NOTES

BUILDING REGULATIONS NOTES

PLANNING NOTE – The local Planning department to be consulted on any local requirements relating to Planning Permissions and Permitted Development rights. An Artical 4, which removes certain rights. maybe in place.
Prior approval to be sought where required.
SINGLE-STOREY EXTENSION
An extension or addition to your house is considered to be permitted development, not requiring an application for planning permission, provided certain limits and conditions are met.
1. On designated land* – no cladding of the exterior.
*Designated land (Article 2(3)) includes national parks and the Broads, Areas of Outstanding Natural Beauty, conservation areas and World Heritage Sites.
2. On designated land* – no side extensions. Rear extension – No permitted development for rear extensions of more than one storey. The regime for larger single-storey rear extensions (see point 9) does NOT apply to houses on designated land.
3. No more than half the area of land around the "original house" would be covered by additions or other buildings. Sheds and other outbuildings must be included when calculating the 50 per cent limit.
4. No extension forward of the principal elevation or side elevation fronting a highway.
5. Materials to be similar in appearance to the existing house.
6. Side extensions to be single storey. Width of side extension must not have a width greater than half the width of the original house.
7. Side extensions to have a maximum height of four metres and width no more than half that of the original house.
8. If the extension is within 2m of a boundary, maximum eaves height should be no higher than 3m to be permitted development.
9. Single-storey rear extensions must not extend beyond the rear wall of the original house by more than 4m if a detached house; or more than 3m for any other house. Where not on designated land (Article 2(3)) or a Site of Special Scientific Interest, this limit is increased to 8m if a detached house; or 6m for any other house.
10. Maximum height of a single-storey rear extension of 4m. (or less than 3m if within 2m of a property boundary)
. Maximum eaves and ridge height of extension no higher than existing house.
TWO-STOREY REAR EXTENSION
An extension or addition to your house is considered to be permitted development, not requiring an application for planning permission, provided certain limits and conditions are met.
1. On designated land extensions of more than one storey are not permitted development. * Designated land includes national parks and the Broads, Areas of Outstanding Natural Beauty, conservation areas and World Heritage Sites.
2. Extensions (including previous extensions) and other buildings must not exceed 50% of the total area of land around the original house. * Sheds and other outbuildings must be included when calculating the above 50% limit.
3. Maximum eaves and ridge height of extension no higher than existing house. If extension is within two metres of a boundary maximum eaves height should be no higher than three metres to be permitted development.
4. Extensions of more than one storey must not extend beyond the rear wall of original house by more than three metres or be within seven metres of any boundary opposite the rear wall of the house.
5. Roof pitch of extensions higher than one storey to match that of the existing house, as far as is practicable.
6. Materials used in exterior work to be similar in appearance to those of the exterior of the existing house.
7. Any upper-floor window in a wall or roof slope in a side elevation must be obscure-glazed and nonopening unless the parts which can be opened are more than 1.7 metres above the floor of the room in which it is installed.
8. No balconies or verandas are permitted development.

NOTICE OF COMMENCEMENT
A notice of commencement is to be submitted to Building Control within 5 days of work being regarded as commenced, under regulation 16 of The Building Regulations etc. (Amendment) (England) Regulations 2010.

Work will be deemed to have commenced when the build has progressed to at least one of the following:

For complex buildings – Foundations are constructed, and the structure of the lowest floor level is complete.
For new buildings and horizontal extensions – Sub surface structure of the building or the extension including all foundations and the structure of the ground floor level is completed.
For all other works – constructed 15% of the overall work.

NOTICE OF COMPLETION
A Notice of Completion to be given to Building Control not more than 5 days after the work has been completed. The notice to contain the following information:
• The name, address, telephone number and (if available) email address of the client, principal contractor, and principal designer.
• A statement from the applicant to say that the works have been completed and complies with all the applicable regulations to the best of their knowledge.
• A statement from both the principal contractor and principal designer to confirm they have fulfilled their duties under Part 2A (duty holders and competence).

CDM REGULATIONS 2015
The client must abide by the Construction Design and Management Regulations 2015. The Client must appoint a Contractor, if more than one Contractor is to be involved, the Client will need to appoint (in writing) a Principal Designer (to plan, manage and coordinate the planning and design work), and a Principal Contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project).

Domestic Clients
The Domestic Client is to appoint a Principal Designer and a Principal Contractor when there is more than one Contractor, if not your duties will automatically be transferred to the Contractor or Principal Contractor.

The Designer can take on the duties, provided there is a written agreement between you and the Designer to do so.

The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works:

(a) Last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.
Or:
(b) Exceeds 500 person days.

