MATERIAL SPECIFICATION:

NB. IF THERE ARE ANY ALTERATIONS TO THE SPECIFICATION THE CONTRACTOR MUST FIRST CONSULT THE CLIENT AND THE LOCAL AUTHORITY BUILDING INSPECTOR AND GAIN HIS APPROVAL

Specification and drawings to be read in strict accordance with Structural Engineers details. Engineer to confirm foundation sizes, lintel designs, wall plate size and locations & all roof timbers. Builder to ensure that he is in receipt of engineers details prior to commencement on site.

CDM REGULATIONS:

The client must abide by the Construction Design & management Regulations 2015. The client must appoint a contractor, if more more than one contractor is to be involved, the client will need to appoint (in writing) a principle designer (to plan, manage and coordinate the planning and design works) and a principle contractor (to plan, manage and coordinate the construction and ensure there are arrangements in pace for managing and organising the project).

DOMESTIC CLIENTS

The domestic client is to appoint a principle designer and a principle contractor when there is more than one contractor on site, if not your duties will automatically be transferred to the contractor or principle contractor. The designer can take on the duties, provided there is a written agreement between you and the designer to do so.

The Heath and Safety Executive is to be notified as soon as possible before construction works start if the works:

(a) last longer than 30 working days and has more than 20 workers working simultaneously at any point in the project.

(b) Exceeds 500 person days.

GENERAL REQUIREMENTS

- The plans relating to the proposed project are to be read in conjunction with all appropriate structural engineer's details and calculations.
- All products and materials to be CE marked and to be fixed, applied or mixed in accordance with the manufacturers' instructions/recommendations and specifications.
- Use figured and on site dims only. If queries arise on site contact Kris Construction Ltd immediately.
- The contractor is to check all dimensions on site prior to commencement of the work and any discrepancies to be brought to the attention of the site agent.
- All work regarding this project is subject to the Local Authority Building Control officer's or approved inspectors approval and satisfaction.
- All statutory site inspections are to be seen and approved by the Local Authority Building Control officer or approved inspector prior to any covering up of any work.
- The contractor shall take into account everything necessary for the proper execution of the works, to the satisfaction of the Inspector whether or not indicated on the drawing.
- The contractor must carry out all investigations on existing structures on site prior to any demolition and ensure the safety of the buildings and personnel on site at any one time.
- All materials shall be fit for their purpose.
- All external softwood and all roof timbers to be vac-vac treated. All cut ends are to be treated on site prior to fixing.
- All drainage and foundation is provisional and subject to the conditions encountered on site.
- The existing buildings are to be protected for the duration of the works. All surplus material is to be removed from the site and site left clean by the contractor after completion of the project.

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.

THERMAL BRIDGING:

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

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 the Building Control Officer.

DEMOLITION:

Contractor to allow for complete removal of existing structure (as denoted on proposed floor plans) including all existing floor, walls and roof structure. Contractor to ensure that all elements of site are left clean and tidy at all times where practically possible. If necessary allow for temporary propping of existing structure during demolition works where first floor structure is to be retained above, refer to plans and sections for locations.

PART A: STRUCTURE

SUB-STRUCTURE

STRIP FOUNDATION:

Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 600mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2010 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. 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, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

WALLS BELOW GROUND:

All new walls to have Class A block work below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. 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.

TIMBER SUSPENDED FLOOR

Ground preparation - Remove top soil & vegetation, apply total weed killer & 150mm min thick sand blinded hardcore and either – (i) Provide concrete ground cover of at least 100mm thick or (ii) Prepare the ground to an even surface and lay a ground cover of concrete at least 50mm thick, on a damp-proof membrane of at least 1200 gauge polyethylene, laid on a bed of Fine blinding material. Floor construction - min 22mm tongue and groove moisture resistant particle/chipboard grade type C4 to BS5669 as required. Lay with staggered joints on 50mm x 200mm C24 grade soft wood joists. Joists to be supported off proprietary galvanized joist hangers built into new masonry walls or fixed to treated timber wall plates rein bolted to walls at 600mm centres. If required, floor joists also to be supported on 100mm x 50mm treated wall plates & DPC onto masonry honeycombed sleeper walls onto thickened over site concrete. Joists to be infilled with 110mm Kingspan K103 insulation between joists fixed with Celotex clips. The top surface of the ground cover under the building shall be above the finished level of the adjoining ground. The underside of the floor joists are not to be less than 150mm above the top of the ground cover. The underside of any wall plate is to be not less than 75mm above the top of the ground cover. Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through cavity with cavity tray over.

