and incoming service penetrations. Please refer to Structural |Engineer's information for full details of all substructure lintels, substructure masonry specification & foundations. Generally, all facing brickwork is to continue 225mm below proposed ground level, unless otherwise advised by the Structural Engineer and/or approved brick manufacturer. All masonry proposed for use below ground level is to be confirmed as suitable for this application by the manufacturer's product specific technical literature. |Foundations are to suit recommendations of the site/geo-environmental reports. Waterproof tanking, where required, is to be installed in accordance with the detailed construction drawings/specialist manufacturer's designs

4.0 DRAINAGE BELOW GROUND

All below ground drainage is to be in accordance with the Civil Engineer and M&E Contractor's drawings and specification.

5.0 GROUND FLOORS

5.1 Ground Floor Construction

75mm thick fibre reinforced sand cement screed on, 500 gauge damp proof membrane separating layer (as recommended by ground floor insulation manufacturer) on, 150mm Kingspan Kooltherm K3 Floor Board insulation (thermal conductivity 0.020W/mK), (or similar approved), with 25mm thick Insulation strips to perimeter (minimum thermal conductivity 0.025W/mK), on 2000 gauge damp proof membrane, on precast concrete beam and block floor system, (Design and void depth as specified by the Structural Engineer), built off of load bearing wall construction. Overall ground floor build-up is to achieve a minimum U-value of 0.09W/m²K. Damp proof membrane is to be lapped and taped and taken up and taped around all incoming pipe and service penetrations, in accordance with specialist manufacturer's installation guidance and recommendations. Ventilation is to be provided in two opposing external substructure walls with free path between sides and to all parts to give an actual opening equivalent to at least 5500mml of free air flow at 1m maximum centres. Ventilators are to be maximum 450mm from internal corners. Intermediate sleeper walls are to have a block omitted at 1m maximum centres, with a suitable lintel over (to Structural Engineer's details and specification) to maintain air flow through the sub-floor void. All telescopic ventilators are to have a cavity tray over. Air bricks are not to be positioned under doorways or entrances. A continuous Hyload, or similar approved, 2000 gauge polythene DPC is to be provided to internal leaf of blockwork below level of precast concrete beams. Minimum depth of sub floor ventilation void is to be in accordance with the Structural Engineer's details and specification. The floor Insulation should tightly abut the blockwork Inner leaf. Cavity wall insulation to fill the full extents of the cavity, height, width and depth in accordance with the MIMA insulation guidance.

5.2 Wet Room Floor.

Where a wet room is to be constructed, screed is to be recessed to accommodate falls and waterproof / tanking Imembrane is to be applied over screed. Additional reinforcement is to be applied to screed subject to specialist/structural engineers design. Suitable tile bed and adhesives are to be installed in accordance with specialist design/manufacturer's instructions and specifications. Membrane to be lapped up walls min 1m above finished floor level or higher subject to specialist design and specifcation. Membranes to be lapped and sealed accordingly and lapped and sealed into floor drain in accordance with manufacturer's design and specification. 5.3 Cold Water Supply

Insulate throughout length of cold water supply pipe when it enters the building less than 750mm from the outside face of the external wall. Seal the damp proof membrane where pipes pass through the floor. Insulation thickness dependent on pipe diameter and thermal conductivity, refer to British Standard. Water Authority supply pipe size and material is to be in accordance with local water authority regulations/requirements. The supply pipe must be continuous from the water meter to the internal stopcock. Refer to Utilities Consultant and Civil Engineer's drawings for full details of all proposed incoming services.

5.4 Limiting Thermal Bridging & Air Leakage

Install continuous 25mm thick perimeter floor insulation strips. Proposed floor insulation must tightly abut new external masonry walls. Seal all penetrations through the floor with a flexible sealant. Due consideration should be given to the requirements associated with APA Accredited Detail Number FF-GF-02 in respect of thermal bridging around the ground floor and external wall junction. The contractor should refer to this detail prior to undertaking

6.0 UPPER FLOORS

6.2 Upper Floor Construction

Generally 22mm thick floor grade tongue and groove chipboard, on timber engineered floor joists (depths as specified on the working drawings and specialist supplier's information) laid at centres indicated on specialist designer's drawings. Chipboard is to be moisture resistant to bathrooms and other wet areas. Chipboard to be stopped 10-15mm short of masonry walls and resulting gap filled with Rockwool isolation strips or similar approved. Typically, joists are to be built in to separating walls and internal leaf of all external walls. All voids around joists are to be filled with mortar so that no gaps remain. The joint Interface between the joist and the mortar is to be sealed with flexible Intumescent mastic sealant. Internal floors should not be continuous between dwellings. 30 x 5mm lateral restraint straps are to be provided at floor joist level, spaced at maximum 2m centres, with associated blocking and noggins, unless otherwise stated by specialist supplier or the Structural Engineer. Trimmers and trimmed joists are to be provided to all staircase openings, in locations as indicated on the working drawings and specialist manufacturer's design drawings. Proposed floor finish to have minimum density of 15kg/m². Ceiling finish is to be 1 no. layer of 15mm thick British Gypsum wallboard (minimum 10kg/m² mass per unit area, or similar approved, to provide minimum fire resistance of 30 minutes. Ceiling is to receive nominal taped and joint finish, unless otherwise preferred by Bellway Homes. Consideration should be given to the impact of placing light fittings within the ceiling finish. Please refer to relevant NHBC guidance, 6.4/10 dated December 2008. Important Note: The appointed timber engineered floor joist manufacturer is to provide designs based on the working drawings, which are to be submitted to the Architect and the Structural Engineer for approval, prior to

6.5 Limiting Thermal Bridging & Air Leakage

Upper floor construction to houses, due consideration should be given to the requirements associated with APA Accredited Detail Number FF-IF-01 around the junctions with the external walls. The appointed contractor(s) should familiarise themselves with the above mentioned details, prior to undertaking the works.

