

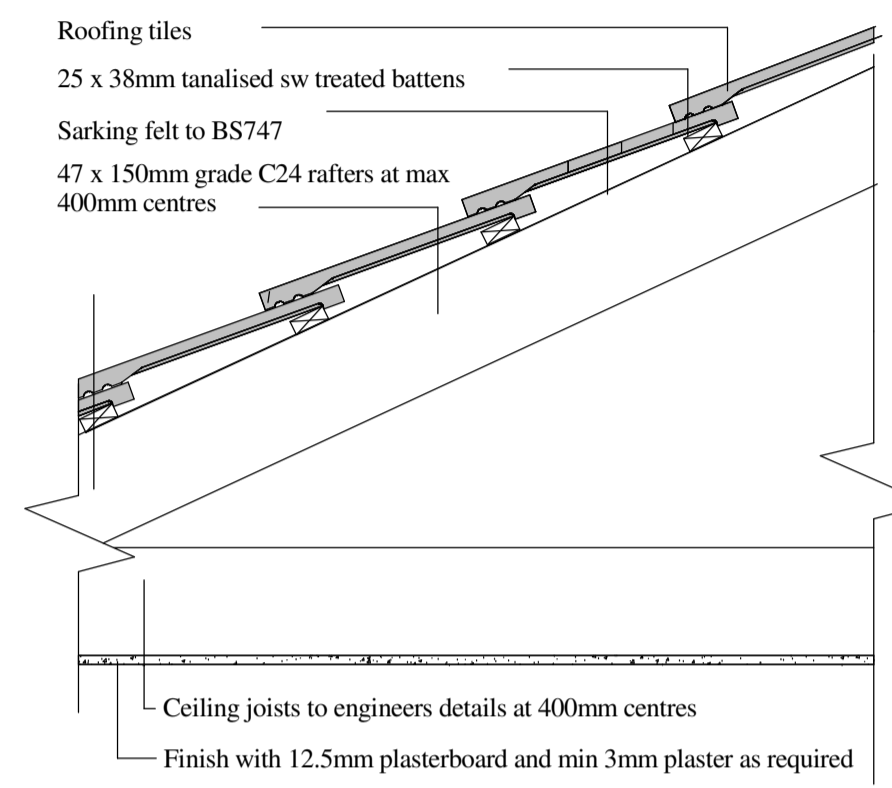
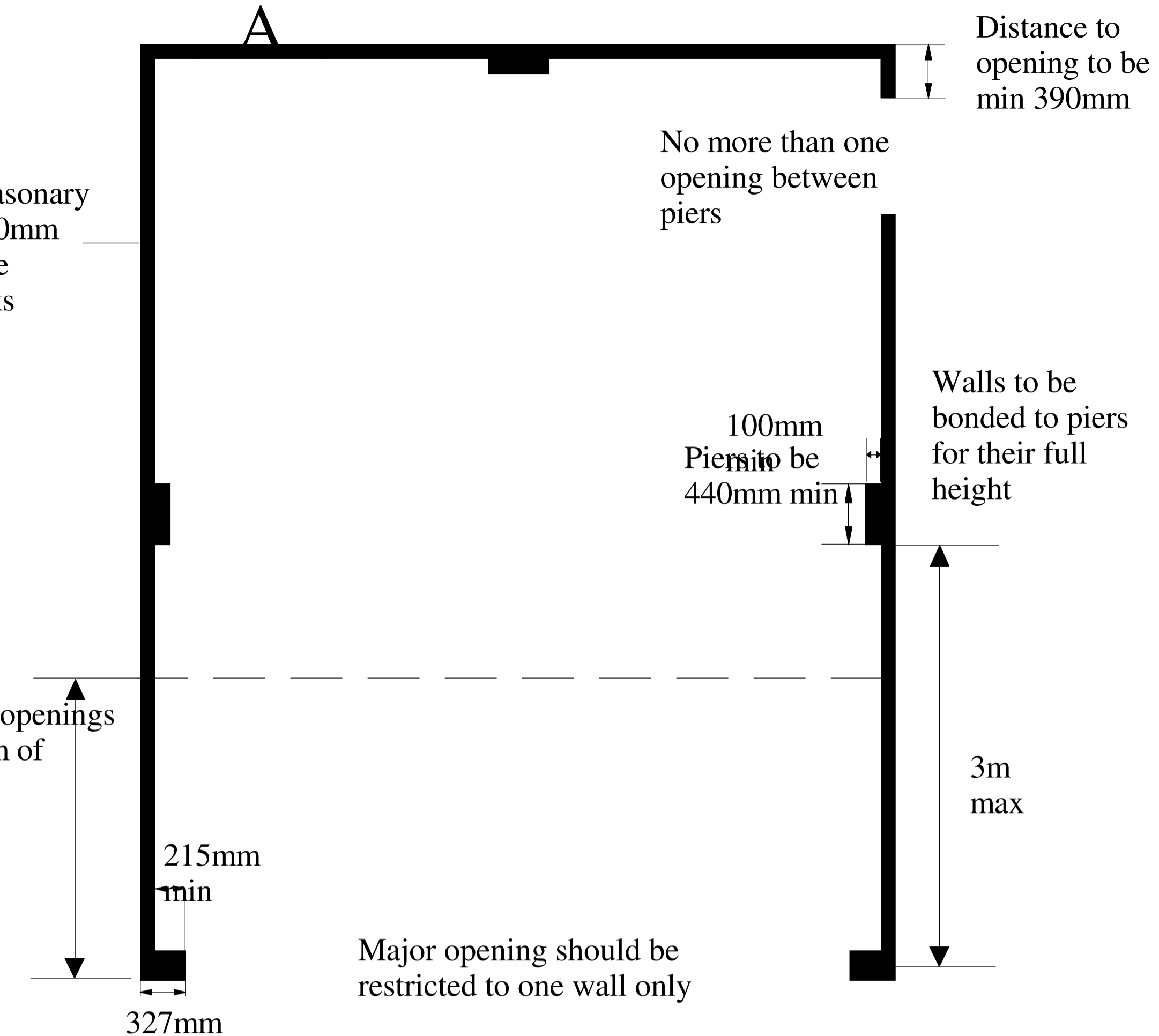
# Building Control Specifications

