

**Project : NEW DWELLING AT:**  
**36 BURRFIELDS ROAD, CHAPEL EN LE FRITH**

**A.J.S ARCHITECTURE**



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These specification notes are to be read in conjunction with all architectural planning and building regulations drawings and mechanical, electrical and structural engineers details and calculations. Particular attention should also be paid to planning conditions to ensure that specific information is provided such as material samples for recon stone, roof slates and any external finishes required.

Refer to planning approval for any such specific requirements.

#### DEMOLITIONS AND GROUND WORKS

Full allowance is to be made for the complete demolition of any existing structure, grubbing up old foundations, redundant drainage and general preparation of site for new building works etc.

#### NEW FOUNDATIONS

Concrete strip foundations to a min depth of 900MM below lowest ground levels – to be agreed with building control on site following trial pits. Strip footings are to be 600X300 to cavity walls and 450X300 to single skin walls.

#### SERVICES – ASSUMED SERVICES TO FEED FROM THOSE THAT SERVE INTO THE SITE FROM BURRFILEDS - ALL SERVICES AVAILABLE

All existing services locations are to be sought from the relevant source so as to ascertain as much of the existing on site apparatus or services within the immediate vicinity of the site to enable new connections to be made and to avoid unnecessary damage to apparatus when excavating.

If any services are required to pass through the foundation zone, they are to be ducted, and have pre-cast concrete lintels provided over.

Generally, holes, recesses and chases to be in locations which least affect the strength, stability and sound resistance of the construction, and should be the smallest practicable size. All gas, electric, water and drainage services are in the road directly in front of the site

#### UNDERGROUND DRAINAGE – FOUL AND SURFACE WATER MANHOLES ARE ASSUMED TO BE WITHIN THE SITE NEAR THE FOOTPATH TO BURRFIELDS

The drainage system shall generally be in accordance with BS 65, 1988 (Specification for vitrified clay pipes, fittings, joints & ducts) and BS 8301 Code of Practice for Building

Drainage. Products shall generally be selected from Hepworth Iron Co. Ltd Technical Handbook. Installation to be in full accordance with manufacturers details and recommendations and, in all cases, shall be constructed to the satisfaction of the appointed Building Inspector. For 100mm drainage runs use 'Supersleeve' system.

As an alternative to vitrified clay, the contractor may elect to use plastic pipelines. Installation should be compliant with BS4660 or BS5481. Generally 100mm diameter pipelines shall be used for private surface water and foul drainage, increasing at final connections onto public sewer(s).

Provide proprietary concrete lintels to BS 5877: part 2 over any underground pipe-work passing through new cavity wall construction, with any opening (min. 50mm space all round) masked to prevent ingress of vermin or fill. A DPM (min. 1200g) is to be installed to form a continuous barrier, running below insulation at suspended GF level; any drainage/ service penetrations will need to be sealed as part of these sub-contractor undertakings, in order to maintain a sealed membrane.

Manholes to be constructed to the depths required using either pre-cast rings and heavy duty cover slabs, or semi-engineering brickwork laid English Bond in 1:3 cement: sand mortar, or plastic inspection chambers by hepworth with adjustable height rings. Step irons to be incorporated into manholes over 900mm deep. Manholes up to 2.7m deep to have internal chamber size, typically, of 1200 x 750mm (dependant upon number of branch connections). Cover dimensions 450 x 600mm, increasing to 600 x 600mm (min) above 1m in depth. Manhole covers to be selected to suit loading criteria, with covers to suit type of surface in which they are to be located (e.g. block pavers to parking areas/ tarmac roadway etc).

Where possible, Contractor will introduce polypropylene inspection chambers in preference to constructed manholes as a means of restricting expenditure. In all situations, design and implementation shall be in strict accordance with manufacturer's recommendations, and shall accord with latest amendment to Approved Document Part H.

Where a drain or sewer runs under a building at least 100 mm of granular or other suitable flexible filling should be provided round the pipe. On sites where excessive subsidence is possible additional flexible joints may be advisable or other solutions adopted such as suspended drainage. Where the crown of the pipe is within 300 mm of the underside of the slab, concrete encasement should be used integral with the slab.