VENTILATION TO FLOORS:

Provide cross-ventilation under floor to outside air by ventilators in at least 2 opposite external walls of the building. Ventilation openings having an opening area of 1500mm² per meter run of perimeter wall or 500mm² per square meter of floor area whichever gives the greater opening area. All sleeper walls or similar under floor obstructions shall be of honeycombed construction or have similar provision for distribution of ventilation. The under floor space shall be free from debris. Ducts to be sealed using gas proof tap if they pass through the radon barrier.

SUPERSTRUCTURE

FULL FILL CAVITY WALL:

To achieve minimum U Value of 0.28W/m²K Wall construction 102.5mm thick SN/mm² (min) facing brickwork, facing brick to match that of existing property, builder to provide client with a sample on site for their approval prior to order and construction. 100mm cavity fulfilled with Dritherm 32 or other approved insulation with K value of 0.032, 100mm thick 3.5N/mm²(min) insulating (K value max0.16) blockwork inner leaf with 12.5mm plasterboard on dabs skimmed dry lining. Walls to be built with 1:5:/6 cement mortar and tied with BBA approved stainless steel wall ties suitable for cavity width at maximum spacing of 750mm horizontal, 450mm vertical and 225mm at reveals, verges and closings for cavities up to 100mm wide. Wall ties and spacing for cavities over 100mm wide to be in accordance with wall tie manufactures details. Wall insulation to be continuous with roof insulation level and taken below floor insulation levels as manufacturer's details. Sizes of structural elements, thickness of walls, height and size of buildings to be in accordance with ADA 1/2. Openings, buttressing and sizes of openings and recesses to be in accordance with diagrams 13, 14 and 15 of ADA1/2. Openings exceeding 2.1m in height or openings less than 665mm measured horizontally to an external corner walls should be in accordance with structural engineer's details. Note if an alternative/similar wall insulation is to be used builder is to ensure that the min U value is achieved, any deviation from the specification should be brought to the attention of the client and EAMONN Architectural as well as building control, with the relevant data sheets provided. Note various alternative insulation types require minimum density block work, this should be taken into account by the builder.

DPC:

Provide horizontal strip polymer (hyload) damp proof course to both leafs 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 with stainless steel vertical twist type wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm cts at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 1243.

CAVITIES:

Provide cavity trays over openings. 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 up stands and suitable cavity weep holes (min 2) at max 900mm centres.

CAVITY CLOSURES:

Proprietary acoustic/insulated fire stop cavity closers, or similar are to be provided to all cavity openings/closings, tops of walls and junctions with other properties.

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.

CLOSING AROUND WINDOW/DOOR OPENINGS:

Checked rebates should be constructed to window/door reveals or proprietary finned insulated closer should be used. Checked rebates are where the outer skin masonry/skin projects across the inner skin by at least 25mm, the cavity is closed by an insulated closer and the window or door is fully sealed with mastic or similar externally.

SEALING AND DRAUGHT PROOFING MEASURES:

All external door and window frames, service penetrations to walls, floors and ceilings, etc, should be sealed both internally and externally with proprietary sealing products such as proprietary waterproof mastic, expanding foam or mineral wool or tape to ensure air tightness.

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 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.

STRUCTURAL BEAMs Etc.:

Non proprietary beams including pad stone to be fabricated and installed in compliance with details and structural calculations carried out by a suitably qualified and experienced person, which must be approved by building control before works commence on site. Engineer to provide building control with associated drawings and calculations as required. DPC trays to be provided above all externally located beams. Weep holes at 450mm centers with at least two per opening.