7.0 EXTERNAL WALLS 7.1 Facing Brickwork & Block Inner Leaf

330mm Cavity external wall (u-value 0.18W/m²K) construction comprising: 103mm approved facing brick outer skin laid in stretcher bond (except where elevations show otherwise) with bucket handle joints (mortar mix and brickwork to NHBC Standards Chapter 6, sulphate resisting where required by Structural Engineer). Facing brickwork to extend 3 courses below finished ground level. For details of external finishes, see materials schedule and specification. 130mm cavity fully filled with Knauf Supafil 34 (thermal conductivity 0.034W/mK), or similar approved, injected glass mineral wool insulation, 100mm thick lightweight block inner leaf (thermal conductivity 0.15W/mK), or similar approved. Density to be between 450kg/m² and 800kg/m². Strengths to be as indicated on the GA plans and as specified by the Structural Engineer. Internal wall finish is to be 1 no. layer British Gypsum | wallboard (nominal 8kg/m² mass per unit area), or similar approved, on plaster dabs. Provide 225mm long ST1 HD stainless steel wall ties, by Ancon or similar approved, set at 450mm vertical and 750mm horizontal staggered centres. Specification to be confirmed by the structural Engineer. DPC to be 2000 gauge polythene in accordance with BS743 and located minimum 150mm above external ground level. Refer to detailed construction drawings. Cavity wall insulation to fill the full extents of the cavity, height, width and depth in accordance with the MIMA insulation guidance. All fillings to the external leaf (for example canopies and railings) are to be fixed in accordance with Structural Engineer's instructions. Generally, close cavity at door and window openings with a proprietary insulated cavity closer (minimum thermal resistance path through the closer of not less than [0.45m²K/W). All windows and doors are to be positioned within opening in such a way to avoid cold bridging, generally, front of frame to overlap the outer leaf by 30mm. Openings in external walls generally to have cavity trays over with minimum 2no. weep holes at 450mm maximum centres. All window jambs are to be constructed in accordance with APA Accredited Detail Number FF-WD-04. Generally, continuous cavity fire stops are to be provided at all separating wall and floor junctions in the form of an oversized sleeved mineral wool cavity sock, by Rockwool or similar. Wall ties are to be provided at maximum 225mm centres around all window and door

openings and no more than 225mm from either side of all masonry expansion joints. 7.4 Masonry Expansion Joints

Masonry expansion joints are to be provided in accordance with the GA plans, elevations and Structural Engineer's details. Refer to working drawings for locations. Wall ties are to be placed within 225mm (either side) of all

movement joints. 7.5 Galvanised Steel Lintels

Galvanized steel insulated cavity lintels designed, tested and manufactured fully in accordance with the British standard, with integral insulation to suit cavity width. Openings over 1.2m wide may require 'propping' until the brickwork over has matured. Minimum bearing of lintels to be 150mm each end bearing to be onto complete block. Lintels above internal doors are to have minimum 100mm end bearing up to 1200mm clear span and 150mm bearing over 1200mm openings. All lintels are to be in accordance with the manufacturer's schedules and calculations. All lintels are to be installed in accordance with the manufacturer's installation guidance and recommendations. Where the lintels approved for use have a continuous steel bottom plate, insulated plasterboard is to be used at the head of the window internally. Insulated plasterboard is to comprise of minimum 15mm insulation (minimum thermal conductivity 0.025W/mK) and 15mm Soundbloc plasterboard. To be in accordance with APA Accredited Detail Number FF-WD-01. Consideration should however be given to the location of the background trickle ventilators when specified in the top of the window frames. Important Note: The appointed lintel manufacturer is to provide schedules and calculations for all cavity wall lintels, which are to be submitted to the Architect and Structural Engineer for approval, prior to manufacture.

Thermal Insulation is to be provided as noted previously within this document. All insulation products proposed for use within the development are to have a GWP of less than 5.

ROJECTS\4720\ENT\700\4720-700.DWG 160817083644 ROB-0

DPC cavity trays are to be filled over all external cavity lintels. The length of the trays to extend 150mm beyond the lintel ends and have stop ends. Allow at least 2 no. proprietary plastic pre-formed weep holes per opening, colour to match brickwork, not more than 450mm apart. Cavity trays are to be filled over all air bricks bridging the cavity. The cavity tray is to extend 150mm minimum each side of bridge. Proprietary weep holes at 450mm maximum centres (colour to match mortar). Continuous horizontal cavity trays are to be provided immediately above all fire barriers at all separating floor levels (apartments & houses). In situations where a roof abuts an external wall, a stepped cavity tray is to be installed above the roof raking down the line of said roof. This terminates above Code 4 lead flashing also running along the line of the roof with minimum 150mm up-stand lead work to be installed strictly in accordance with Lead Sheet Associations instructions and recommendations. Proprietary, plastic pre-formed weep holes (colour to match brickwork) are to be located at maximum 450mm centres.

8.1 Masonry Separating Walls (Between Dwellings)

300mm masonry party wall (u-value 0.00W/m²K) construction comprising: 2 No. leaves 100mm thick concrete blockwork. Density to be between 1350kg/m³ and 1600kg/m³. Strengths to be as specified by the Structural Engineer. 100mm cavity fully filled with Knauf Supafil Party Wall Wool. Supafil Party Wall Wool is only to be installed by contractors approved by Knauf Insulation; and must not exceed 25kg/m³ density once installed. Cavity and wall ties are to be kept free from mortar droppings and debris. Fully fill all blockwork joints with mortar. Ensure that all injection holes are drilled through mortar joints and made goad by fully filling with mortar. Provide 225mm Fire ratings for fire door assemblies are given in minutes and noted in the door schedule. Door leaf must have a long Ancon HRT4, or similar approved, wall ties as described in BS.EN 845-11:2003 and DD140 and spaced at 450mm vertical and 750mm horizontal centres (not staggered) to all party walls. Walls to be finished with 1no.layer 15mm British Gypsum Soundbloc plasterboard (nominal 8.0kg/m² gypsum based), or similar approved. Plasterboard to be on plaster dabs and applied to both sides. Mortar joints to cover the full thickness of the blocks. leave no voids. Cavities between external and separating walls to be linked and cavity insulation carried across separating walls to form continuous cavity barrier. Alternatively, where manufacturer's technical literature permits, continue the full fill cavity wall insulation to act as the fire stop. Party wall construction is to continue up to the underside of the roof finish and junction between separating wall and roof filled with a flexible mineral wool fire stop closer. All chases for services are to be kept to a minimum and filled well with mortar. Stagger chases on each side of the wall to avoid them being back to back. Catnic, or similar approved, coil mesh 64mm bed joint reinforcement is to be placed within each leaf at 450mm vertical centres for the full height of the party wall, unless otherwise advised by the Structural Engineer. Important Notes: Party wall construction is to be strictly in accordance with Robust Detail E-WM-28. Make sure that there is no connection between the two leaves of masonry except for the wall ties, insulation and foundations. Communal face of party walls could be hard wall plastered if so desired by the client. Due consideration should be given to the requirements associated with APA Accredited Detail Number FF-IW-01 in respect of thermal bridging at party wall junctions. It should be noted that the party wall construction, noted previously within this document, is to be adhered to for Robust Detail

