KCRDESIGN
PLANS TO INSPIRE

Specification
Address removed to protect client confidentiality
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6 Chada Avenue, Gillingham, kent. ME7 4BN
Compnay registered address: 7 - 7c Snuff Street, Devizes, Wiltshire. SN10 1DU
KCR Design is a trading style of Pickhill Services Ltd. Compnay Reg No. 6949517

Phone 01634 757355 Email enquiries@kcrdesign.co.uk Web www.kcrdesign.co.uk

SPECIFICATION AS APPLICABLE

This specification to be read in conjunction with the architectural drawings and any structural calculations.
Any and all notes on the drawings are specific to the particular build and are to supersede this specification.
Do not scale from the drawings. Scale for planning purposes only. The contractor is responsible for checking all dimensions on site prior to commencement of the works with any errors being reported as soon as possible.
The contractor shall be entirely responsible for the security, strength and stability of the building during the course of the works.
All building work to be carried out to the satisfaction of the local authority building control officer and in accordance with the current building regulations and as such additional unforeseen building works may be required on site.
The exact location, type, condition and invert level of all existing drainage to be ascertained on site, with any defects being reported.
The contractor shall inspect all adjoining properties which may be affected by the works prior to commencement of works and record and report to the owner any defects.

Finished room dimensions may vary from those stated on the drawings.
Items in this specification, the drawing notes, and parts of the drawings, may not form part of the contract to be carried out by KCR Design.

Party Wall act

The owner, should they need to do so under the requirements of the Party Wall Act 1996, has a duty to serve a Party Structure Notice on any adjoining owner if the building work involves works on or to an existing Party Wall including:

- Support of beam
- Insertion of DPC through wall
- Raising a wall or cutting off projections
- Demolition and rebuilding
- Underpinning
- Insertion of lead flashings
- Excavations within 3 meters of an existing structure where the new foundations will go deeper than adjoining foundations, or within 6 meters of an existing structure where the new foundations are within a 45 degree line of the adjoining foundations.

A Party wall agreement is to be in place prior to start of works on site.

Southern Water

If submission has been made to building control, they will inform Southern Water of the application. It is the responsibility of the homeowner to ensure the requirements (if applicable) of Southern Water are adhered to. They can be contacted on 0330 303 0119

CDM Regulations

The owner, should they need to do so, must abide by the Construction Design and Management regulations 1994 which relate to any building works involving more than 500 man hours or longer than 30 days duration. It is the client's responsibility to appoint a Planning Supervisor on all projects that require compliance with the CDM regulations.

AS APPLICABLE

1. Intermediate floors
2. External walls
3. Roofs
4. Windows and doors
5. Internal walls
6. Plumbing and electrical
7. Structural
8. Stairs and ceiling insulation
9. Ventilation
10. Fire prevention and means of escape

1. INTERMEDIATE FLOORS

INTERMEDIATE FLOORS
Intermediate floor to be 22mm t&g flooring grade chipboard or floorboards laid on joists at 400mm cts . Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floor joists. Ceiling to be 12.5mm plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38 herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS7331:1990. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

UPGADE TO HALF HOUR FIRE RESISTANCE AND PROVIDE ADEQUATE SOUND INSULATION
Lay minimum 150mm Rockwool insulating material or equivalent on chicken wire between joists and extended to eaves. Chicken wire to be fixed to the joists with nails or staples these should penetrate the joists side to a minimum depth of 20mm, in accordance with BRE-Digest 208 1988

2. EXTERNAL WALLS

TIMBER FRAME WALL WITH EXTERNAL HANGING TILE
To achieve minimum U Value of 0.28W/m²K
Tiles hung vertically on 25 x 38mm preservative-treated battens to provide vented and drained cavity, battens fixed vertically to breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) on 12mm thick WPD external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 100mm x 50mm head & sole plates and vertical studs (with noggins) at 400mm ctrs or to s/engineer's details & calculations. Insulation to be 100mm Celotex FR4000 between studs plus 12mm Celotex to the inner face with 12.5mm Knauf wallboard over. Vapour control layer fixed to internal face of insulation and finished with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally.