PARTY WALL ACT
Should they need to do so under the requirements of the Party Wall Act 1996, the owner has a duty to serve a Party Structure Notice on any adjoining owner if the building work involves any of the following to a Party Wall:
- Support of beam
- Insertion of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding
- Underpinning
- Insertion of lead flashings

A Party Wall Notice is also required for:
- Any excavtions within 3 metres of any part of a neighbouring owner's building or structure, where any part of that work will go deeper than the neighbour's foundations; or
- Any excavations for a new building or structure, within 6 metres of any part of a neighbouring owner's building or structure, where any part of that work will meet a line drawn downwards at 45° in the direction of the excavation from the bottom of the neighbour's foundations, see diagram 7 in the following Government guidance,
https://www.gov.uk/government/publications/preventing-and-resolving-disputes-in-relation-to-party-walls/-the-party-wall-etc-act-1996-explanatory-booklet#-para_28

A Party Wall Agreement is to be in place prior to start of works on site.

THERMAL BRIDGING
Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element, (i.e. around windows and door openings). Reasonable provision shall also be made to ensure the extension is constructed to minimise unwanted air leakage through the new building fabric.

MATERIALS AND WORKMANSHIP
All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking.
The latest edition of the British Standard (including any amendments) applies to any undated references within these specifications.

SITE PREPARATION
Ground to be prepared for new works by removing all unsuitable material, vegetable matter and tree or shrub roots to a suitable depth to prevent future growth. Seal up, cap off, disconnect and remove existing redundant services as necessary. Reasonable precautions must also be taken to avoid danger to health and safety caused by contaminants and ground gases, e.g. landfill gases, radon, vapours etc. on or in the ground covered, or to be covered by the building.

EXISTING STRUCTURE
Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by Building Control.

BEAMS
Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance, as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

STRAPPING OF FLOORS
Lateral restraint to be provided where joists run parallel to walls. Floors to be strapped to walls at max 2.0m centres with 1200mm x 30mm x 5mm galvanised mild steel straps or other approved, in compliance with BS EN 845-1 (+A1:2016). Straps to be taken across minimum of 3 joists and built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

FLAT ROOF RESTRAINT
100m x 50mm C16 grade timber wall plates to be strapped to walls using 1200mm x 30mm x 5mm galvanised mild steel straps at maximum 2.0m centres, straps to be fixed to internal wall faces.

OPENINGS AND RETURNS
An opening or recess greater than $0.1m^2$ shall be at least 550mm from the supported wall (measured internally).

LINTELS
- For uniformly distributed loads and standard 2 storey domestic loadings only
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1-1:2023 Eurocode 2, with a concrete strength of 50 or 40 N/mm^2 and incorporating steel strands to BS 5896 to support loadings assessed to BS EN 845-2:2013.
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.
Independent lintels to have an insulated cavity closure between the inner and outer lintel.

STEEL LINTELS
Lintel and lintel installation to be in accordance with BS 5977-1 Lintels. Method of assessment of load and BS EN 845-2 Specification for ancillary components for masonry.
Lintel to be galvanised steel, powder coated lintel, such as Catnic, with a built-in damp-proof course.
The lintel to be wide enough to provide adequate support to the walling above, to be installed with a nominal 150 mm bearing area at each end and to be fully bedded on a solid bed of mortar. Only full bricks or blocks to be part of the bearing area – lintels not to be placed directly onto part bricks. Padstones and spreaders to be provided under the bearings, where required. Installation to be in accordance with manufacturers recommendations.
Overhang of any masonry to be a maximum of 25mm and lintel toe to project beyond window head externally.
Risk of condensation at potential cold bridges to be minimised, wall insulation should abut the head of the window frame and insulation to be provided at the underside of the lintel unless the manufacturer produces an alternative.
(In severely exposed locations or where the lintel does not offer a built-in DPC, a separate membrane to be fitted, turned up at the edge to ensure the water is not directed into the cavity. For coastal areas, the use of soffit cladding to also be considered to provide further protection).

FOUNDATION TYPES
Foundation details are primarily intended for single or two storey domestic extensions.
Additional foundation drawings provided under details drawings pages – Proposed Strip Foundation Layout and Details 2555-SCE-00-GF-DR-S-1000.
Calculations for foundations provided under calculations pages – Calculations Package 10 Lloyd Road Extension 2555.