9.2 Non-Load Bearing Timber Internal Partitions.

63mm overall thickness timber partition comprising: Treated softwood timber stud partition, or similar approved. To be finished with 1no. layer 15mm British Gypsum Soundbloc plasterboard, or similar approved, applied to both sides to provide minimum 40db sound reduction from airborne sound. This applies to internal walls between a room and a bedroom or room containing a W/C however, excludes the wall between an En-suite and a bedroom. Important Notes: Moisture resistant plasterboard is to be installed to all kitchens and wet rooms, unless otherwise indicated on the working drawing general arrangement floor plans. Where protected hallways are provided within dwellings, the plasterboard finish to the walls forming the same, are to achieve a minimum of 30 minutes fire resistance. Reinforcement framing is to be provided to support medium to heavy fixtures such as radiators and kitchen wall units etc., where appropriate. Where protected hallways are provided within dwellings, the surrounding partition construction is to continue to the ceiling. Services and ducting passing through 30 minute fire resistant partitions are to be sealed/filled with fire collars, accordingly. Ducting for soil and vent pipes is to be lined with 2no. layers of 15mm Soundbloc plasterboard. 12mm thick plywood lining is to be incorporated into the overall wall build-up in wet rooms for compliance with the ER's in all HA units. Typically, this is to be face fixed to the studwork and all boxing.

10.0 LIMITING THERMAL BRIDGING AND AIR LEAKAGE

Ensure all gaps are sealed around partition perimeters and junctions- apply flexible sealant as necessary. Air movement at rear of dry lining is to be limited by sealing of gaps between masonry walls and openings. Continuous dabbing of plasterboard adhesive is to be applied around all door and window openings and room perimeters at ceiling and floor level and vertical wall junctions and all electrical points. Seal all penetrations where service pipes pass through any walls, partitions and duct casings with expanding foam or other suitable flexible sealant. Please refer to the APA Accredited Details for Thermal Bridging.

10.2 Manufacturer's Data

Brick, block and mortar manufacturer's suitability for use guidance. Plasterboard manufacturer's installation guides to linings and partitions.

11.0 EXTERNAL WINDOWS & DOORS

11.1 New External Windows & Doors Generally.

Windows and doors are to provide opening lights and styles, as indicated on the working drawing elevations. All windows and doors are to include draught excluder, weather strips etc. All windows and doors are to be manufactured in Aluminium; colour in accordance with planning approval. All entrance doors are to be manufactured in aluminium and finished to match as close as possible the proposed windows. Sills are to be factory fitted and sized to suit set back of frame and sub-sill detail. The window manufacturer should ensure they refer to this document, in conjunction with the Employer's Requirements, prior to undertaking the works/manufacture. All proposed apertures are to be checked on site, prior to manufacture. Sill profile acceptors to receive 25mm moisture resistant MDF internal boards. Each and every frame should have the appropriate BS or BBA certification reference clearly visible. All windows are to be located as identified on working drawings. All windows (including frames etc.,) to achieve a minimum U-value of 1.40W/m²k, in accordance with the SAP calculations, unless project dictates otherwise. All external doors (including frames etc.,) to achieve a minimum U-value of 1.00W/m²k, in accordance with the SAP calculations, unless project dictates otherwise. All upper floor and other externally inaccessible windows are to be fitted with easy clean hinges, for cleaning purposes. Level thresholds are to be provided where indicated on the working drawings, in accordance with Approved Document M of the Building Regulations. All front entrance doors are to be manufactured to provide a minimum 800mm clear opening. All doors on escape routes, whether or not fire doors, shall not be fitted with a lock, latch or bolt fastenings, unless they are filled with simple fastenings that can be readily operated from the side approached by people making an escape. The operation of any such fastening shall be without the use of a key and without having to operate more than one mechanism. All windows to be in accordance with BS7950.

11.3 Secured by Design (External Windows & Doors)

This specification attempts to highlight some of the key external window and door specification requirements, in respect of complying with Section 2 of Secured by Design. The following is by no means an exhaustive list and the window/door manufacturer should refer to the Secured by Design (New Homes 2014) guidance and the report prepared by the Secured by Design Officer, specifically for this project. All front entrance door sets are to comply with Secured by Design security and performance standards (i.e. tested/certificated to PAS 23/24). Please refer to sections 21.1 to 21.4 (inclusive) of the Secured by Design 'New Homes 2010' guidance. All locking systems are to comply with the Secured by Design requirements. Please refer to sections 21.5 to 21.8 (inclusive) of the Secured by Design 'New Homes 2010' guidance. Careful consideration should be given to doors on escape routes. Door sets are to be securely fixed to the fabric of the building, in accordance with the specialist manufacturer's installation specifications. Please refer to section 21.9 of the Secured by Design 'New Homes 2010' guidance. All glazed panels, in or adjacent to doors are to be laminated and tested/certificated as an integral part of the door set. Please refer to sections 21.11 to 21.12 (inclusive) of the Secured by Design 'New Homes 2010' guidance. Door chains or limiters are to be fitted to all front entrance doors in accordance with section 21.14 of the Secured by Design 'New Homes 2010' guidance. Letter plates or boxes associated with the front entrance doors are to comply with the crime prevention solutions, as described in the sub clauses of sections 21.18 to 21.19 (inclusive) of the Secured by Design 'New Homes 2010' guidance. All external door sets not designated as the main access/egress route are to meet the same physical standards as the 'front door'. Please refer to section 21.1 of the Secured by Design "New Homes 2010" guidance. All French windows and external glazed double doors are required to meet the same physical standard as the 'front door'. Please refer to section 26.2 of the Secured by Design "New Homes 2010" guidance. All glazing in or adjacent to these doors is to be laminated to a minimum thickness of 6.4mm and securely fixed, in accordance with the manufacturer's specifications. Please refer to section 26.3 of the Secured by Design 'New Homes 2010' guidance. All ground floor and other easily accessible windows are to be tested/certificated to meet BS 7950: 1997 and assessed to the relevant material standard. Please refer to sections 28.1 to 28.4 (inclusive) of the Secured by Design 'New Homes 2010' guidance. All windows are to be securely fixed to the fabric of the building, in accordance with the specialist manufacturer's installation specifications. Please refer to section 28.5 of the Secured by Design "New Homes 2010" guidance. All ground floor and easily accessible upper floor windows are to be fitted with minimum 6.4mm thick laminated glass. Please refer to section 28.8 of the Secured by Design 'New Homes 201 0' guidance. These windows shall also have key operated locks. Please refer to section 28.6 of the Secured by Design 'New Homes 2010' guidance. Al

11.4 Background Ventilation

Background ventilation should be provided to satisfy the requirements of Approved Document F of the Building Regulations in relation to ventilation system 01. Ventilators should be located in all rooms with external walls, with at least 5000mm² equivalent area in each habitable room and 2500mm² equivalent area in each wet room. If MVHR system 4 is used no background ventilation is required.