Brindle House, Cowlinge, Newmarket, Suffolk, CB8 9QD

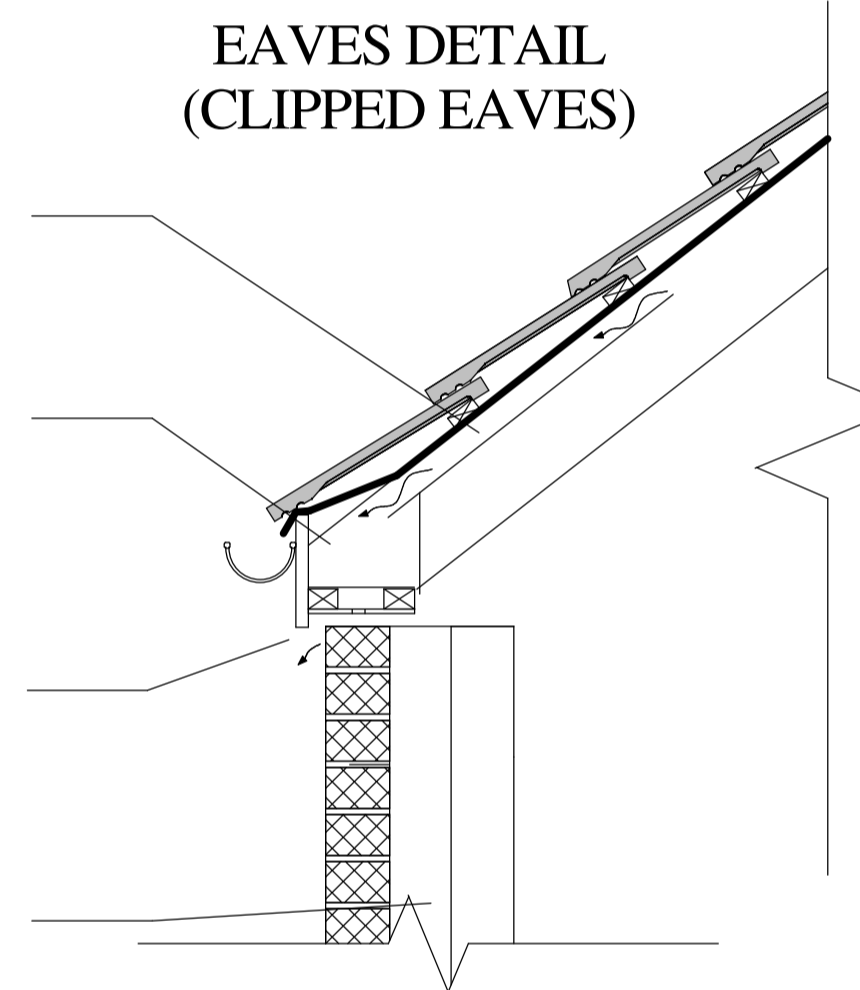
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