EXPANSION JOINTS:

External walls should be provided with adequately spaced and sized expansion joints, in accordance with masonry manufactures details with adequate tying to each side of the joint and leaf of masonry using stainless steel wall ties (normally at each block height) and sealed externally with a proprietary flexible mastic sealant. (Normally expansion joints are 10-12mm wide and spaced at max 12m ctrs in brick work & 6m ctrs in block work).

STRAPPING AND RESTRAINT:

Walls to be restrained at intermediate floor, ceiling and gable walls by the provision of 30 x 5 x 1000mm lateral restraint straps or other approved in compliance with BS EN 845-1, at maximum 2m centers carried across at least 3 joists or rafters, etc, with a minimum of 38mm wide x ¼ depth noggins.

INTERNAL PARTITIONS:

STUD PARTITIONS:

75mm x 50mm softwood treated timber studs at 400mm cts with 50 x 75mm 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. 50mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud to achieve min level of 40dB. 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 12.5 mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops. Apply 15mm moisture resistant plasterboard to utility room walls, WC's and en suite walls.

MASONRY PARTITIONS:

Construct non load bearing internal masonry partitions using dense concrete blocks built off thickened floor slab and 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.

PITCHED ROOFS

PITCHED ROOF COVERINGS:

Roof covering to consist of tiles as agreed with client with associated capping, verge/eaves details fixed in accordance with manufacturer's details for pitch and exposure as detailed on the drawings. Tiles to be fixed to a minimum 25 x 38mm treated timber batten or to manufacturer's directions and roof timbers to be overlaid with breathable membrane to BS747 or relevant BBA certificate. Insulation to warm roof areas to be 100mm Kingspan kooltherm K107 insulation between rafters maintaining min 25mm air space above and underdrawn with 32.5mm Kingspan K118 (vapour checked) insulated plasterboard and 3mm skim coat of finishing plaster fixed in accordance with manufacturer's recommendations. Insulation to cold roof areas to be min 270mm loft roll insulation laid in two layers: first 170mm laid between joists with upper 100mm layer running perpendicular to this. Soffits, fascias and barge boards etc to match the existing or UPVC to BS 4576, fixed in compliance with manufacturers details. Allow for building in as work proceeds or insertion of proprietary stepped/cavity tray dpc to follow line of new roof 150mm above all roof/wall abutments as necessary using code 5 lead flashings. Tie new roof into the existing, alter/modify/renew existing roof coverings and form a weather tight structure. Fix 12.5mm foil backed plasterboard (joints staggered) and 3mm skim coat of finishing plaster to the underside of all ceilings using galvanized plasterboard nails.

ROOF RESTRAINT:

Roof and walls to be provided with lateral restraint straps across at least 3 timbers as noted in wall section at ceiling, wall plate and verge levels with 30 x 5mm x 1m galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centers.

ROOF INSULATION & VENTILATION GAPS:

Insulation to be fixed in accordance with manufacturers details and must be continuous with the wall insulation but stopped back at eaves or at junctions with rafters to allow for a continuous 25mm air space to allow for sag in felt if using a breathable roofing membrane in accordance with the manufacturer's details.

ROOF WITH HORIZONTAL CEILINGS & INSULATION AT WALL PLATE LEVEL:

Roof insulation to be continuous with the wall insulation but stopped back at eaves or at junctions with rafters to allow a 50mm air gap. Cross ventilation to be provided by proprietary eaves ventilation strips equivalent to a 10mm continuous air gap to opposing sides of roof at eaves level and fitted with an insect grill.

PITCHED ROOF WITH INSULATION FOLLOWING SLOPE OF RAFTERS & MONO PITCHED ROOFS:

Roof insulation to be continuous with the wall insulation but stopped back at eaves or at junctions with rafters to allow a 50mm air gap. Cross ventilation to be provided by a proprietary eaves ventilation strips equivalent to a 25mm continuous air gap to opposing sides of roof at eaves level and fitted with insect grill and at ridge/high level to provide ventilation equivalent to a 5mm air gap in the form of proprietary dry ridge system or vent tiles spaced in accordance with tile manufacturer's details.