11.5 Purge Ventilation

Windows to habitable rooms are to provide opening lights with a free open-able area of at least 1/20th of the internal floor area of the room. Window manufacturer is to ensure that this achievable via the windows indicated on the working drawings.

11.6 Ironmongery & Security

All ironmongery and security features in respect of the proposed windows are to be in accordance with the relevant British Standards and codes of practice, as well as the Secured by Design criteria, noted previously within this document.

11.7 Fitting Generally

Windows are to be supplied with suitable requisite fixing cleats and head fixing ties. Internal plaster stops are not required. The sub-frame is to be manufactured to suit the exact brickwork opening; the window to be fitted is to be exactly sized to give the manufacturer's required clearance. The sub-frame is to be built in as work proceeds in accordance with the BBA Certificate procedure. All window openings are to be site measured prior to manufacture of the window modules. All external window and door sets are to be securely fixed to the fabric of the building, in accordance with the specialist manufacturer's installation specifications. The window manufacturer is to make sufficient allowances/tolerances for the window modules to be fitted within the structural openings indicated on

Internal doors on escape routes, whether or not the doors are fire doors, shall not be fitted with lock, latch or bolt fastenings unless they are filled with simple fastenings that can be readily operated from the side approached by people making an escape. The operation of any such fastenings shall be without the use of a key and without having to operate more than one mechanism. All internal doors are to provide a minimum clear opening of 750mm, unless noted otherwise within the internal door schedules (i.e. cupboards for example). To ensure good transfer of air throughout the building, there should an undercut of a minimum area 7,600mm² in all internal doors above the floor finish (equivalent to a 10mm undercut to a 762mm door). Notwithstanding the above mentioned maximum allowable threshold gap below a fire door. Please refer to Bellway Homes finishes schedule for details of required finish etc. Please refer to selected specialist manufacturer's typical non-loadbearing studwork details and guidance for information relating to provisions to be made when setting out the structural openings for all internal doors (i.e. an allowance should be made for the fixing of a timber packer to the vertical studs at all door jambs, to aid the fixing of the softwood linings etc.).

full test report to the British Standard and have BWF Certifier Accreditation. The complete fire door assembly, including its frame, intumescent seals, hinges, glazing and ironmongery must perform to the British Standard. The door assembly must carry a permanent and tamper evident label. The manufacturer's specific and comprehensive installation instructions must be followed. Fire doors should be fitted with a self-closing device, where noted on the internal door schedule, in accordance with Approved Document B of the Building Regulations.

All windows and external doors to have suitable mastic sealant applied to front and back of frames in accordance with manufacturer's recommendations. Provide adequate draft stripping to loft hatches and roof access doors. Separating/party walls and floors to be constructed and sealed.

New staircases are to achieve full compliance with Approved Document Part K of the Building Regulations. Headroom at stairs and landings to be minimum 2000mm, unless otherwise detailed. Risers are not to be open. Handrails to be 900mm above pitch line and landings. Landings should be provided at the top and bottom of every flight and the width and length should be at least as great as the width of the flight. A door may swing across a landing providing it is infrequently used (i.e. a store cupboard door) and leaves a minimum of 400mm clear space across the full width of the flight. Please refer to the working drawings for precise rise and goings etc. No opening in the balustrade is to allow the passage of a 100mm diameter sphere and should not be readily climbable. Where tapered treads are formed, treads should measure minimum 50mm at the narrow end and min 234 going, mid-width. Maximum pitch of 42°. Important Note: The appointed staircase manufacturer is to provide designs based on the working drawings, which are to be submitted to the Architect for approval, prior to manufacture.

Code 4 stepped and cover flashing dressed over ties by at least 150mm (see manufacturer's recommendations) and turned up brickwork 150mm min or to Lead Sheet Association requirements. Flashing fixed in position with lead wedges 25mm minimum into brickwork joint and pointed. Cavity trays are to be provided above lead work where external wall becomes internal. All lead work is to be carried out in strict accordance with the Lead Sheet Association's recommendations and guidance.

Corrosion protection to all steelwork is to be as specified by the Structural Engineer. Structural steelwork is to be fire protected to a minimum 30 minutes. All steelwork and associated connections are to be in accordance with Structural Engineer's drawings and specification.

Any steelwork (to Structural Engineer's calculations) to be built-in solid (supported on pad stones to Structural Engineer's design) and levelled with steel shims provided and treated with either: Finished with intumescent paint, nullifier or similar approved, to achieve a minimum of 30 minutes fire resistance where appropriate or, Encased with suitable number of layers of Knauf cement bonded particle board, or similar approved, applied in strict accordance with specialist manufacturer's recommendations. To achieve minimum 30 minutes fire resistance where appropriate. All joints are to be sealed with intumescent mastic, or similar approved.