Where a drain or sewer running below a building is less than 2 m deep, the foundation should be extended locally so that the drain or sewer passes through the wall.

## ABOVE GROUND DRAINAGE

Internally, W.C.'s to be connected into 100mm pvc waste pipes to soil stack, or waste connector into foul drain outlet. Whb's, sink units etc. to be fitted with 75mm deep seal anti-siphon/Hepseal traps connected via 32mm waste pipes respectively. Baths are to be fitted with shallow traps in 40mm pipe work. N.B. – where two pipes from different fittings are adjoined on the same run, pipe work is to be increased at that junction to 50mm minimum.

All new pipe work to comply with BS 5572: Code of Practice for Sanitary Pipe work. Provide rodding access to all new plumbing and drainage connections for cleaning/ removal of blockages. All pvc waste pipes and drains to be solvent welded and air pressure tested upon completion. Ventilate the soil pipes at head of each main drainage run (terminating vent pipe, and/or via a ridge vent terminal by roof tile specialist). BBA certified Air

Admittance Valves to be fitted to head of stub stacks (provide air ventilation grill just below plasterboard encasement enclosures).

Note: To minimise noise transmission soil and vent pipes to be insulated with glass fibre quilt for the full height of the pipe, before boxing-in to all habitable rooms/ corridors/ hallways etc.

## MASONRY BELOW DPC

All new walls below ground level are to be formed in either dense aggregate 7N blockwork or Class B semi engineering brickwork/ engineering quality facings to BS 3921. Mortar mix generally for works below actual ground level 1:3 (cement: sand). Above ground a natural (or tinted) mortar mix to match existing is to be adopted.

Allow for 150mm cavities to be filled with weak mix concrete to 225mm to ground level, and sloped to exterior, with weep-holes at base of wall to suit finished ground levels. Allow for min. 3no. courses of engineering/ FL quality facings immediately below dpc to visible areas, increasing where ground levels slope away from building.

Dpm under Ground Floor slab to run continuous into cavities to lap with dpc to wall, this may entail use of supplementary sheets at edge of slab. (Contractor to obtain manufacturer's recommendations).

## GROUND FLOOR CONSTRUCTION (Ground Bearing Slab-Insulated)

(Allow for 225 deep beam and block if required by building control depending on ground conditions)

New floor to consist of 100mm reinforced slab with screed over - approx 50mm (allow for underfloor heating as/if required) on 150mm Xtratherm XT/UF rigid floor insulation or similar approved KINGSPAN with 500g isolating membrane to prevent reaction with cement, Min 1200g D.p.m. is to be laid on min 25mm sand blinding on a minimum of 150mm well consolidated hardcore. All to achieve a 'U' value in accordance with building regs and relevant thermal calculations. Allow for 25mm perimeter up stand insulation to all relevant areas.

## DPC'S, FLASHINGS & CAVITY TRAYS

Damp proof courses and cavity trays to be formed using a high performance pitch free polymeric dpc system, or equal approved with proprietary steps, stop ends and weep holes and should be located at wall/roof abutment locations, and if required at dpc level where ground levels are set at the same level as finished floor level.

Horizontal dpc's minimum 150mm above adjacent ground level (n.b. where ramped flush entrances occur, provide double damp proofing under door threshold and stepped dpc. either side of entrance for the length of the ramp. Vertical dpc at perimeters of all openings to be RMC Thermabate, as before described. Provide weepholes to external wall lintels, as appropriate, and at base of external cavity walls.

## NEW EXTERNAL WALLS (350mm O/A) (150 cavity)

New walls externally comprising of 350mm wide cavity construction consisting of an outer leaf (100mm on bed) of RECON STONE (Marshall – Cromwell Pitched Weathered or

similar) - 150 deep course with stone heads, cills. 150mm wide insulated cavity with partial fill, 100MM KINGSPAN CAVITY INSULATION FITTED IN ACCORDANCE WITH MANUFACTURERS DETAILS with all cavities thermally sealed against air leakage. An inner leaf of 100mm wide 7N TOPLITE 7 concrete load-bearing block or similar approved semi dense thermal block.