STRIP FOUNDATION
Provide concrete strip and pad foundation as detailed in structural drawing 2555-SCE-00-GF-DR-S-1000 and in accordance with Table 10 of Approved Document A.
Thickness of concrete to strip foundation not to be less than 300mm and minimum width of foundation to be equal to the width of the wall plus 300mm.
Thickness of concrete to pad foundation not to be less than 300mm and minimum width of foundation to be equal to the width of the wall plus 700mm.
Concrete mix to conform to BS EN 206:2013(+A2:2021) and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, depth and size of foundation to be approved on site by Building Control to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:2015 Code of Practice for Foundations (+A1:2020). Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions be found or any major tree roots in excavations, Building Control to be contacted and the advice of a Structural Engineer should be sought.

MASS FILL FOUNDATION
Provide a mass fill concrete foundation to all foundations. Concrete mix to conform to BS EN 206:2013 (+A2:2021) and BS 8004:2015 Code of practice for foundations (+A1:2020). All mass fill foundations to be bearing on suitable loadbearing strata, depth and size of foundation to be approved on site by Building Control to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004 Code of Practice for Foundations (+A1:2020). Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions or difference in soil type be found, or any major tree roots in excavations, Building Control to be contacted and the advice of a Structural Engineer should be sought.

PIPES PASSING THROUGH TRENCH FOUNDATIONS
The load-bearing capability of foundations must not be affected where services pass through.
The pipe work to be sleeved. Flexible material to be provided around pipe and flexible joints to be provided where pipes exit the foundation.
Alternatively
Pipework should pass through a suitably strengthened opening in the foundation, i.e. foundation shuttered and a provided with suitable lintel over the pipe allowing for sufficient space for movement to ensure that the drain is capable of maintaining line and gradient. Opening should be masked with granular backfill (pea shingle) around pipe.
DPC to be provided, as required by Building Control.
Advice from Building Control to be sought on suitability of pipe running through foundation before construction.

PIPES PASSING THROUGH WALLS
Walls above pipes passing through substructure walls to be supported on suitable lintel on semi-engineering bricks. Pipe to be provided with a 50mm clearance all round, opening to be masked with granular backfill (pea shingle) around pipe. DPC to be provided, as required by Building Control.
Alternatively
Where new pipework passes through external walls the pipe work is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm.

SOLID FLOOR INSULATION OVER SLAB to meet min U value required of 0.14 W/m^2K – P/A ratio 0.5
Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2:2023 and BS EN 206 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 100mm thick 100mm Kooltherm K103 Floorboard insulation borad and with 25mm thick perimeter insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped by 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.
Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

WALLS BELOW GROUND
All new walls below ground to be constructed using blockwork compliant with BS EN 771 and suitable for below ground level or semi engineering brickwork. Walls to be built using 1:4 masonry mortar mix or equal approved specification to BS EN 1996-1-1. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18 W/m^2K (actual U Value achieved 0.17 W/m^2K)
New cavity wall to comprise of 103mm suitable facing brick. Full fill the cavity with 90mm Kingspan Kooltherm K106 full fill insulation as manufacturer's details, leaving 10mm cavity between the insulation and outer skin. Inner leaf constructed using 100mm thick Durox superbloc, 0.15 W/m^2K, e.g. Celcon solar, Thermalite turbo. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.
Vertical joints in the board must be staggered and all joints tightly butted.
All details including corner and junction to be as relevant BBA certificate.
Location to be assessed for suitability of insulation boards.

DPC
Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins, DPC to be placed a minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

WALL TIES
All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS EN 845-1:2013.
Wall ties for cavities over 150mm to be suitable for cavity width, and installed as manufacturer's details.

CAVITIES
Provide cavity trays over openings and where roofs abut walls. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

EXISTING TO NEW WALL
Cavities in new wall to be made continuous with existing, where possible, to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITY BARRIERS
30 minute fire resistant cavity barriers to be provided around openings, at tops of walls, gable end walls, vertically at junctions with separating walls and horizontally at separating floors. Cavity trays to be provided over barriers where required. Trays and cavity barriers to be installed according to manufacturer's details.

MOVEMENT JOINTS
Movement joints to be provided at the following maximum spacing:
Clay brickwork – 12m.
Calcium silicate brick – 7.5-9m.
Lightweight concrete block – density not exceeding $1,500kg/m^3$ – 6m.
Dense concrete block – density exceeding $1,500kg/m^3$ - 7.5-9m.
Any masonry in a parapet wall (length to height ratio greater than 3:1) – half the above spacings and 1.5m from corners.
Movement joint widths for clay bricks to be not less than 1.3mm/m i.e. 12m – 16mm and for other masonry not less than 10mm.
Additional movement joints may be required where the aspect ratio of the wall (length :height) is more than 3:1. Considerations to be given to BS EN 1996-1-2:2005 Eurocode 6. Design of masonry structure.