BREATHABLE ROOF MEMBRANES:

Ventilation to the roof space may be omitted, only if a proprietary BBA or similar approved breathable roof membrane, with minimum 25mm thick treated vertical counter battens and proprietary eaves carrier system is used. Breathable roof membranes & proprietary roof vents must always be installed as manufacturer's details: (note: some breathable membranes may also require additional roof ventilation).

VALLEYS AND LEAD WORK:

Lead work, flashing, soakers, valleys and gutters, etc, to be formed from Code 5 lead sheet and fully supported on treated valley boards, etc, and to have a minimum 150mm lap joints, dressed 200mm under tiles, etc, and not to be fixed in lengths exceeding 1.5m and to be fixed in accordance with the roof cladding manufacturers and the Lead Development Association recommendations.

STEELWORK FIRE PROTECTION:

Ensure all structural elements supporting first floor structure is incased in 15mm fire line plasterboard to ensure a minimum of 60minutes fire protection or paint with intumescent paint. Note due to steel weights it may be necessary to provide 2 layers of 15mm fire line plasterboard, contractor to seek advise from steel supplier and building control.

PART B: FIRE SAFETY AND MEANS OF ESCAPE

SMOKE/HEAT ALARMS:

All floors to be provided with mains operated interconnected fire detection and fire alarm system to BS 5446 & installed in accordance with the relevant recommendations of BS 5839 - 6:2004 to at least a Grade D Category LD1 standard. Self contained mains operated smoke alarms (heat alarms installed in kitchens if open to stairway) with battery back up to be fixed at ceiling level in all circulation areas at each storey level, within 7.5m of all doors to habitable rooms.

MEANS OF ESCAPE WINDOWS:

Means of escape windows to be fitted with proprietary hinges to open to the minimum required clear width of 450mm. Escape windows must have minimum clear opening casement dimensions of 0.33m² and 450mm (typically 450mm wide x 750mm high), located within 800-1100mm above floor level to all bedrooms and habitable rooms at 1st floor level and inner habitable rooms on the ground floor. Windows above the ground floor storey and within 800mm of floor level are to be provided with containment/ guarding/ proprietary catches which should be removable (child proof) in the event of a fire. Where escape windows cannot be achieved, direct access to a protected stairs (or protected route to inner rooms) is acceptable in compliance with ADB1 par 2.6 (a) or (b).

PART C: SITE PREPARATION AND RESISTANCE TO CONTAMINANTS & MOISTURE

RESISTANCE TO MOISTURE

HORIZONTAL DAMP PROOF COURSES AND TRAYS (dpc's):

Horizontal damp proof course (dpc) and dpc trays with weep holes at 1.0m ctrs to be provided 150mm above ground level continuous with and sealed to the floor damp proof membrane (dpm) & radon/ dpc tray to prevent the ingress of moisture into the building.

VERTICAL DAMP PROOF COURSES AND TRAYS (dpc's):

Stepped and horizontal dpc/cavity trays are to be provided over all openings, roof abutments/ projections and over existing walls with different construction or materials. Install vertical dpc or proprietary insulated cavity closers at all closings, returns, abutments to cavity work and openings etc to prevent the ingress of moisture into the building.

PART E: RESISTANCE TO THE PASSAGE OF SOUND

NEW INTERNAL WALLS AND FLOORS TO NEW EXTENSION:

Sound insulation details between internal walls & floors separating bedrooms or a room containing a WC and other rooms to be carried out in accordance with the relevant details contained within the notes and Approved Document E.

PART F: VENTILATION

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 liters per second. 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 liters per second. 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 60l/sec or 30l/sec if adjacent to hob to external air, sealed to prevent entry of moisture. 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.