(N.B. During adverse weather conditions and overnight, it will be necessary to provide protection to the cavities during construction to prevent damage to the insulation and unwanted water retention.)

Stainless steel cavity wall restraint ties set out in accordance with BS1243. The first run of wall ties to be located at 600mm centres horizontally, starting approx 2c. below dpc.

Subsequent run of wall ties to be spaced at not more than 750mm centres horizontally (as cavity is in excess of 75mm; vertical twist stainless steel wall ties should be used, or ties of equal performance). N.b., Wall ties, spaced at no more than 450mm apart vertically, should be provided within 225mm from the sides of all openings with un-bonded jambs (i.e., those closed using RMC Thermabate insulated cavity closers).

Allow for an internal finish of 12.5mm plasterboard on dabs and finished with a plaster skim coat. Tape and seal all areas against air leakage.

Cavities to be closed at jambs and cills using insulated cavity closers in accordance with manufacturers details relating to insulation type used.

Generally, movement joints in masonry walls should be based on BS 5628: Pt1: 1992 and BS5628:Pt2: 1995, which recommends (cellular polyethylene filled) vertical joints of 16mm thickness at max. 12m. centres for clay bricks, 8m. apart and 10mm thick for calcium silicate bricks & 6m apart/ 10mm thick for concrete blocks. Where possible movement joints should be sited behind RWP's. Complete joint with compatible gun applied 1 part polysulphide, or silicone seal to pre-approved colour finish, where visible.

#### INTERNAL WALLS (Blockwork)

Internal load-bearing walls are to be built off foundations as discussed before and are to incorporate dpc/dpm at the same level as floor slab. Blockwork is to be 100mm Besblock Cellular Bescrete, or equal approved (generally stated as 7N/mm<sup>2</sup>).

#### INTERNAL WALLS (Stud Partitions)

Non-load bearing stud partitions: either:

75mm British Gypsum Gypwall Rapid dB Plus or similar approved system. With 15mm soundbloc rapid (soundbloc rapid MR to wet rooms etc) either side of Gypframe 43mm AS 50 acoustuds at 900ctrs with gypframe GWR2 mid height noggins upto 2400MM of 450ctrs and no noggins upto 2700mm. The spec complies with approved document 'E' 2003 for sound separation and fire protection for 30mins as required

Or:

100X50 SW timber studwork at 450ctrs with 63mm ISOVER APR1200 sound insulation between studs and over boarded with 15mm GYPROC WALLBOARD and skim. Allow for plyboard backing where fixings required

## LINTELS

Catnic high performance range galvanised mild steel lintels or equal approved, with minimum 150mm end bearings, for use in external walls to wall thickness as specified earlier. Voids to lintels to be ordered with, or shall have later applied rigid insulation thermal boarding. Allowances should also be made for stepped dpc's over lintels where appropriate. Provide weep holes above openings within cavity wall construction at a maximum of 450mm centres, with a minimum of two weep holes per opening.

Where internal openings in existing masonry are to be formed, an alternative support of pre-stressed concrete lintels may be used upon consultation of the Structural Engineer – 150mm minimum end bearings as before.

## STEEL BEAMS – where relevant

New load bearing steel beams where indicated are to be provided as indicated on Structural Engineer's Drawings/ supporting Calculations, including provision of any load-bearing concrete pad-stones for steels onto masonry bearing.

Protect all new and existing exposed steelwork with min. ½hr. fire resistant board material such as 15mm Gyproc Fireline board or intumescent paint (or a combination of both).

Installation shall be to the satisfaction of the Building Control Inspector, and shall, in all cases meet requirements of Approved Document Part B.

## FIRST FLOOR and SECOND FLOOR CONSTRUCTION

Allow for new 200X75 floor joist at 400CTRS with mid span noggins. All joist to be on hangers rather than built in. Floor boards over to be min 22m T & G flooring grade board. Insulate floor with 100mm Isover APR1200 sound quilt and underdraw with either 15MM fireline board or wallboard rated to allow for 30min fire separation with skim finish.

New staircase to be min 235 treads with 13 risers over floor to floor indicated. Stair to be either MDF and softwood with glazed balustrade at min 900mm height. Max pitch and stair to be 42deg and ensure 2000mm min head height maintained over string.