ROOF JOISTS SIZE AND SPAN
BASED ON C24 GRADE JOISTS AT MAX 400MM CENTRES; IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT - 'SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS' OR ASK YOUR STRUCTURAL ENGINEER FOR ADVICE

WARM FLAT ROOF
(imposed load max 1.0 kN/m^2 – dead load max 0.75 kN/m^2)
To achieve U value 0.15 W/m^2K
Flat roof covering to be glass reinforced plastic (GRP) system with BROOF(t4) fire rating in accordance with BS EN 13501-1:2018 and with a current BBA or other approved accreditation. Roof covering to be laid in compliance with manufacturer's details by flat roofing specialist onto 150mm Celotex XR4000 rigid insulation on 18mm exterior quality plywood over sw firings to minimum 1 in 40 fall on sw treated 47 x 195mm C24 flat roof joists at 400mm ctrs to give a max span of 4.51m or as Structural Engineer's details and calculations.
Fix 12.5mm plasterboard over vapour barrier to underside of joists, finish a with plaster skim. Provide cavity tray to where new roof abuts existing house.
Provide restraint to flat roof by fixing of 30 x 5 x 1200mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.
THIS IS A GENERAL GUIDE BASED ON NORMAL LOADING CONDITIONS FOUND IN DOMESTIC CONSTRUCTION. IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT - 'SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS' OR ASK YOUR STRUCTURAL ENGINEER FOR ADVICE.

LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid in accordance with BS 5534 and BS EN 12588. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc.

INTERNAL STUD PARTITIONS
100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm c/cs. Provide min $10kg/m^3$ density acoustic soundproof quilt tightly packed (e.g.100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions to be built off doubled up joists where partitions run parallel or provide noggins where at right angles, or to be built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plasterboard with skim plaster finish. Plasterboard to be taped and jointed complete with beads and stops.

INTERNAL MASONRY PARTITIONS
Construct non load bearing internal masonry partitions using dense concrete blocks built off thickened floor slab. Wall to be tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation.
Concrete mix to conform to BS EN 206-1 (+A2:2021).
Depth to Engineer's details and dependent on ground conditions, depth to be approved by Building Control on site. Wall to be tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERNAL LOADBEARING MASONRY PARTITIONS
Construct load bearing internal masonry partitions using dense concrete blocks built off concrete foundation.
Concrete mix to conform to BS EN 206-1 (+A2:2021).
Depth to Engineer's details and dependent on ground conditions, depth to be approved by Building Control on site. Wall to be tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

STAIRS
Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Cupboard doors may open across the top landing where the swing is a minimum of 400mm from the tread. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass. Allow for all structure as designed by a Structural Engineer.

ELECTRICAL
All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a Competent Person registered under a Competent Person Self Certification Scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency better than 80 lumens per circuit watt. All fixed to have lighting capacity (lm) 185 x total floor area, to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

HEATING
Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations.
The energy performance of the new components to be assessed. The results should be recorded and given to the building owner.
All accessible pipes to be insulated to the standards in Table 4.4 Approved Document L.

SMOKE DETECTION
Provide a linked smoke alarm detection system to BS EN 14604 and BS 5839-6:2019 to at least a Grade A category LD3 standard (Grade A, LD2 for large house with 3 stories or more). System to be mains powered with battery back up. Smoke detectors to be provided to:
- Each hallway and landing
- Every principal living room (as required by Building Control)
An interlinked heat detector to be provided in the kitchen. In hallways exceeding 7.5m in length, no point within the hallway should exceed 7.5m from the nearest detector and no bedroom door should be further than 3m from the nearest smoke alarm. If ceiling mounted detectors to be 300mm from the walls and light fittings.

ESCAPE WINDOWS
Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. The window should have an unobstructed clear openable area that is at least $0.33m^2$ and have no clear dimension less than 450mm high or 450mm wide.
The bottom of the openable area should be not more than 1100mm above the floor.
The window should enable the person to reach a place free from danger from fire.

Please ensure that where Part K applies the window is not less than 800mm above floor level or is provided with suitable guarding and/or safety glass as appropriate

UNPROTECTED AREAS LESS THAN 1M FROM BOUNDARY
Any window or door openings should meet the conditions in Diagram 11.5 in Part B Volume 1 (small unprotected areas), and the rest of the wall should be fire resisting from both sides.
External surface materials facing the boundary should be class B-s3, d2 or better.

ACCEPTABLE UNPROTECTED AREAS
The following requirements applies only to buildings which are 1m or more from any point of a relevant boundary. Other methods of calculation are given in Approved Document B1.