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, shower room and utility rooms at a rate of 2500mm² or 2 x 4tge catches fitted to windows Purge ventilation - New Windows/roof lights to have open able 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° Window openings which open less than 15 degrees is not suitable for purge ventilation and alternative ventilation details are required as detailed below and in compliance section 5 & Appendix B of AD F1. Purge (natural) ventilation openings to habitable rooms to be typically 1.75m above floor level. The area of external windows, roof windows & doors should not exceed 25% of the usable internal floor area.

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.

MECHANICAL EXTRACT VENTILATION RATES:

Mechanical ventilation is to be provided to the rooms listed below directly ducted to the outside air equivalent to the following rates: Kitchen - 30 l/s over hob or 60 l/s elsewhere, Utility room 30 l/s and shower room - 15l/s.

GENERAL REQUIREMENTS FOR MECHANICAL EXTRACT VENTILATION:

Mechanical ventilation to rooms without open able windows to be linked to light operation and have 15 minutes overrun and a 10mm gap under the door for air supply. Fans must not be installed in rooms containing open flue appliances unless the interaction of mechanical ventilation & open flue heating appliances is checked and certified by an approved method & suitably qualified person. Mechanical ventilation to be ducted in proprietary insulated ducts to outside through walls to proprietary vent or through roof space to proprietary matching tile/soffit vent.

PART G: SANITATION, HOT WATER SAFETY AND WATER EFFICIENCY

WHOLESOME WATER SUPPLY:

Sinks with hot and cold running water is to be provided in all food preparation areas, shower room to be fitted with shower. Hot & cold water taps to wash basins, baths, showers & sinks including external taps to have water from a wholesome water supply.

WASH BASINS AND SEPARATION OF W/C FROM ANY FOOD PREPARATION AREAS:

Wash hand basins to be provided in all rooms containing a w/c and a door must separate the w/c from any food preparation area in a dwelling.

COMMISSIONING CERTIFICATES:

Commissioning certificates for fixed building services are required on completion with copy sent to building control.

SUPPLY (WATER FITTINGS) REGULATIONS:

All new water installations must be in compliance with the 'Supply (Water Fittings) Regulations 1999' for England and Wales, for the protection against frost and freezing, prevention of waste, misuse, undue consumption, contamination and erroneous measurement of a water supplier's mains water supply.

PART H: DRAINAGE AND WASTE DISPOSAL

FOUL WATER DRAINAGE

FOUL, RAIN AND STORM WATER DRAINAGE SYSTEMS:

Both storm and foul drainage to consist of 100mm diameter UPVC proprietary underground drainage laid at a minimum gradient of 1:40 where serves up to one WC or 1:80 where serves two or more WC's, surrounded in pea/single size gravel a minimum of 900mm deep in drives and roads and 400mm elsewhere, unless provided with a 100 mm reinforced concrete slab with compressible material under and 300mm min bearing on original ground.

Proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level and or direction and at 45 m maximum spacing in straight runs up to 1.2m in depth. All gullies to be trapped and have rodding access where serving branches. Inspection chamber covers to be mechanically fixed and suitable for vehicular loads in drives and roads and double sealed bolt down covers and frames in buildings.

Surface and foul water drainage to connect to existing sewers discharging to mains.

NB. It has been assumed that the connection to the foul and storm water sewers is within 20 meters from the house and not exceeding 2 meters deep.

Foul drainage systems to low lying buildings or basements which carry storm water or other vulnerable drainage systems should be provided with anti flood protection such as one way valves, etc, to prevent flooding and sewerage entering the building.

WASTE PIPES:

All W/Cs to have trapped outlet connected to 100mm diameter pipes, and to be provided, with a wash hand basin with hot and cold running water. Sanitary appliances such as wash hand basin, baths, showers, sinks etc, to be provided with 75mm deep seal traps. Where WHB exceed 1.7m or baths exceed 2.3m anti-syph on traps to be used. Waste pipe sizes to comply with Diagram 3 of ADH. Where waste pipe runs exceed 4m BBA approved air admittance valves are to be fitted above appliance spill over level. Waste pipes to either discharge below trapped gully grating or into SVPs via proprietary waste manifolds or bossed junctions. Where SVP's are located externally outlet must terminate minimum 900mm above any opening into building and be fitted with proprietary cage. Internally all waste and drainage pipes to have rodding access/eyes at changes of direction and be adequately clipped/supported and provided with 30 minutes fire protection where passing through floors.