17.1 Pitched Roof Construction Generally

Where possible, the main roofs are to generally be formed using prefabricated timber trussed rafters, manufactured in accordance to specialist design and calculations and the requirements of 886399; Part 2 & 3, BS5268; Part 2 & 3, BS4978. Sizes are to take account of the type of roof covering and weight. Roof pitches are to be as shown on working drawings. Roof trusses are to bear on to a minimum 100 x 75mm treated softwood timber wall plate strapped to blockwork at maximum 2m centres with 30 x 5mm galvanised mild steel straps, unless otherwise specified by the Structural Engineer. Where applicable, gable ladders are to be specified by truss manufacturers and fixed to last truss (and built solidly in to the external wall). External walls are to be built around gable and to finish level with the top of the gable ladder. Provide and trim for a nominal 520 x 520mm roof access hatch, in locations indicated on the working drawings. Hatch to be located a minimum of 300mm from all vertical internal wall faces. Roof access space hatches are to be insulated and draught sealed with a bolt or catch to compress the seal. Roof access hatches are required to provide a minimum of 30 minutes fire resistance where indicated on the WORKING GRAWING GENERAL AFRANGEMENT TIOOF DIANS. UNGERSIGES OF FOOT TRUSSES (AT SECONG TIOOF IEVEL) ARE TO DE finished with 1 no. layer of 15mm British Gypsum wallboard, or similar approved, to provide minimum 30 minutes fire resistance. Provide 30 x 5mm galvanised mild steel straps at a maximum of 2m centres along ceiling and verge levels. in scenarios where the roof trusses and floor joists run parallel to the external walls. Straps are to be securely fixed to 3no. trusses/joists and turned down the cavity face, of the inner leaf of masonry, a minimum of 1500mm. Treated softwood timber packing pieces are to be provided between the end of the truss/joist and wall. Softwood noggins are to be provided between trusses/joists, on line of straps. New roof structure, dead and imposed loads should be calculated in accordance with the British standard. Structural timber should be specified according to strength classes of British Standard in conjunction with Approved Document A of the Building Regulations. Wind loads appropriate to the site location should be calculated in accordance with British Standard and the roof designed to resist wind uplift, holding down straps should be utilised where the self-weight of the roof is not sufficient-check with the local building control. Selected roof tiles are to be suitable for the pitch stated on the working drawings. All roof tiles are to be laid in accordance with the manufacturer's installation guidance and laid on Glidevale Protect VP400 vapour permeable underlay, or similar approved. Ventilation of the roof void is to be provided via proprietary vent tiles and ridge vent tiles, Glidevale FV100, or similar approved as indicated on the detailed construction drawings. All renewable energy equipment located on the proposed roof structure, such as photovoltaic/solar thermal panels, is to be in accordance with specialist's design and specification. Roof truss manufacturer is to take into account the weight of the above, as part of the design. Provide 110mm diameter half round aluminium gutters (refer to working drawings for details) discharging into 63mm diameter aluminium down pipes in locations indicated on the general arrangement floor plans and elevations. All jointing, fixing and falls are to be in accordance with the manufacturer's instructions. All penetrations through the proposed roof finishes (i.e. soil and vent pipes) are to be installed and weatherproofed in accordance with the manufacturer's guidance. Sleeved mineral wool fire stop cavity barriers (oversized and friction fitted within the cavity) should be provided at eaves level, in accordance with the detailed construction drawings. In addition, all boxed eaves are to be filled with mineral wool, or similar fire resisting material, for at least the width of the party walls. All fire stopping is to be interlinked accordingly.

17.2 Flat Roof Construction Generally

Flat roof to be made up of proprietary single ply membrane system installed by manufacturer approved specialist contractor with all fixings, fillets, welds, laps and joints strictly in accordance with manufacturer's design, details and specification. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be properly heat welded before leaving the job site each day. All surfaces of the insulation shall be inspected prior to installation of the roof membrane. All substrates shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet, or damaged insulation boards shall be removed and replaced. All surfaces to receive new insulation, membrane, or flashings shall be clean, smooth, dry, and free from flaws, sharp edges, loose foreign material, oil, and grease. Should surface moisture occur, the contractor shall provide the necessary equipment to dry the surface prior to application. Roofing shall not start until all defects have been corrected. Uninterrupted waterstops shall be installed at the end of each day's work, and shall be completely removed before proceeding with the next day's work. Waterstops shall not remain in contact with the finished roof as the installation progresses. Certain membranes are incompatible with polystyrene, asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with membranes. The Contractor shall consult manufacturer regarding compatibility, precautions, and recommendations. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over insulation board shall be provided for roof areas which receive rooftop traffic during construction. The Contractor shall take precautions that storage and/or application of materials and/or equipment does not overload the roof deck or building structure. Flammable adhesives shall not be stored and shall not be used in the vicinity of open flames, sparks and excessive heat. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Adhesive odours could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odour while ventilating the building. Keep lids on unused cans at all times. Wherever possible, air intakes should be sealed off during adhesive application. Appropriate protective wear shall be worn when using solvents or adhesives or as required by job conditions. Workers shall follow OSHA safety procedures. All membranes in accordance with BS 8747 laid to the recommendation of CPP 144 Part 3 on 1 on WBP sheathing fixed over 150mm PIR rigid insulation. Vapour control layer to warm side of insulation over 15mm OSB deck. Installation to manufacturer's specification and to achieve U-value of 0.15W/m²K. Consult manufacturers for further guidance. Roof structure to include timber firrings of minimum depth of 25mm forming falls of 1:80 (to rainwater shoots/outlets) using engineered timber joists, manufactured in accordance to specialist design and calculations. Sizes are to take account of the type of roof covering, weight and access for maintenance. Joists to be built in to wall and strapped to blockwork at maximum 2m centres with 30 x 5mm galvanised mild steel straps, unless otherwise specified by the Structural Engineer. Undersides of roof joists (at second floor level) are to be finished with 1 no. layer of 15mm British Gypsum wallboard, or similar approved, to provide minimum 30 minutes fire resistance. Provide 30 x 5mm galvanised mild steel straps at a maximum of 2m centres along ceiling and verge levels, in scenarios where the roof joists run parallel to the external walls. Straps are to be securely fixed to 3no. joists and turned down the cavity face, of the inner leaf of masonry, a minimum of 1500mm. Treated softwood

timber packing pieces are to be provided between the end of the joist and wall. Softwood noggins are to be provided between joists, on line of straps, New roof structure, dead and imposed loads should be calculated in accordance with the British standard. Structural timber should be specified according to strength classes of British Standard in conjunction with Approved Document A of the Building Regulations. Wind loads appropriate to the site head within 3000mm horizontally from the pipe (the dry part of the stack may reduce from 100mm to 75mm location should be calculated in accordance with British Standard and the roof designed to resist wind uplift, holding down straps should be utilised where the self-weight of the roof is not sufficient-check with the local building control. All roof membranes to be applied in accordance with the manufacturer's installation guidance and laid on 19mm WBP ply board on main roof and 22mm WBP ply board on smaller roofs or as details depict. Ventilation of the roof void is to be provided vapour control layer, or similar approved as indicated on the detailed construction drawings unless voids are fully filled where possible. All renewable energy equipment located on the proposed roof structure, such as photovoltaic/solar thermal panels, is to be in accordance with specialist's design and specification. Roof joist manufacturer is to take into account the weight of the above, as part of the design. Provide lead lined shoots to aluminium hoppers (refer to working drawings for details) discharging into 63mm diameter aluminium down pipes in locations indicated on the general arrangement floor plans and elevations. All jointing, fixing and falls are to be in accordance with the manufacturer's instructions. All penetrations through the proposed roof finishes (i.e. soil and vent pipes) are to be installed and weatherproofed in accordance with the manufacturer's guidance.