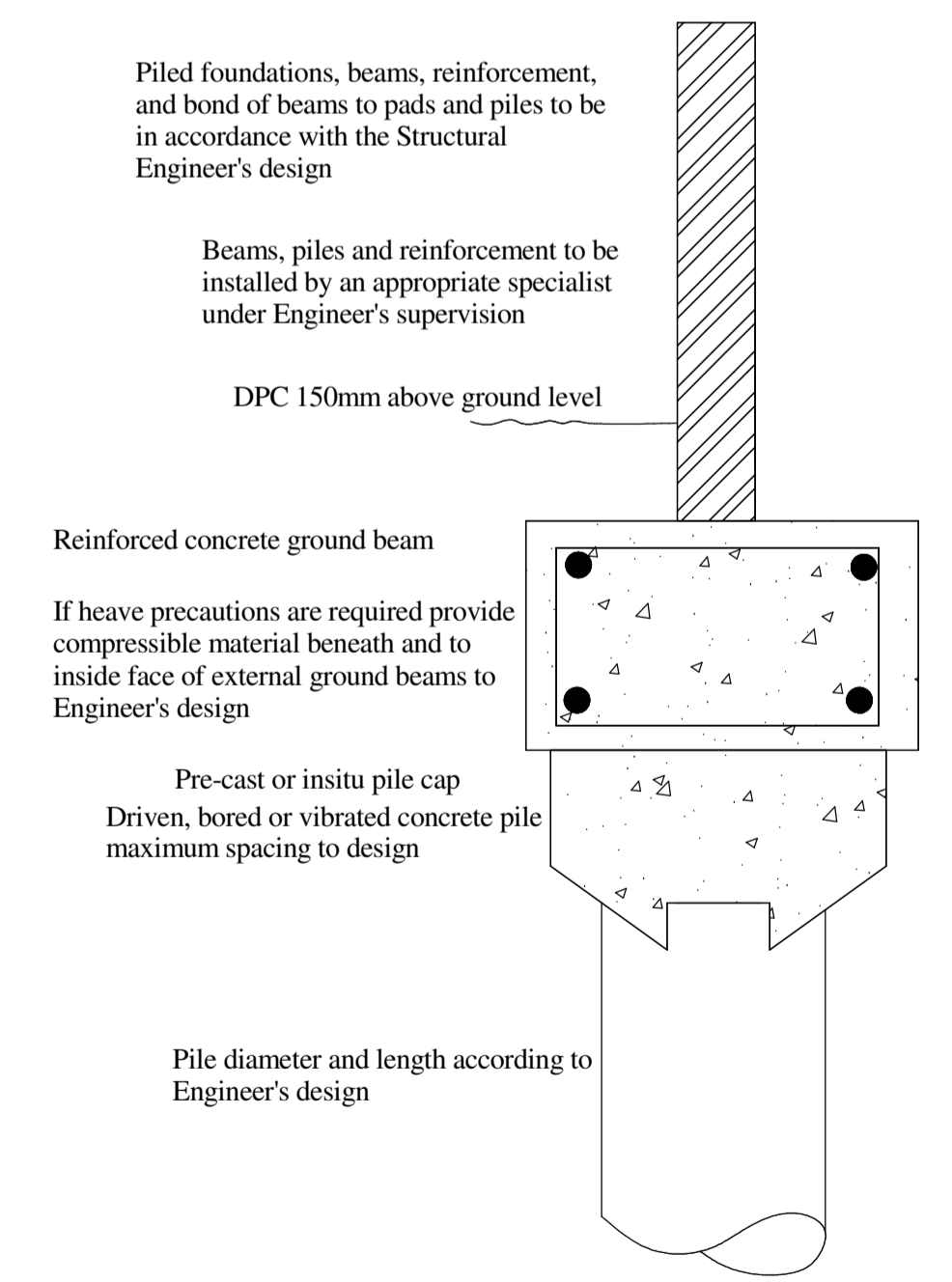
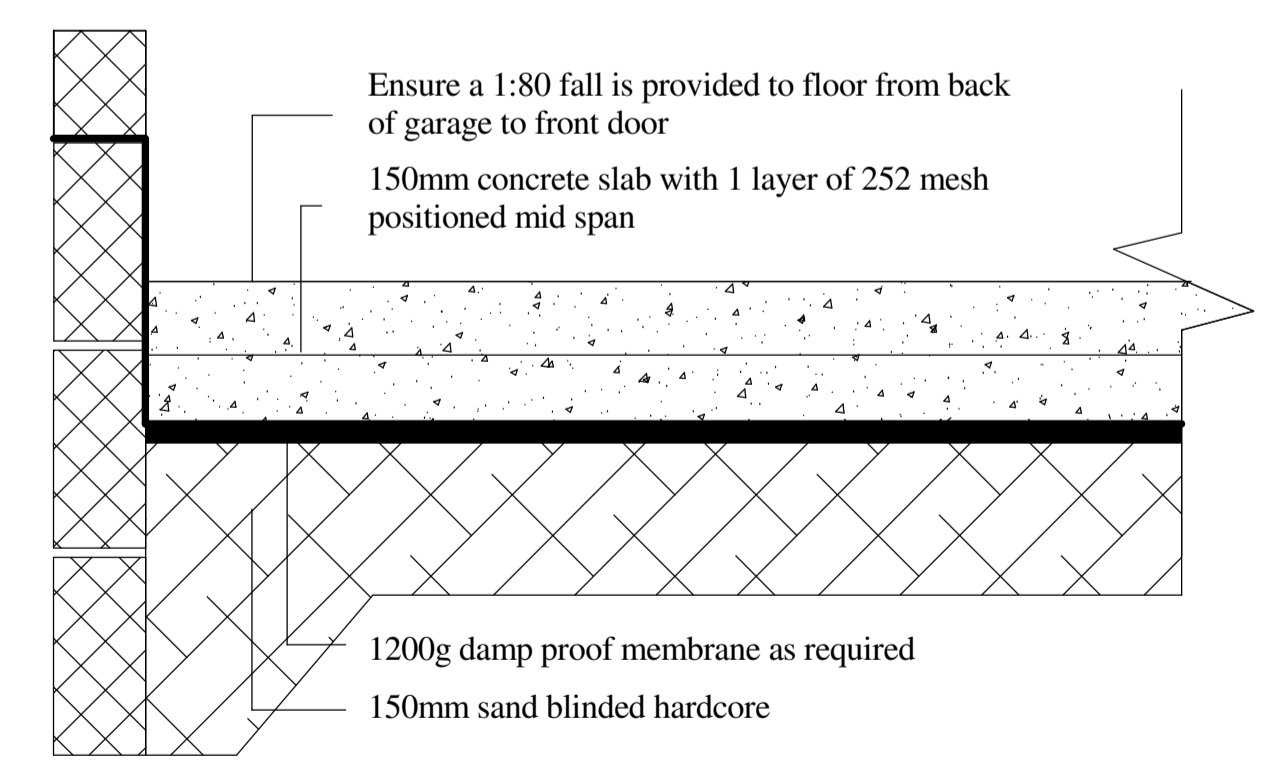
# Approved Document