Please note the extent of unprotected area on an external wall, i.e. windows, doors, timber cladding etc, should not exceed:
- $5.6m^2$ when the minimum distance between side of the building and the relevant boundary is 1m
- $12m^2$ when the minimum distance between the side of the building and the relevant boundary is 2m
- $18m^2$ when the minimum distance between the side of the building and the relevant boundary is 3m
- $24m^2$ when the minimum distance between the side of the building and the relevant boundary is 4m
- $30m^2$ when the minimum distance between the side of the building and the relevant boundary is 5m
- no limit when the minimum distance between the side of the building and the relevant boundary is 6m

SAFETY GLAZING
All glazing in critical locations to be toughened or laminated safety glass to BS EN 12600:2002, BS EN 14179 or BS EN ISO 12543-1 and Part K of the current Building Regulations, i.e. within 1500mm above floor level in doors and side panels within 300mm of door opening and within 800mm above floor level in windows.

NEW AND REPLACEMENT WINDOWS
New and replacement windows to be double glazed with 16-20mm argon gap and soft coat low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m^2K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.
Windows to be fitted with trickle vents to provide adequate background ventilation in accordance with Approved Document F.

NEW AND REPLACEMENT DOORS
New and replacement doors to achieve a U-Value of $1.4W/m^2K$. Glazed areas to be double glazed with 16-20mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K of the current Building Regulations.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.

ROOF LIGHTS
Min U-value of 2.2 W/m^2K.
Roof-lights to be double glazed with16mm argon gap and soft low-E glass. Roof lights to be fitted in accordance with manufacturer's instructions, with rafters doubled up to sides and suitable flashings provided.

EXTRACT FOR SHOWER ROOM
Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 l/s. Vent to be connected to light switch and to have 15 minute over run if no window in the room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO UTILITY ROOM
To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 l/s. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation with an extract rating of 60 l/s, or 30 l/s if adjacent to hob to external air. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

PURGE VENTILATION
Minimum total area of opening in accordance with Table 1.4 Approved Document F1.
Hinged or pivot windows with an opening angle of 15 to 30 degrees to have an openable area in excess 1/10 of the floor area of the room.
External doors and sash, hinged or pivot windows with an opening angle of equal to or greater than 30 degrees to have an openable area in excess of 1/20 of the floor area of the room.
Purge ventilation should be capable of extracting at least 4 air changes per hour per room directly to the outside. Internal doors should be provided with a 10mm gap below the door to aid air circulation.

BACKGROUND VENTILATION
Controllable background ventilation at least 1700mm above floor level to be provided to habitable rooms and kitchens at a rate of min $8,000mm^2$, and to bathrooms at a rate of min $4000mm^2$.
Total number of ventilators installed in a dwellings habitable rooms to be at least 4 ventilators for one bedroom dwellings and 5 ventilators for dwellings with more than one bedroom.
Background ventilators to be tested to BS EN 13141-1. Background ventilator equivalent area and operation to be measured and recorded.
Noise attenuating background ventilators should be fitted to facades with sustained loud noise.

Where the extension connects to in an existing room and as a result the existing room is left with no windows or background ventilation less than $5000mm^2$, then the new room background ventilation to be at least $10,000mm^2$ equivalent area.
Where the extension connects to in an existing room and as a result the existing room is left with background ventilation at least $5000mm^2$, then both the following is to be provided:
- Background ventilators of at least $12,000mm^2$ equivalent area should be provided between the two rooms.
- Background ventilators of at least $12,000mm^2$ equivalent area between the additional room and the outside.

C2. CONDENSATION
Walls, floors and roof of the building to be designed and constructed so that their structural and thermal performance will not be adversely affected by interstitial condensation, surface condensation or mould growth. Account to be taken of the building's form and orientation in relation to topography, prevailing winds, sunlight and over-shadowing, and the rate at which humidity is generated.
Materials with the highest vapour resistance should be located on the warm side of a thermal element. VCLs to be provided where necessary.
The junctions between elements are designed to Accredited Construction Details or guidance of BRE IP17/01] and BS 5250:2021 Management of moisture in buildings to be followed.

SOAKAWAY DRAINAGE
A new soakaway is to be constructed and situated a min distance of 5.0m away from any building. The soakaway is to be a min of 1 cubic metre capacity (or to depth to Local Authority approval), filled with suitable granular fill and provided with geotextile surround to prevent migration of fines and connected to existing drainage via 110mm dia UPVC pipes surrounded in 150mm granular fill. If necessary carry out a porosity test to determine design and depth of soakaway.