Unless otherwise stated new sanitary fittings to be provided by the client and fixed by the contractor. Extent and location of pipe work and installation of sanitary ware to be to client's specification. Provision of pipe work for future connection of appliances to client's specification. All exposed pipe work to be boxed-in as agreed with client.

RAINWATER DISCHARGE AND HARVESTING RAINWATER GUTTERS AND DOWN PIPES:

Rainwater gutters and down pipes to be provided for all roofs greater than 6m 2, sizes and number to be suitable for roof area as detailed below and fixed in compliance with manufacturers details. All down pipes are to be connected directly to storm water sewers. Colour and section profile to match existing detail.

SURFACE WATER DRAINAGE AROUND THE BUILDING:

Drainage of paved areas to be carried out in accordance with BS 6367:1983 A1 84 and Approved Document H. Paths and paved areas to have an anon slip finish with a fall of 1:40 - 1:60 and a reverse gradient of at least 500mm away from walls of building. Surface water to be disposed of by an adequately sized and roddable drainage system via soakaways, or other approved means.

BUILDING OVER OR CLOSE TO PUBLIC SEWERS:

Owners of building being constructed, extended or underpinned within 3m of a public sewer as indicated on the relevant water authorities sewer maps are required to consult with the Water Authority and where necessary obtain consent and enter into an agreement to build close to or over the public sewer before works commence site. Protection of the sewer pipe and systems are to be carried out in compliance with the relevant water authorities requirements.

SEPARATE SYSTEMS OF DRAINAGE:

The building owner/agent must carry out all necessary consultations with the relevant water authority before works commence on site. Rain/surface water systems cannot be connected to foul water drains without the written permission of the relevant water authority. 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- 6m for 100mm pipe for single W/C all branch pipes to connect to 110mm soil and vent pipe. Waste pipes not to connect within 200mm of the W/C 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.

PIPE WORK THROUGH WALLS:

Where new pipe work passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. Where drainage pipes are within 1000mm of foundations ensure that all drains are encased in concrete. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin. Drain testing (Reg 16 of the building regulations 1991) The whole of the drainage system shall be tested when laid and again on completion to the satisfaction of the LA Building Control Officer. Any lengths, fittings or construction found to be defective to be taken up, re-laid and retested until satisfactory. Testing will be by water generally as laid down in BS8301:1985.

PART J: COMBUSTION APPLIANCES & FUEL STORAGE SYSTEMS

SPACE & HOT WATER HEAT PRODUCING APPLIANCES IN GENERAL:

Contractor is to include for extending and modifying the existing heating circuit to provide heating via means of radiator to suit the client's requirements. Output/size of radiator to suit room size and to be fitted with thermostatic type valves with pipe work insulated to non heated locations. Gas installations to be installed and comply with BS 5440, BS 5546, BS 5864, BS5871, BS 6172, BS 6173 and BS 6798. All space and hot water systems must be installed, commissioned, calibrated and certified by a suitably qualified person or installer registered with an appropriate competent person's scheme and details supplied to Building Control and the owner along with the operating manuals, etc before the building is completed/occupied.

NEW GAS BOILER: (note builder to asses existing boiler to ascertain if it can be retained and utilised as part of works).

Heating and hot water will be supplied via a wall mounted condensing vertical balanced flue pressurised boiler with a min SEDBUK rating of 86%. No combustible materials within 50mm of the flue. System to be fitted with the mnostatic radiator valves and all necessary zone controls and boiler control interlocks. The system will be installed, commissioned and tested by a "competent person" and a certificate issued that the installation complies with the requirements of PART L.