## EAVES DETAIL (CLIPPED EAVES)



## STRUCTURE TO ENGINEERS DETAILS AND CALCULATIONS



- Building Regulations application is not required for garages which are:
  - Detached single storey
  - Containing no sleeping accommodation
  - Not exceeding floor area of 30m<sup>2</sup>
  - Constructed substantially of non-combustible material i.e. masonry walls and a tiles roof.
  - If the garage is constructed of combustible material it must be positioned at least one metre from the boundary, road or building

Planning approval IS necessary for this garage.

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

**Domestic clients**  
 The domestic client is to appoint a principal designer and a principal contractor when there is more than one contractor, if not your duties will automatically transferred to the contractor or principal contractor.

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

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

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

**HEALTH AND SAFETY**  
 The contractor is reminded of their liability to ensure due care, attention and consideration is given in regard to safe practice in compliance with the Health and Safety at Work Act 1974.

**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.

**SITE INVESTIGATION**  
 A survey of the site is to be carried out by a suitably qualified person including an initial ground investigation, a desk study and a walk over survey. A copy of all reports and surveys to be sent to building control for approval before works commence on site. Any asbestos, contaminated soil or lead point found on the site is to be removed by a specialist. Asbestos is to be dealt with in accordance with the Control of Asbestos Regulations 2006.

**SITE PREPARATION**  
 Ground to be prepared for new works by removing all unsuitable material, vegetable matter and free 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.

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

**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. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1992-1, with a concrete strength of 50 or 40 N/mm<sup>2</sup> 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.

**STRAPPING FOR PITCHED ROOF**  
 Gable walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BSEN 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screw fixed. Provide solid noggin between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centres.