UPGRADING 225mm SOLID PARTY WALL (cold adjoining space)
The existing walls must be checked for stability and be free from defects as required by the Building Control Officer. Provide a scratch coat render to existing wall. Insulate wall on the warm side using 77.5mm Celotex PL4000 insulated plasterboard. Plasterboard to be fixed using dot and dab bonded to the existing construction with proprietary adhesive at 300mm centres vertically/horizontally and in accordance with manufactures instructions. Tape joints and the seal perimeter edges with mastic, to provide a vapour control layer (VCL). All work in accordance with BS 8212: 1995 (Code of practice for dry lining).

3. ROOFS

PITCHED ROOF INSULATION AT CEILING LEVEL
To achieve U value of 0.16 W/m²K
Timber roof structures to be fixed in accordance with BS Codes of Practice no CP3 and CP112. Roofing tiles to match existing on 25 x 38mm tanalised sw treated battens on breathable membrane, supported on (see structural notes) rafters at max 400mm centres. Rafters supported on min 100 x 50mm sw wall plates. Insulation at ceiling level to be 150mm FR4000 Celotex between ceiling joists with a further 25mm over joists.
Construct ceiling using sw joists at 400mm centres, finished internally with 12.5mm plasterboard and min 3mm thistle multi-finish plaster. Provide polythene vapour barrier between insulation and plasterboard. Restraint strapping - 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres, in accordance with CP111 Part 2.

WARM FLAT ROOF
To achieve U value 0.18 W/m²K
Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed 22mm exterior quality plywood over 125mm Celotex TA4000. Insulation bonded to 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 47 x 195mm C24 flat roof joists at 400mm c/cs max span 4.55m (unless otherwise stated on drawing). Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house if new roof abuts existing house.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

FLAT ROOF VENTILATION
cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation strip equivalent to 25mm continuous with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a continuous 50mm air gap above the insulation for ventilation.

LEAD WORK AND FLASHINGS
All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. 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. All work to be undertaken in accordance with the Lead Development Association recommendations.

UPGRADE OF PITCHED ROOF
To achieve U-value 0.18 W/m²K
The existing roof condition must be checked and be free from defects as required by the Building Control Officer any defective coverings or felt to be replaced in accordance with manufacturer's details.

Insulation to be 50mm Celotex GA4000 infilled between rafters and 70mm under rafters. Provide a cavity of 25mm by fixing battens between plasterboard and under rafter insulation (recommended where insulation under rafters exceeds 50mm). Maintain a 50mm air gap above insulation to ventilate roof. Provide opening at eaves level at least equal to continuous strip 25mm wide and opening at ridge equal to continuous strip 5mm wide to promote ventilation or provide equivalent high and low level tile vents in accordance with manufactures details. Fix 12.5mm foil backed plasterboard (joints staggered) and 5mm skim coat of finishing plaster to the underside of all ceilings using galvanized plasterboard nails.

4. WINDOWS AND DOORS

NEW AND REPLACEMENT WINDOWS
New and replacement windows to be double glazed with 16mm argon gap and soft coat low-E glass. Window Energy Rating to be Band C or better and to achieve U-value of 1.6 W/m²K. 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.

SAFETY GLAZING
All glazing in critical locations to be toughened or laminated safety glass to BS 6206 and Part N 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.

ESCAPE WINDOWS
Provide emergency egress windows to any newly created first floor habitable rooms and ground floor inner rooms. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq, 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.

ROOF LIGHTS
Min U-value of 1.6 W/m²K.
Roof-lights to be double glazed with16mm argon gap and soft low-E glass. Window Energy Rating to be Band C or better. Roof lights to be fitted in accordance with manufacturer's instructions with rafters doubled up to sides and suitable flashings etc.

5. INTERNAL WALLS

INTERNAL STUD PARTITIONS
100mm x 50mm softwood treated timbers studs at 400mm cts with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

STUD ASHLAR/DWARF
To achieve minimum U Value of 0.28W/m²K
Construct stud wall using 100mm x 50mm head & sole plates and vertical studs (with noggins) at 400mm centres. Insulation to be 100mm Celotex FR4000 between studs plus 12mm Celotex to the inner face with 12.5mm Knauf wallboard over with VCL fixed to internal face of insulation and finished with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. All doors in Ashlar walls to be insulated.