18.0 ROOF INSULATION & VENTILATION

In cold roofs provide insulation consisting of 100mm thick Knauf Earthwool Loft Roll 44 insulation (thermal conductivity 0.044W/mk) laid between the bottom chords of the roof trusses or ceiling joists and 1 no. layer of 300mm thick Knauf Earthwool Loft Roll 44 insulation (thermal conductivity 0.044W/mk) cross laid over the bottom chords of the roof trusses or ceiling joists. Overall build-up is to achieve a minimum u-value of 0.11W/m²K. High level ventilation within the roof void is to be provided using a dry ridge tile ventilation system, as indicated on the detailed construction drawings, to achieve ventilation equivalent to a 5mm continuous gap, as required by the NHBC Standards. Provide ventilation equivalent to a continuous 10mm over fascia vent, running the full length of the eaves by proprietary vent tiles and ridge vent tiles. Vent tiles to be at 1000mm¢ horizontally. Ensure an air path above the roof insulation. All insulation products proposed for use within the development are to have a GWP of

18.2 Limiting Thermal Bridging & Air Leakage

Due consideration should be given to the requirements associated with following APA Accredited Details for Thermal Bridging, in respect of the roof construction, as follows: Eaves (insulation at ceiling level) APA Detail Number FF-RE-01. Eaves (insulation at rafter level) APA Detail Number MCI-RE-04. Gable (insulation at ceiling level) APA Detail Number FF-RG-01. Gable (insulation at rafter level) APA Detail Number MCI-RG-02.

Approved Document F of the Building Regulations ventilation system 01 is to be used, which consists of background ventilators and intermittent extract fans. General layouts are shown on the working drawing general arrangement floor plans however; these are to be verified by a specialist designer. Purge, background and mechanical ventilation requirements are all subject to specialist designer's/manufacturer's details. Natural ventilation is to be provided within all cycle and refuse stores, in accordance with the working drawings.

20.0 SMOKE DETECTION, CARBON MONOXIDE ALARMS & ESCAPE SIGNAGE

All new houses should be provided with fire detection and fire alarm systems, in accordance with the relevant recommendations of BS 5839-6:2013 Code of Practice for the Design, Installation and Maintenance of Fire Detection and Fire Alarm Systems in Dwellings to at least Grade D Category LD3 Standard. Smoke and heat alarms must be mains operated and conform to BS 5446-1:2000 or BS 4446-2:2003 respectively: Fire Detection and Alarm Devices for Dwellings, Part 1 Specification for Smoke Alarms, or Part 2 Specification for Heat Alarms. They should have a standby power supply such as a battery (either non-rechargeable or rechargeable) or capacitor. More information is given in clause 15 of BS 5839-6. At least one approved smoke alarm unit must be fitted in circulation areas at each floor level in every dwelling and be positioned a maximum of 7m from kitchen or living room doors, maximum of 3m from bedroom doors and a minimum of 300mm from light fittings and walls. Large circulation areas may require two units; check Approved Document B of the Building Regulations. Alarms must be connected to a separately fused mains electricity supply with a transformer (if needed), a three hour capacity battery back-up and where more than one unit is fitted within a dwelling, they must be interconnected. The installation must comply with the current IEE regulations. Detectors should not be placed over stairwells. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be a compatible interlinked heat detector of heat alarm in the kitchen, in addition to whatever smoke alarms are need within the circulation spaces. Carbon Monoxide detectors are to be located where shown on drawings but, generally adjacent the boiler location and in any room containing a solid fuel appliance (e.g. open fire).

21.0 ELECTRICAL SERVICES

Electrical installation - please see the services drawings for the electrical layout only. Particular consideration should be given to the need to de-rate cables which are covered or surrounded by thermal insulation. Switches, outlets and controls are to be located as follows: Any service control needed to be operated or read on a frequent basis, or in an emergency, should be included within the height band of 450-1200mm from finished floor level. Please refer to diagram 22 within Approved Document M of the Building Regulations. Switches for permanently wired appliances are located between 450mm and 1200mm above the floor, unless needed at a higher level for particular appliances. Simple push button controls that require limited dexterity are not more than 1200mm above the floor. The operation of switches, outlets and controls does not require the simultaneous use of both hands, except where this mode of operation is necessary for safety reasons. Switched socket outlets indicate whether they are 'on'. Mains and circuit isolator switches clearly indicate that they are on or off. Front plates contrast visually with their backgrounds. Installation is to be carried out in accordance with the current IEE regulations, the electricity supply regulations, and CIBSE guides and to the approval of the Electricity Board. Where ducts, conduits and cables pass through separating or load bearing walls, the surrounding gap is to be filled with intumescent mastic or expanding foam to maintain fire rating of wall. All external space lighting light fittings are to be dedicated low energy fittings and controlled by movement detecting shut-off devices (PIR) or timer switches. All burglar security lights are to have a maximum wattage of 150W and are to be fitted with movement detecting shut-off devices (PIR) and daylight cut-off devices. All other security lighting is to be specially designed to accommodate CFL, luminaries or strip lights and be fitted with dawn-to-dusk sensors or timers. All internal energy efficient light fittings must be capable of only accepting lamps having an average luminous efficiency not less than 40 lumens per circuit watt. All fittings will comprise of the lamp, control gear and appropriate housing, reflector, shade or diffuser. All external energy efficient light fittings will be capable of only accepting lamps having an average luminous efficiency not less than 40 lumens per circuit watt. All fittings will accommodate only compact luorescent lamps (CFL) luminaries or strip lights and be controlled by a time clock or daylight sensor. Electricity and primary heating fuel consumption data must be displayed to occupants via a correctly specified energy display device, in accordance with the Code for Sustainable Homes specification. Please refer to same for full details. The electrical contractor is to provide Bellway Homes with a whole house electrical certificate, for each dwelling, prior to final completion. Important Notes: This specification is to be read in conjunction with the Code for Sustainable Homes Specification. All dwellings are to be fitted with 100% dedicated low energy lighting 21.1 Secured by Design (Electrical Services)

This specification attempts to highlight some of the key electrical specification requirements, in respect of complying with Section 2 of Secured by Design. The following is by no means an exhaustive list and the electrical sub-contractor should refer to the Secured by Design (New Homes 2014) guidance and the report prepared by the Secured by Design Officer, specifically for this project, lighting is to be provided which illuminates all external doors, car parking areas and some footpaths leading to dwelling entrance doors. Please refer to section 30.1 of the Secured by Design 'New Homes 2010' guidance. light spill, in respect of dwelling security lighting, is to be controlled using suitable photometry. Please refer to section 30.3 of the Secured by Design 'New Homes 2010' guidance. All external lighting is to switched using photo electric cell with a manual override facility. Please refer to section 30.4 of the Secured by Design 'New Homes 2010' guidance. A 13 amp non switched fused spur, suitable for an alarm system is to be installed within all dwellings.