**SOLID GARAGE FLOOR**  
 Solid garage floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide 150mm ST2 or Gen1 ground bearing slab thickened 300mm at garage entrance, concrete mix to conform to BS EN 1992-1-1:2004 with 1 layer of 252 steel mesh positioned mid span. Slab to be laid over a 1200 gauge polythene DPM as required. DPM to be lapped in with DPC in walls. Ensure a 1:80 fall is provide to floor from back of garage to front garage door.

**DETACHED GARAGE WITH SINGLE SKIN EXTERNAL WALLS**  
 (Structural engineers details & calculations to be provided if the floor area greater than 36m<sup>2</sup> or the eaves level is higher than 3.0m or the ridge is higher than 3.6m.)  
 Provide 100mm brick external walls with 100 X 400mm piers at maximum 3.0m ctrs.  
 Design of garage to be in accordance with Approved Document A diagram 18/19/20  
 Garage door opening not to exceed 5.0m in width and 2.1m in height. No other openings within 2.0m of garage door.  
 The total size of openings in a wall not containing a major opening should not exceed 2.4m<sup>2</sup>  
 No more than one opening between piers  
 Unless there is a corner pier, the distance from a window or a door to a corner should not be less than 390mm.  
 Isolated central columns between doorways (where applicable) to be 325 x 325mm min  
 Any other openings to be calculated by a structural engineer  
 Roof slope to be no more than 40 degrees  
 Wall plates and gable ends to be strapped at 2m centres  
 Garage structure and construction to comply with Approved Document A

**DPC**  
 Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins 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 retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows.  
 Wall ties to be suitable for cavity width and in accordance with BS 5628-6 and BS EN 845-1.

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

**PITCHED ROOF**  
 Pitch 22-45° (imposed load max 0.75 kN/m<sup>2</sup> - dead load max 0.75 kN/m<sup>2</sup>)  
 Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1.  
 Suitable roofing tiles on 25 x 38mm tanalised sw treated battens on sarking felt supported on 47 x 150mm grade C24 rafters at max 400mm centres max span 3.47m. Rafters supported on 100 x 50mm sw wall plates.  
 Construct ceiling using sw joists at 400mm centres, finished internally with 12.5mm plasterboard and min 3mm histle multi-finish plaster as required.  
 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 noggin. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.  
 THIS IS A GENERAL GUIDE BASED ON NORMAL LOADING CONDITIONS FOUND IN DOMESTIC CONSTRUCTION. IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT - 'SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS' OR ASK YOUR BUILDING CONTROL OFFICER FOR ADVICE.

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

**INTERNAL LIGHTING**  
 Internal energy efficient light to be fitted as calculated in the DER and in compliance with the Domestic Building Services Compliance Guide. Provide low energy light fittings not less than three per four (excluding infrequently accessed spaces used for storage, such as cupboards and wardrobes). Low energy light fittings should have lamps with a luminous efficacy greater than 45 lamp lumens per circuit-watt and a total output greater than 400 lamp lumens. Fixed internal lighting to be pin based fluorescent or compact fluorescent lamps or low energy bayonet or Edison screw base compact fluorescent lamps.

**RAINWATER DRAINAGE**  
 Rainwater goods to be new 110mm UPVC half round gutters taken and connected into 68mm dia UPVC downpipes. Rainwater taken to new soakaway, situated a min distance of 5.0m away from any building, via 110mm dia UPVC pipes surrounded in 150mm granular fill. Soakaway to be min of 1 cubic metre capacity (or to depth to Local Authorities approval) with suitable granular fill with geotextile surround to prevent migration of fines. If necessary carry out a porosity test to determine design and depth of soakaway.

**EXTERNAL SURFACE WATER DRAINAGE**  
 Drainage of paving areas to be carried out in accordance with BS 6367:1983 and Approved Document H.  
 Hard surfaces around the building should be provided with a proprietary non-slip permeable surface laid to manufacturer's details and in compliance with BS EN 1338. Concrete paving blocks. Requirements and test methods, to allow adequate drainage, or provided with a non slip surface and cross fall of 1:40 - 1:60 draining away from the building (for a minimum of 500mm) to a suitable soakaway.  
 Paths, driveways and other narrow areas of paving should be free draining away from any buildings to a pervious area such as grasslands or to a suitable soakaway.

AHP Design Ltd  
 Unit 3, Goodwin Business Park, Willie Snaith Road,  
 Newmarket, Suffolk, United Kingdom, CB8 7SQ  
 email: leigh@architecturalhouseplans.co.uk  
 Tel: 07843099418