PROVISION OF INFORMATION- COMMISSIONING CERTIFICATES (TESTING):

Copy of installers commissioning certificate to be sent to building control on completion of the work.

PART L: CONSERVATION OF FUEL AND POWER IN EXISTING DWELLINGS

EXTERNAL GLAZING:

External glazing insulation details to comply with U-values for external windows, doors & roof lights in compliance with paragraphs 4.19-4.22 & Table 1 of ADL1B and as follows:

- Windows: 1.6 W/m2K (or Window energy rating (WER) as Band C of par 4.22 of ADL1B)
- Roof Lights 1.4 W/m2K (or Window energy rating (WER) as Band C of par 4.22 of ADL1B) - Doors with more than 50% glazing: 1.8 W/m2K
- Other doors: 1.8 W/m2K
- Replacement windows/doors: As above or 1.2 W/m2K centre pane- if external appearance of facade or character of the building is to be maintained.

UPVC WINDOWS & DOORS:

All new windows/doors to be UPVC to BS644 and BBA approved, drained and vented systems in accordance with BS 8000. Double glazed units to comply with the requirements of BS 5713 including correct marking. Pattern as indicated on drawings and to be chosen from approved manufacturer as agreed with the client. All new windows to have opening lights equivalent to a minimum of 1/20th of the floor to any one room for ventilation purposes. Provide trickle vents to give ventilation area as detailed. Weather-stripped, lockable casement fasteners, white or bronze finish. Window Boards to be painted soft wood to match existing window boards. Heads and cills to match detail on existing windows.

FOLDING DOORS:

To comprise client approved outward opening thermally broken powder coated uPVC folding system on cill/track system in accordance with client's requirements. Fully weather-stripped and tested for weather tightness and infiltration and tested rate pressure classes in accordance with BS 6375 Part 1 2004 EN 10077-2 ISO 15099 1200special exposure category achieving 600Pa for air permeability, 600Pa for water tightness and 1200Pa for wind resistance. Doors to have a 'shootbolt' locking system that locks into both the top and bottom track. Configuration to be as shown on the drawings.

ROOF LIGHTS:

Proprietary roof lights (style to be confirmed by client) to be provided as shown on the drawings. Min U-value of 1.4 W/m²K Roof-lights to be double glazed with 16mm 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 flashing etc. Refer to plans for locations, specification and size to be agreed with client.

AREAS OF EXTERNAL WINDOWS, ROOF WINDOWS & DOORS:

Area of external windows, roof windows & doors should not exceed the sum of 25% of the usable internal floor area of the extension, plus the total area of any windows or doors which as a result of the extension works, no longer exists or are no longer exposed in compliance with paragraph 4.2 of ADL1B. Where area of external windows, roof windows & doors exceed 25% of the usable floor area insulation levels to be increased accordingly.

CLOSING AROUND WINDOW & DOOR OPENINGS:

Checked rebates should be constructed to window/door reveals or proprietary finned insulated closers should be used. Checked rebates are where the outer skin masonry/skin projects across the inner skin by at least 25mm, the cavity is closed by an insulated closer and the window or door is fully sealed with mastic or similar externally.

SEALING & DRAUGHT PROOFING MEASURES:

All external door and window frames, service penetrations to walls, floors and ceilings, etc, should be sealed both internally and externally with proprietary sealing products such as proprietary waterproof mastic, expanding foam or mineral wool or tape to ensure air tightness.

SAFETY GLAZING:

Doors and adjacent sidelights/windows in critical locations within 1500mm of ground and floor level, and 300mm of doors and windows within 800mm of floor/ground to be safety glazed to: BS EN 12150, BS EN 14179, BS EN 14449, which supersedes BS 6206 Safety glazing must comply with the new system of marking which requires visible and clear and indelible markings on each piece of safety glazing with critical locations in compliance with: BS EN 12150, BS EN 14179, BS EN 14449 NEW AND REPLACEMENT WINDOWS See and replacement windows to be UPVC double glazed sections to match existing, to be low-E glazing, to achieve min 1.6 W/m²K U-value. Opening lights to be a min. of 1/20th of room floor area and fitted with trickle ventilators not less than 8000sq. mm. Ventilators to be controllable and secure. Silicone mastic sealant all round externally. 25mm thick timber window boards provided to each window. All new windows to be complete with thermobate cavity closures to reveals. First floor windows to have an unobstructed openable area at least 0.33m² and 450mm high x 450mm wide.