2.0 PLUMBING & SPACE HEATING

Plumbing and heating designs are all to be in accordance with M&E Engineer's or specialist sub-contractor's design and details. Suggested radiator locations have been indicated on the working drawing general arrangement floor plans however, the heating designer's drawings are to be referred to in respect of required output and sizes etc. Generally, space heating is to be provided by wall mounted balanced flue condensing type boilers, supplying a wet radiator system. Gas boiler to be installed by a GAS SAFE registered engineer, to comply with the current Building Regulations and British Standards. Typically, boiler flues are to be positioned a minimum of 300mm from openings into buildings and returns (including extractor fans), as indicated in Diagram 3.4 within Approved Document J of the Building Regulations. Provide durable wire guard to flue if less than 2m from external ground level. The boiler should only fire when there is a demand for heating and hot water. A copy of the operating and aintenance information for the heating and hot water systems is to be provided on completion of the installation. This information should be in an accessible location and directly relate to the system installed. The instructions should explain how to operate and maintain the system to ensure efficiency and the conservation of fuel and power. Certification to be provided on completion, to confirm that the space and water heating, and relevant information regarding the operation, has conformed to Approved Document L1A of the Building Regulations. The contractor is to provide Bellway Homes with the relevant Benchmark certificates prior to handover. Provide insulation to pipes and ducts unless the heat loss from the pipe contributes to the useful heat requirement of the room space. All radiators are to be fitted with thermostatic controlled radiator valves to shut off heat when room temperature is reached, except those fitted in the same room/zone as the location of the room thermostat which provides boiler interlock in accordance with Approved Document L1A of the Building Regulations. Room thermostat(s) are to be provided to switch off the boiler when no heat is required. Additional zonal room thermostats and timing controls are to be provided where the floor area of the dwelling exceeds 150ml. Separate timing devices should be provided for room space heating and hot water control. Boilers used for the operation of space heating and hot water systems, for each dwelling, to have a dry NO2 emission level of equal or less than 40mg/Kwh. Important Note: The above specification notes are all subject to specialist M&E Contractor/Plumbing and heating designer's details and therefore, may be superseded.

23.0 ABOVE GROUND DRAINAGE & PLUMBING INSTALLATION

Plumbing installation to be specialist designed in accordance with the local Water Supply Bylaws. All materials in respect of sanitary pipework are to meet all current British Standards and codes of practice. Insulate incoming main. All fittings are to have 75mm deep seal traps. Basins and bidets to have 32mm diameter wastes maximum 1 7m length (anti-siphon trap or increased pipe diameter if longer); all other wastes (excluding WC) to be 40mm diameter, 1.7-3m length (anti-siphon trap or increased pipe diameter if longer. This will increase to 50mm diameter where pipework length is in excess of 3-4m in length and where there is combined appliance waste. WC waste is to be 100mm diameter. All waste pipes shall be laid to falls. Provide waste connections for washing machines and dishwashers, where applicable. All plumbing shall be installed in accordance with manufacturer's

instructions. The maximum lengths of waste pipes shall be as follows: 32mm pipe = 1.7m maximum length 40mm pipe = 3.0m maximum length 50mm pipe = 4.0m maximum length +100mmenfise = 6.0dd erdxirimumfile length Soil and ventilating stacks to terminate via 'mushroom' ventilator and 900mm minimum above any window diameter above the highest branch). Discharge/soil stacks may terminate inside a building when fitted with air admittance valves provided they are accessible and within the insulated envelope of the building. Air admittance valves can only be fitted to a limited number of ventilation stacks without ventilation of the drainage system - Civil Engineer must confirm locations of open vented stacks required. Soil pipes to be fully insulated with 50mm thick mineral wool, or similar approved (internally, up to underside of roof insulation) and enclosed with 2 no. layers of 15mm Soundbloc plasterboard on 38 x 50mm, softwood timber framing. Provide access for rodding as required. Pipework laid between joists is to be adequately supported. All layers of wall plasterboard to be carried through behind soil and vent pipe. Anti-Syphon traps are to be used where noted above. Provide branch ventilation pipes where required over spill over levels. Provide removable access panels to facilitate rodding and access panels to

WC sixtype at appropriate leastings. Stub stacks are to terminate minimum of 100mm above flood level of highest. WC cisterns at appropriate locations. Stub stacks are to terminate minimum of 100mm above flood level of highest appliance with air admittance valve fitted. Rodding eyes provided above flood level at all lengths, not otherwise accessible. A large radius bend (at least 200mm at centreline) is to be provided at the base of all soil and vent pipes, unless otherwise noted by the M&E or Civil Engineer's, with access above floor level for rodding.

24.0 SANITATION, HOT WATER SUPPLY & WATER EFFICIENCY

24.1 Approved Document Part G1 - Cold Water Supply

Wholesome water required to places where output is used for drinking or for a sanitary convenience. All cold water storage tanks are to be supported on a rigid platform. All water provided for human consumption and personal hygiene is to be provided by a licensed water supplier. Reclaimed water; where specified, the water generated should not be supplied to appliances where water is drawn off for personal hygiene, drinking or culinary use. Reclaimed water which has been suitably filtered and/or treated In accordance with the relevant standards and regulations can be used to supply W/C's, washing machines and garden taps. Marking of pipework to be in accordance with WRAS Information and guidance note number 9-02-05.

24.2 Approved Document Part G2 Water Efficiency

Potential consumption of wholesome water by occupants of a single dwelling must not exceed 105 litres per person per day for compliance, 125 litres for Building Regulations compliance. Contractor is to provide Bellway Homes with a record of details of the installed system to ensure that the home owner can renew at a later date (sanitary appliances/white goods). 5 litres of the 105 litres per day per occupant allows for external use. Important Note: The above specification notes are all subject to The Code for Sustainable Homes Specification and therefore,

24.3 Approved Document Part G3 - Hot Water Supply, Systems & Safety

Any storage vessels should not allow water to exceed 100°C. Discharge from any safety devices should be located so as not to endanger anyone in or about the building. Hot water supply to baths is not to exceed 48°C. Hot water system needs to resist temperature and pressure variations in normal use or if malfunction occurs. In line blending valve/thermostatic mixing valve on bath (48°C maximum) should not be easily altered by the occupants. Vented systems; need to have a vent pipe from the storage vessel to terminate over a cold water store cistern, as well as a thermostat on the vessel (100°C maximum). Unvented systems; need at least 2no. safety devices to prevent water from being stored over 100°C. System is to be commissioned. Cold water tank should be fully supported. Support to extend 150mm beyond the tank in all directions. Important Note: The above specification notes are all to read in conjunction with Approved Document G of the Building Regulations and the M&E Engineer's specification.