RAINWATER DRAINAGE
Flat Roof – Drainage
The flat roof is to be constructed to drain the rainwater quickly and effectively into the perimeter box gutters without allowing water to collect in depressions and 'pond on the surface of the roof leading to the build-up of silt deposits on the roof and stresses when the water freezes (a small amount of ponding is inevitable and it should not reduce the performance of the roof covering).

Ponding will be reduced by ensuring the roof is provided with a decent fall allowing the rainwater to be drained effectively towards the outlets and gutters at the edge of the roof.

Permitter box guttering to be a minimum width of 110mm and 68mm deep and have a continuous seem into outlets. Outlets to drain into hopper heads connected to 68mm dia UPVC downpipes that drain into existing rainwater drainage.

EXTERNAL SURFACE WATER DRAINAGE
Drainage of paving areas to be carried out in accordance with BS EN 12056-3:2000 and Approved Document H.
Hard surfaces around the building should be provided with a proprietary non slip permeable surface laid to manufacturer's details and in compliance with BS EN 1338:2003, to allow adequate drainage.
or be provided with a non slip surface and cross fall of 1:40 - 1:60 draining away from the building (for a minimum of 500mm) to a suitable soakaway.
Paths, driveways and other narrow areas of paving should be free draining away from any buildings to a pervious area such as grasslands or to a suitable soakaway.

UNDERGROUND FOUL DRAINAGE
Underground drainage to consist of 100mm diameter UPVC proprietary pipework to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1 (+A1:2023).

INSPECTION CHAMBERS
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all connections, changes of level, changes in direction, and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

INSPECTION CHAMBERS
Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all connections, changes of level, changes in direction, and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.

ABOVE GROUND DRAINAGE
All new above ground drainage and plumbing to comply with BS EN 12056-2 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti-vac bottle traps and rodding eyes to be provided at changes of direction.

Size of wastes pipes and max length of branch connections (if max length is exceeded then anti-vac traps to be used).
Wash basin – 1.7m for 32mm pipe 3m for 40mm pipe.
Bath/shower – 3m for 40mm pipe 4m for 50mm pipe.
WC – 6m for 100mm pipe for single WC.
All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.
Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.
Waste pipes not to connect on to SVP within 200mm of the WC connection.
Supply hot and cold water to all fittings as appropriate.

SOIL AND VENT PIPE
Svp to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m.
Provide a long radius bend at foot of SVP.

AUTOMATIC AIR VALVE
WC to be connected to new 110mm UPVC soil pipe with accessible internal air admittance valve complying with BS EN 12380. Air admittance valve to be placed at a height so that the outlet is above the spill over level of the highest fitting.

PIPEWORK THROUGH WALLS
Where new pipework passes through external walls the pipework is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm.
Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form an opening in the wall which gives 50mm space all round pipe. Mask the opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

DOOR BETWEEN HOUSE AND GARAGE
Door between garage and house to be FD30 self closing, fitted with 3 steel hinges, intumescent strips and smoke seals. A 100mm step down into garage to be provided. Construction between house and garage to be 30 minutes fire resisting.

FIXED EXTERNAL LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency better than 80 lumens per circuit watt.
External light fittings to have both the followiing:
- Automatic controls which switch luminaires off in response to daylight.
- If luminous efficacy is 75 light source lumens or less, provide automatic controls which switch luminaires off after the lit area becomes unoccupied, if luminous efficacy is greater than 75 light source lumens, manual control can be installed.

STRUCTURAL NOTES:

ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR / FABRICATOR PRIOR TO COMMENCEMENT OF WORKS.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.

ALL WORKS TO BE CARRIED OUT IN STRICT ACCORDANCE WITH THE ENGINEER'S SPECIFICATIONS, RELEVANT BRITISH STANDARDS, STATUTORY HEALTH AND SAFETY/C.D.M. REGULATIONS, RELEVANT CODES OF PRACTICE AND THE CURRENT EDITION OF THE BUILDING REGULATIONS.

FOR FINAL SETTING OUT INFORMATION RELATING TO GRID LINES AND WALL POSITIONS REFER TO THE ARCHITECT'S DRAWINGS.

ALL DIMENSIONS, LEVELS AND SETTING OUT TO BE CONFIRMED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

THE CONTRACTOR IS TO BE FULLY RESPONSIBLE FOR ALL TEMPORARY/PERMANENT PROPPING AND SHORING ON THE PROJECT. CONTRACTOR TO ENSURE THAT ALL PARTS OF THE STRUCTURE ARE ADEQUATELY PROPPED PRIOR TO ANY COMMENCEMENT OF WORKS.