NEW AND REPLACEMENT DOORS:

New and replacement doors to achieve a U-Value of 1.60W/m²K. Glazed areas to be double glazed with 16mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206 and Part K of the current Building Regulations.

PART P: ELECTRICAL

SAFETY :

Contractor is to include for extending and modifying the existing power/lighting and electrical installation to client's instructions.

ELECTRICAL INSTALLATIONS:

New or works to existing electrical circuits or systems must be designed, installed, tested and certified to BS 7671 or with the current editions of the IEE regulations by a competent person in compliance with Approved Document P of the Building Regulations.

INTERNAL 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.

ENERGY EFFICIENT LIGHTING FIXED:

INTERNAL/

fixed internal energy efficient lighting in new extensions must not be less than 75% of all the fixed low energy light fittings (fixed lights or lighting units) in the main dwelling spaces (excluding cupboards & storage areas), fitted with lamps which must have a luminous efficiency greater than 40 lumens per circuit-watt and a total output greater than 400 lamp lumens.

EXTERNAL/

Fixed external energy efficient lighting in new extensions must consist of either:

(i) Lamp capacity not greater than 100 lamp-watts per light fitting and fitted with automatic switch off between dawn and dusk and when lit area becomes unoccupied; or

(ii) Lamp efficacy greater than 45 lumens per circuit-watt; and fitted with automatic switch off between dawn and fitted with manual controls.

INTERNAL SWITCHES/SOCKETS:

All internal switches & socket out lights for lighting & other equipment in habitable rooms at appropriate heights between 450-1200mm from finished floor level as diagram 22 M2 section 8 of building regulations. Consumer unit switches are sited between 1350-1450mm from ffl.

ELECTRICAL WORK:

All electrical work required to meet the requirements of part P (electrical safety) must be designed, installed, inspected and tested by a person competent to do so. Prior to completion the council must be satisfied that either:

A: An electrical installation certificate issued under the competent person self certification scheme has been issued.

B: Appropriate certificates and forms defined in BS 7671 have been submitted that confirm that the work has been inspected and tested by a competent person.

A competent person will have the sound knowledge and experience relevant to the nature of the work undertaken and to the technical standards set down in BS 7671, be fully versed in the inspection and testing procedures contained in the regulations and employ adequate testing equipment. In the case of Option B only, the competent person must be a member of NICEIC or ECA. In addition, in the case of minor works (see part P for definition) an electrician qualified to at least City and Guilds 2391 is considered to be a competent person. The person carrying out the work must arrange for a competent person to inspect the electrical installation at first fix stage and inspect and test prior to the installation being live.

MATERIALS AND WORKMANSHIP:

All materials must comply with the following:

- British Standards or European Standards.
- Product Certification Schemes (Kite marks).
- Quality Assurance Schemes.
- British Board of Agreement Certificates (BBA).
- Construction Product Directives (CE Marks).
- Local Authority National Type Approvals (System Approval Certification).

All materials must be fixed in strict accordance with manufacturers printed details and workmanship must be in strict accordance with BS 8000: Workmanship on Building Sites: Parts: 1 to 16 . Where materials, products and workmanship are not fully specified or described, they are to be: Suitable for the purpose stated or inferred & in accordance with recognized good practice.

NON BUILDING REGS SPECIFICATION:

- All painting, decorating and finishes are to be agreed with the client.
- All wood work is to be left ready to decorate.
- All internal walls to have a smooth plaster finish ready to decorate.
- Specification of finishes is to be to the client's instruction.