## PITCHED ROOF

New roof covering at 35deg with BLUE/GREY SLATE on 50mm x 25mm Type A tanalised tiling battens gauged to suit manufacturers recommendations and specifications for chosen coverings - additional tiling battens to be fitted to all unrestrained felt overlaps.

Nail all roof covering materials to all perimeters of roof for at least the initial 15% of the width of the building. Breathable roofing felt by Tyvek, Kloborg or similar approved fixed in accordance with manufacturers instructions.

Ensure that all ridge tiles are mechanically fixed for initial ridge distance of min 900mm unless dry ridge system is used where installation should be carried out in strict accordance with manufacturers instructions.

All fixings to be in accordance with manufacturers installation handbooks, guidelines, recommendations and instructions. All roof works to be carried out in strict accordance with BS5534.

Roof structure to be min 150x75 c24 grade rafters at 400CTRS in accordance with attached drawings and manufacturers details. Allow for all relevant diagonal and lateral strapping.

Allow for velux rooflights as indicated and doubling up of rafters to frame. Allow for mid span steel purlins as indicated - support with relevant calcs.

100mm x 75mm C24 wall plates. Provide 30mm x 5mm galvanised steel wall plate or vertical twist lateral restraint straps at 1800mm centres, minimum 1000mm long anchored to face of wall/gable and rafters/trusses. Fix rafters to wall plates using frame anchors or skew nails.

Roof is to be insulated at ceiling rake level with 100mm kingspan and 50mm below.

Provide ventilation to all roof spaces via 25mm (25,000mm<sup>2</sup>) insect-proof continuous vent at eaves level with 5mm continuous ventilation system at ridge via either in-line tile ventilators or dry-vent ridge tile system at centres appropriate to manufacturers recommendations to achieve 10,000mm<sup>2</sup>.

## RAINWATER GOODS

Plastic guttering in black with half round guttering and round rwps. Soffit boards in white flush to wall.

## WINDOWS AND EXTERNAL DOORS

To comprise of WHITE UPVC FLUSH CASEMENT WINDOWS and steel braced painted front doors in accordance with secured by design standards. All details to be supplied by the relevant window manufacturer in accordance with latest building control standards.

Purpose made windows and frames must be to high performance standards; all openings must incorporate an integral neoprene weather-seal. Double glazing to be hermetically sealed, min. 4:12:4, with argon filled cavities & Pilkington Low 'E' reflective coatings (MUST BE MIN 1.2W/m<sup>2</sup> K).

Rear doors to be aluminium bi-fold units. Finished in white with either double or triple glazed units. Allow for catnic over relevant to opening width thereto.

Laminated glass to be provided on all ground floors and any vulnerable locations to upper storeys, e.g., above low pitch roofs etc. Safety glazing to all areas is to be in accordance with Approved Document; Part N (1998), and comply with BS5713, BS6262 Part 4 1994, BS6206 as appropriate – including any glazing below 800mm from finished floor level, and 1500mm above floor level for a horizontal distance of 300mm either side of doors. Patterns for any obscure glass to be agreed with Employer before installation is allowed to proceed. Window fastening shall be far enough apart to be beyond the reach of a child, and secured with appropriate locking device to suit location. Casement window opening lights shall have an easy clean arrangement, i.e., side hung windows to have 90 degree open hinges. Preference will be given for top hung, tilt & turn, fully reversible casements, with easy reach (low level) handles. All manufacturers details/ product samples to receive prior Client's Approval.

All windows shall be installed in accordance with the manufacturers recommendations.

Windows, doors and all component parts shall comply with the provisions of BS7950 & BS 644 with regard to security. All metal components shall have a minimum 30year life.

Windows and components shall comply with BS 8213 as appropriate.

## INTERNAL DOORS

Ensure all doors to habitable rooms are suited fire doors and frames rated to 30min. All glazing thereto to be fire rated accordingly.

Internal door finishes to be agreed with the client.

## EXTRACT VENTILATION

The ventilation within the house must be in accordance with the latest standards within Building Regs to approved document Part F and approved document Part L – to the latest revisions.

Particular ref must be made to Part L domestic services compliance guide for ventilation performance levels.