ADVICE MAY BE SOUGHT FROM A SPECIALIST OR FROM THE STRUCTURAL ENGINEER.

IMPOSED LOADS:

RESIDENTIAL = $1.5kN/m^2$

ROOF = $0.75kN/m^2$

NON LOADBEARING STUD PARTITIONS = 1.5kN/m RUN / $1.0kN/m^2$ BLANKET UNO.

100 BLOCK WALL = 5kN/m RUN

STRUCTURAL DESIGN

STRUCTURAL DESIGN AND LAYOUT MAY CHANGE DEPENDING ON CONFIRMATION OF ARCHITECTS DESIGN AND DETAILS

WALLS

BRICKWORK TO HAVE A WATER ABSORPTION BETWEEN 7% AND 12%

MINIMUM STRENGTH OF BLOCKWORK:-

BELOW GRD = $7.3N/mm^2$

GRD – ROOF = 7.3 N/mm^2

MORTAR ABOVE GRD TO BE 1:1:6 (iii) / M4

MORTAR BELOW GRD TO BE 1:0:3 (i) / M12

MOVEMENT JOINTS TO BE:-

CLAYBRICK – POSITIONED AT MAX. 12000mm CENTRES

BLOCKWORK – POSITIONED AT MAX. 6000mm CENTRES

ALL JOINT WIDTHS TO BE MIN. 16mm

ALL INTERNAL WALLS TO BE TOOTHED INTO EXTERTNAL/PARTITION WALL OR BUILT INTO USING CATNIC STRONGHOLD SYSTEM OR SIMILAR APPROVED

WALL TIES

EXTERNAL CAVITY WALL TIES TO BE STAINLESS STEEL TYPE 2 WHEN TESTED IN ACCORDANCE WITH 'DD 140' (125 CAVITY) AND 250mm LONG, UNLESS NOTED OTHERWISE. PROVIDE ANCON TEPLO 2 WALL TIES OR SIMILAR APPROVED.

EXTERNAL BRICKWORK/SFS WALL TIES TO BE ANCON SD25/14 RESTRAINT SYSTEM.

PARTY WALL TIES TO BE STAINLESS STEEL TYPE 2 WHEN TESTED IN ACCORDANCE WITH 'DD 140' (100 CAVITY) AND 250mm LONG, UNLESS NOTED OTHERWISE. PROVIDE ANCON HRT 4 WALL TIES OR SIMILAR APPROVED.

MINIMUM EMBEDMENT DEPTH IN MORTAR TO BE 50mm. SPACING 900mm HORIZONTALLY AND 450mm VERTICALLY IE 5.0 TIES PER SQ. METRE OF WALL MINIMUM.

ADDITIONAL TIES ARE TO BE USED AT JAMBS OF OPENINGS SO AS TO PROVIDE A VERTICAL SPACING NOT GREATER THAN 225mm. WITHIN 150mm OF VERGES & JAMBS A TIE IS REQUIRED AT LEAST EVERY 225mm VERTICALLY.

LINTELS

IF MOVEMENT JOINTS ARE TO BE PLACED AT WINDOW/DOOR OPENINGS & JAMBS, SLIP MEMBRANE AND SEPARATE INNER & OUTER LEAF LINTELS ARE REQUIRED.

LINTEL SUPPLIER IS TO CONFIRM CORROSION PROTECTION REQUIREMENT AND ANY NON STANDARD DETAILS REQUIRED.

LINTEL FIRE AND CORROSION SPECIFICATION IS TO BE ADVISED BY SUPPLIER AND SUITABLE FOR THE PROPOSED DESIGN AND LOCATION.

LINTEL PROPPING AND INSTALLATION AS PER SUPPLIER GUIDANCE.

ALL P.C. LINTELS BELOW GROUND FOR SERVICE PENETRATIONS TO BE MIN. 140mm DEEP.

ALL DOOR & WINDOW OPENINGS TO EXTERNAL AND INTERNAL WALLS TO BE PROPRIETARY LINTELS DESIGNED BY LINTEL MANUFACTURER. ALL INTERNAL WALL LINTELS TO BE CONCRETE, MINIMUM DEPTH 215mm.

STRUCTURAL STEELWORK

THIS DRAWINGS IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, MECHANICAL & ELECTRICAL AND ARCHITECTS DRAWINGS AND SPECIFICATIONS. ALL GRID AND SETTING OUT DIMENSIONS AND LEVELS TO BE CROSS-CHECKED AGAINST ARCHITECTS DRAWINGS. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH STATUTORY HEALTH AND SAFETY/C.D.M. REGULATIONS, RELEVANT CODES OF PRACTICE AND THE CURRENT EDITION OF THE BUILDING REGULATIONS.