25.0 INCOMING SERVICES

Service entries at GF level of houses installed to local Service Company's requirements in locations indicated on the working drawings; all incoming services to enter dwelling via sleeve.

In general the following criteria apply but refer to site specific conditions:

Gas supply: Independent gas main to be provided to each dwelling of suitable size, capacity and pressure. Gas meter to be located in ground mounted box in position indicated on working drawings and to Gas Authority/Gas Safety Body requirements.

Electric supply: Independent electric main provided to each dwelling of suitable size and capacity. Electric meter located in semi-recessed wall mounted box in position indicated on working drawings and to Electric Authority/IEE requirements. Where meter is 2m or more from RCCB then an isolator is to be installed. Water supply: Independent water main 750mm below FGL provided to each dwelling of suitable size, capacity &

pressure. Water meter sited in external chamber or within dwelling under sink as indicated on working drawings and to Water Authority requirements. Incoming supply to rise to stopcock/drain valve located under sink. Telecom supply: Independent telecom cable provided to each dwelling at the external Termination Equipment (NTE) and all internal telecom points wired and connected to it; all to telecom supplier's requirements.

Sky/Cable TV: Where specified, an independent cable is to be provided to each dwelling in accordance with communication provider's requirements.

Contractor's/Utilities Consultant's details and therefore, may be superseded. A detailed kitchen design shall be provided by the specialist supplier utilising the indicative layout provided on the

working drawings. Particular consideration should be given to the requirement for 3no. recycling bins located

Important Note: The above specification notes are provided for guidance only and are all subject to specialist M&E

within the kitchen, with no bin having less than a 7 litre capacity. 27.0 AIR PERMEABILITY & AIR PRESSURE TESTING

28.0 INTERNAL FINISHES SPECIFICATION

A schedule of proposed plots for air pressure testing is to be agreed with the appointed Building Control Authority.

Please refer to Bellway Homes internal finishes specification for full details.

The electrical and associated services serving the site shall be designed, tested and commissioned to comply with all relevant British and European Standards, IEE Regulations as well as the requirements of the Local Planning Authority, Building Regulations and current CIBSE Guides. The installations shall be installed and finished to a high standard and all equipment and accessories shall be selected to suit the environment. Where requested, the contractor shall provide samples of all visible accessories and luminaries for consideration by the Client or his/her representative. The electrical installations shall only be carried out by an NIC/EIC registered company. All wiring shall be concealed. Wiring in plastered walls shall be in oval PVC conduit chased into the walls with full plaster covering to conduit. PVC protective channeling to the electrical wiring shall not be used. The installations shall be capable of re-wiring without disturbance to the finishes. Prior to Practical Completion the contractor will provide copies of NIC/EIC completion and inspection certificates for the whole of the project. Practical Completion will not be certified until all certificates are provided. The certificates will be without departures. The certificate will be duly completed in full by a qualified person. A copy of each circuit schedule will be included within the operating manual. All luminaries and the design of the illumination in each area shall comply with the current CIBSE lighting guidance notes for the relevant environment. All chases for services are to be kept to a minimum and filled well with mortar. Stagger chases on each side of the wall to avoid them being back to back.

28.2 Sanitaryware

All Sanitary ware is to be in accordance with Bellway Homes' internal finishes specification.

29.0 HOME USER GUIDES Bellway Homes are to provide each homeowner with a Home User Guide that complies with Man1 Checklist Parts & 2 (i.e. includes instruction for the operation of the window and door locks etc.) as issued by the BRE, in accordance with the Code for Sustainable Home specification.

30.0 EXTERNAL WORKS

Please refer to the Civil Engineer's 30.1 Level Threshold Access

A hard surfaced level threshold is to be provided to all front entrance doors, where indicated on the working drawings, in accordance with Approved Document M of the Building Regulations. Note: Front and rear level access | E M A I L : info@rdjwarchitects.co.uk required for CfSH compliance. Where achievable, a level standing is to be provided at the front and rear entrance doors which is a minimum of 900 x 900mm, in accordance with Approved Document M of the Building Regulations. Maximum cross fall away from doorway of 1:40. Mobility thresholds to be provided at all entrance doors with a maximum up-stand height of 15mm. In the case of communal entrance doors these would preferably in aluminium, for durability. A low profile drainage channel, or similar approved, should be provided at all level thresholds. Please refer to Civil Engineer's drawings for confirmation of type etc. Drain should be connected into main surface water drainage system. Please refer to Civil Engineer's drawings for site specific requirements. 'Ramped' approach of gradient not sleeper then 1:15 for 10m flights or 1:12 for 5m flights with final 1 .2m falling away from door at 1:40. Stepped' approach (steep sites only) of max 1.8m flight rise consisting of 75-150mm risers and 280mm min goings with top/bottom/intermediate landings of 0.9m x 0.9m. If 3 or more risers single grip-able handrail 850-1000mm above pitch line to extend 300mm beyond top/bottom riser required.

Please refer to Bellway Homes' appointed Landscape Architects' drawings and specification for detailed proposals. 30.3 Secured by Design (External Works)

This specification attempts to highlight some of the key electrical specification requirements, in respect of complying with Section 2 of Secured by Design. The following is by no means an exhaustive list and the electrical | DATE sub-contractor should refer to the Secured by Design (New Homes 2010) guidance and the report prepared by the Secured by Design Officer, specifically for this project. The cycle storage located within timber shed structures (typically in private garden spaces) is to meet the requirements of sub clause 35.3 of the Secured by Design 'New Homes 2010' guidance.

C4 roof revd C5 Mark up revs

CONTRACTOR IS RESPONSIBLE FOR ALL SETTING

OUT AND MUST CHECK DIMENSIONS ON SITE

. WRITTEN DIMENSIONS ONLY TO BE TAKEN

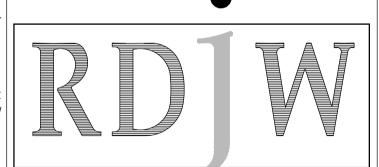
3. ARCHITECT TO BE IMMEDIATELY NOTIFIED OF

SUSPECTED OMISSIONS OR DISCREPANCIES

THIS DRAWING MUST NOT BE SCALED

BEFORE WORK IS PUT IN HAND

ISSUED



ARCHITECTS





CRAWLEY . WEST SUSSEX . RH106AN TEL: 01293 404300 . FAX: 01293 404299 WEBSITE: www.rdjwarchitects.co.uk

Housing Development Springfield Hospital Hebdon Road Tooting

Proposed Construction Notes

26.10.15

CHECKED