VENTILATION SYSTEM MUST BE A HEAT RECOVERY SYSTEM, IF REQUIRED FOLLOWING CALCULATIONS, WITH AN EFFICIENCY MIN OF 90% - VENT AXIA SYSTEM OR SIMILAR APPROVED – DETAILS OF SYSTEM TO BE USED TO BE SUPPLIED BY CONTRACTOR

REFER TO THERMAL CALCULATIONS TO COMPLY WITH ALL REQUIREMENTS – to be supplied under separate cover.

Please note – no responsibility will be taken for failure of site pressure testing as this relates to site workmanship to specific specification details under separate cover – work to the requirements therein only.

## NEW HEATING, HOT WATER.

CONDENSING COMBINATION BOILER TO BE POSITIONED WITHIN WALL CUPBOARD WITHIN KITCHEN DEPENDING ON APPOINTED KITCHEN DESIGN. ENSURE CUPBOARD VENTED THERETO

Wall mounted gas fired, condensing combination central heating boiler location to be agreed with client. Balanced flues are to be fitted externally with protective wire guard cages and to terminate a minimum of 300mm from any adjacent opening (a minimum of 600mm where oil fired boiler is to be installed) and in accordance with Gas Board Regulations and Guidelines. Alternative air inlet and exhaust flues/ combined flues are to be installed in strict accordance with manufacturers instructions and in accordance with flue exhaust locations indicated in Diagram 3.4 of approved document J.

New heating systems to incorporate zone controls via thermostatic radiator valves with new heating boiler to incorporate timing device, interlock facilities and flow control to prevent unnecessary boiler cycling. Provide and supply commissioning instructions approved by appropriate professional organization to the end user. Heating system to comply with BS5449 1990.

The SEDBUK rating of any installed heating boiler is not to be less than the relevant ratings listed below:

Central Heating System Fuel

Class A Boiler with a minimum SEDBUK of 90 %+ - RAVENHEAT BOILER OR SIMILAR APPROVED WITH WINTER AND SUMMER SETTINGS TO COMPLY WITH MIN STANDARDS.

A completion certificate from a competent person/CORGI registered will be required to confirm that the combustion appliances achieve compliance with the requirements of the Building Regulations.

Storage vessel located within property as indicated to comply fully with BS3198 and to incorporate a thermostat and timer. Hot water storage vessels and all pipework in or passing through unheated areas is to be fully insulated. Pipework within 1 metre of hot water storage cylinder is to be insulated to achieve a minimum 'U' value of 0.27W/m<sup>2</sup>K.

## ELECTRICAL

ALL ELECTRICAL WORK IS REQUIRED TO MEET PART P OF THE BUILDING REGULATIONS – ELECTRICAL SAFETY AND IT MUST BE DESIGNED, INSTALLED, INSPECTED AND TESTED BY A PERSON COMPETENT TO DO SO. PRIOR TO THE COMPLETION OF ALL ELECTRICAL WORKS, AN ELECTRICAL CERTIFICATE IS TO BE ISSUED BY A COMPETENT PERSON IN ACCORDANCE WITH BS 7671.

Refer to Electrical Sub Contractors Drawings and Specification for more detailed information outlined in foregoing text, and for details of wiring requirements elsewhere for private areas – internal/ external lighting, socket outlets, smoke alarms, equipment schedules etc (including areas such as Utility and Kitchen). ALL SWITCHES & SOCKETS ARE TO BE SITED BETWEEN 450MM AND 1200MM FROM FINISHED FLOOR LEVEL. - Refer to client requirements for all finishes but suggest satin chrome finish to all sockets/lights switches etc.

In order to comply with the requirements of Regulation L1a, it is necessary to provide fixed light fittings only capable of housing lamps having a luminous efficacy greater than 40 lumens per circuit watt. (E.g. fluorescent tubes, compact fluorescent lamps and any holder capable of taking energy efficient lighting ONLY). The method for determining the number of locations to be equipped as a reasonable provision for efficient lighting (per floor) is 1 energy efficient fitting per 25 square metres of floor area or one fitting for every four fixed light fittings.

External lighting system to include;

An automatic solar extinguisher or should have sockets that can only be used with lamps having an efficacy greater than 40 lumens per circuit watt (such as fluorescent or compact fluorescent lamp types, and not GLS tungsten lamps with bayonet cap or Edison screw bases).

## SMOKE ALARMS

Smoke alarms are to be provided throughout and are to be inter-connected and mains wired with emergency battery back-up supply. To be minimum 300mm from electrical fittings and maximum 3 metres from any adjacent bedroom door. All to comply with B.S. 5839-6:2004 Category LD3 standard.(Please note that electrical installation is to comply with Part P – Electrical Safety.

Or

A Fire Alarm system to conform to BS 5839, pt.1, 1988 by specialist sub contractor – incorporating automatic detection and alarms provided within habitable rooms and areas of infrequent use, and generally comprising, elsewhere, of automatic fire detectors, audible alarms, control and indicating equipment. The system is to be powered by mains electricity

with a back up standby supply. On completion of the installation the installer should certify that the system complies with BS 5839.

#### NOTICE PLATE PROVISION

Every combustion appliance within the property should have a label of durable material, indelibly marked to indicate its limitations of use, to be located in an identifiable location. This label should be fixed in a secure position, such as adjacent to the gas or electricity consumer unit, the water supply stopcock or next to the chimney or hearth described.

#### ENERGY EFFICIENT DESIGN: THERMAL BRIDGING AND AIR LEAKAGE

Ensure all building works are undertaken in line with the DTLR publication 'Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings

#### PART 'L' COMPLIANCE CALCULATIONS

Test data must be provided to show compliance under approved document 'L' with regard to new build property. Advice to be sought from the Local Authority with regard to the relevant bodies that can provide such calculations/details.

#### PRESSURE TESTING

Air Leakage testing is to be carried out by a specialist sub-contractor in order to comply with Part L2a of the Building Regulations. No responsibility can be taken for air leakage testing and compliance other than the specification in compliance with building control

Pressure testing is to be completed to the dwelling upon completion and notice of the result is to be given to the Local Authority Building Control Department no later than 7 days after the final test.

TEST RESULTS REFER TO RELEVANT THERMAL CALCULATIONS – DO NOT VARY FROM SPECIFICATION THERE-IN. NO RESPONSIBILITY CAN BE TAKEN FOR PRESSURE TEST FAILURE

#### FIXED BUILDING SERVICES

A commissioning notice for all of the fixed building services is to be submitted to the Building Control Inspectors no later than 30 days after the completion of the dwelling.

An operation and maintenance manual/instructions are to be supplied to the dwelling owner upon occupancy of the dwelling.

#### BUILDING REGULATIONS PART M – ACCESS

Ramped approach (design criteria in accordance with the approved document part M) to the principle entrance door, whichever is suitable to the individual design. 1 in 20 ramp over 3M.

Ensure front door has a minimum clear opening between door leaf and frame of 800mm for disabled access. Suggest the use of overall external door and frame width of 1000mm.

Disabled thresholds to entrance doors to have either hardwood sills that meet BS 6375 parts 1 & 2/ Part M compliant door threshold sills or the use of two split half batter kerbstones set on outer stone wall with the top at finished floor level with the slope facing outwards and have a disabled access weather-strip with an up stand of no more than 15mm by Stormguard (such as a 'Trimline' or similar).

Ground floor WC with an unobstructed clearance of 1000mm wide and 750mm deep to the door (on frontal approach). With side door - Internally provide min. width of 900mm with a clear unobstructed access of 650mm - max. basin size 350x250mm centered max. 400mm from the front face of the W.C.

#### BIN STORAGE

A storage area and a wheelie bin must be provided to the property in accordance with LA requirements. Paved area to rear/side of dwelling to be used for bin storage - both general and recycling waste

#### EXTERNAL WORKS.

Allow for indian stone paved footpaths and rear patios

Tarmac drive space for 2 cars per dwelling

Retained walls to side and rear to be finished in coursed gritstone to match adjacent dwelling

Grassed area to rear and side of dwelling to gardens

Timber fence line between garden to rear at height of 1800mm.

Allow for 2 No. trees to each garden – existing and proposed: trees to be either small Maple or Cherry trees