ALL STRUCTURAL STEELWORK SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH BS 5950, NSSS (5TH EDITION- CE MARKING VERSION), THE PROJECT SPECIFICATION AND BS 5950-2:2001.

NOTES TO SUB CONTRACTORS

THE STEELWORK SUPPLIER IS TO SUBMIT DUPLICATE COPIES OF ALL FABRICATION DRAWINGS TO THE ENGINEER FOR EXAMINATION AND COMMENT WELL IN ADVANCE OF FABRICATION (MIN. 5 WORKING DAYS).

ALL SUB CONTRACTORS FENESTRATION PRODUCTS IE CLADDING, STONEWORK, RAINSCREENS, CURTAIN WALLING, SHEETING AND GLAZING ARE TO SPAN AND BE FIXED VERTICALLY TO STEEL BEAMS OR CONCRETE FLOORS. NO HORIZONTAL FIXINGS ARE PERMITTED UNLESS OTHERWISE AGREED WITH THE ENGINEER. HORIZONTAL FIXINGS MAY RESULT IN ADDITIONAL SECONDARY STEEL BEING REQUIRED.

THE STEELWORK SUB CONTRACTOR SHOULD ALLOW IN HIS TENDER FOR LIASING WITH THE CHOSEN SUPPLIER OF MASONRY SUPPORT SYSTEMS AND WINDPOSTS/RAILS (IE ANCON OR SIMILAR APPROVED) TO DETERMINE THE FIXING REQUIREMENTS OF SUCH ITEMS BACK TO THE MAIN FRAME STEELWORK

Floor Areas Existing
Existing Ground Floor Area = 96.43 sqm
Existing First Floor Area = 56.09 sqm
Total Existing Floor Area = 167.28 sqm

Floor Areas Extension
Ground Floor Extension Area = 48.69 sqm
First Floor Extension Area = 0 sqm
Total Extension Floor Area = 48.69 sqm

Floor Areas Proposed
Proposed Ground Floor Area = 145.12 sqm
Proposed First Floor Area = 56.09 sqm
Total Proposed Floor Area = 201.21 sqm

Area of Foundations = 14.74 sqm

GIA Floor Areas
Lounge = 16.73 sqm (17.38 m)
Hall = 6.95 sqm (13.88 m)
Study = 6.45 sqm (11.13 m)
Family Area & Kitchen = 62.41 sqm (39.59 m)
Utility 11.75 sqm (14.91 m)
WC & Shower = 3.95 sqm (8.26 m)
Garage = 13.68 sqm (16.18 m)
Landing = 5.57 sqm (10.94 m)
Bed1 = 16.70 sqm (16.98 m)
Ensuite 1 = 2.76 sqm (6.64 m)
Bed2 = 10.08 sqm (12.93 m)
Bed3 = 9.16 sqm (13.05 m)
Bed4 = 7.28 sqm (11.23 m)
Bathroom = 4.55 sqm (10.23 m)

Structural Beams
For structural and bearing foundation/pad stone details, please refer to Structural Engineers calculations and drawings:
- 2555 - CALCULATION PACKAGE

Beam A
1nr UC 254 x 254 x 73 (British Steel Section Range 2022 (BS4-1))
Steel grade; S355 - (Tata Steel Advance), with 10mm THICK PLATE ON TOP TO SUIT THICKNESS OF WALL. (BEAM A)

Column Beam C
2nr UC 152 x 152 x 23 (British Steel Section Range 2022 (BS4-1))
Steel grade; S355 - (Tata Steel Advance),

Lintel 1
1nr Supreme Concrete, R15120 Pre-Stressed Lintel 1200x140x100

Lintel 2
2nr Supreme Concrete, R15120 Pre-Stressed Lintel 1200x140x100

PAD-1
Supreme Concrete Padstones PAD07 PADSTONE 440x140x215

ISSUED FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRAWN	CHECKED
01	Feb2025	B.Regs note added for roof lights	JS	JS

ORIGINAL SIZE	SCALE	DATE
A1	1:100 & 1:50	Feb 2025

CLIENT	Jay & Laura Siadankay 10 Lloyd Road, Prescot, L34 6LG --
LOCATION	10 Lloyd Road Prescot, Knowsley, L34 6LG
DRAWING TITLE	BUILDING REGULATIONS --
DRAWING NUMBER	LloydRd/Ext/T/03/Con
REVISION	10/01

Jay Siadankay
10 Lloyd Road, Prescot, Knowsley, L34 6LG
MOB: 07843164132 - E-Mail: j.siadankay@btinternet.com

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