6. PLUMBING AND ELECTRICAL

ELECTRICAL
All lighting, power and switch points are to be to clients requirements and installed to I.E.E. Code of Practice and B.S. 7671 by an N.I.C.I.E.C. approved Contractor. All electrical work is required to meet further requirements of Part P (Electrical Safety) and must be designed, installed, inspected and tested by a person competent to do so. Prior to completion the local Authority needs to be satisfied that Part P has been complied with. This will require an appropriate electrical installation certificate B.S. 7671 to be issued for the work by a person competent to do so. Run all electric cables in the first floor void above mineral wool and all cables in stud walls filled with mineral wall to be run in conduit. Where recessed light fittings are installed perforating the plasterboard, a fire resisting enclosure should be built around the light fitting to maintain an imperforate floor. The light fitting should then be of a type that is ventilated downwards through the ceiling.

ENERGY EFFICIENT LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency greater than 45 lumens per circuit watt and a total output greater than 400 lamp lumens. Not less than three energy efficient light fittings per four of all the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations.

ABOVE GROUND DRAINAGE
Above ground drainage to comply with BS.5572.1978. for sanitary pipework. All drainage in accordance with part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes at changes of direction. All plumbing to be to BS 5572.
Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
Sinks - 3m for 40mm pipe 4m for 50mm pipe
Washing machine and dishwasher - stand pipe 50mm
Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe
Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
W/c - 100mm for 6m for single wc
All branch pipes to connect to 110mm soil and vent pipe. Waste pipes not to connect within 200mm of the wc connection.
Supply hot and cold water to all fittings as appropriate.

HEATING
Extend all heating and hot water services from existing and provide new TVRs 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, Gas safety requirements and IEEE regulations.

9.STRUCTURAL

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 the Building Control Officer.

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 nailed to timber cradles or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance.

LINTELS
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 8110, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacture standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

OPENINGS AND RETURNS
An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally).

10. STAIRS

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. 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.

TRADITIONAL BALUSTRADES
Provide balustrades to balcony min 1100mm in height and capable of resisting at least the horizontal force given in BS6399-1:1996. No openings in any balustrading should allow the passage of a 100mm sphere and children should not readily be able to climb the guarding.

CEILING INSULATION
Insulation above ceiling areas and behind ashlar walls, to be min 300mm fibreglass insulation to achieve a U-Value of 0.16W/m2k

11. VENTILATION

BACKGROUND AND PURGE VENTILATION
Background ventilation - Controllable background ventilation via trickle vents to BS EN 13141-3 within the window frame to be provided to new habitable rooms at a rate of min 5000mm²; and to kitchens, bathrooms, WCs and utility rooms at a rate of 2500mm²
Purge ventilation - New Windows/rooflights to have openable area in excess of 1/20th of their floor area, if the window opens more than 30° or 1/10th of their floor area if the window opens less than 30°
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.

12. FIRE PREVENTION AND MEANS OF ESCAPE

SMOKE DETECTION
Mains operated linked smoke alarm detection system to BS 5446 - 1:2000 and BS5839-6:2004 to at least a Grade D category LD3 standard and to be mains powered with battery back up. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all levels/ storeys and within 7.5m of the door to every habitable room. If ceiling mounted they should be 300mm from the walls and light fittings. Where the kitchen area is not separated from the stairway or circulation space by a door, there should be an interlinked heat detector in the kitchen.

MEANS OF ESCAPE - Fire doors
Form a protected escape stairway by providing half hour fire resistance to all partitions as well as floors and ceilings above and below rooms. Stairway to be protected at all levels - from the loft room/rooms then leading directly to an external door at ground level (no inner rooms allowed). All doors on to the stairway must be FD20 rated fire doors to BS 476-22:1987 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCO). Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route

enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level or stair pitch line.

MEANS OF ESCAPE - 2 exits at ground floor
The first and second storeys should be served by a protected stairway, the structure forming this enclosure must have 30 minute fire resistance including floors and ceilings above and below rooms. The doors must be FD20 rated fire doors to BS 476-22:1987 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCO). The enclosure should lead to at least two alternative escape routes at ground level, which should be separated from each other by fire-resisting construction and fire doors. Where applicable, any glazing in walls or doors enclosing the protected stairs is to have 30 minutes fire resistance. (no inner rooms allowed)

MEANS OF ESCAPE – Exit at first floor level.
An MOE window having an opening area of at least 0.33M2 and with minimum width or height of at least 450mm. The bottom of such opening should be located at a height of minimum 800mm and maximum 1100mm above the floor level.

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 nailed to timber cradles or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance.