

Building Specification

Foundations

Using Ready-Mix GEN 3 MIX 9C20/28 days, depth of excavation 1200mm(min) x 600mm(min) wide, concrete to be a min. of 300mm deep.

For depth of foundations against distance and type of trees, see “NHBC Standards” – “Building Near Trees” guide.

Where excavation is greater than 1.5m in depth, sides are to be shored up and supported to prevent sides collapsing.

Substantial barriers will be erected around excavations greater than 2m deep.

If high risk soil then “Claymaster Clayhall Compressible Board” (50mm thick) to be installed at sides of footing.

Foundation arrangements showing where the sewer/s pass through walls, should have 600mm clearance either side, and suitable bridging arrangements.

Foundations must be equal to or greater than the invert of the sewer. When the invert of the sewer is greater than 1.5 meters below finished ground level, proposed foundations are to be a minimum of 1.0 meter from the public sewer.

Wall Construction (Brick cavity wall)

Walls to be constructed of brick facings to match existing externally, 100mm fibreglass dri-therm cavity insulation within 100mm cavity, and 100mm thick thermolite block internal skin.

Wall ties are to be butterfly or flat stainless steel at a spacing of 900mm & 450mm, but doubled around openings.

Cavities to be closed at reveals by using 100mm thermabutt cavity closer.

External wall brickwork to have expansion board incorporated every 12m.

Internal wall constructions

To provide sound insulation within the dwelling in accordance with approved document "E"(2003), wall should be constructed from 100mm stud with either 2 layers of plasterboard each side or 1 layer of plasterboard each side with 100mm thick rockwool insulation between studs.

The underside of the decking between garage & and habitable room shall be fire protected with intumescent fire sealant and garage wall shall achieve a u-value of 0.6w/m²k.

Lintels

Cast-in lintels to be used for exterior solid walls over doors and windows.

Existing lintels are to be checked for roof loading before commencement.

All steel lintels to be on minimum bearing of 150mm, with any return piers no less than 550mm long, sitting on padstones no less 450mm long or 3 courses of engineer bricks.

Lintels to be fire protected with plasterboard (2 x 15mm) or with intumescent fire coating paint.

Ground floor construction (suspended)

Internal oversite to be 100mm concrete, on 100mm of hard-core compacted and 50mm min above external oversite. Floor to be t & g chipboard same level as existing, on 100mm x 50mm treated sc3 joist (to approved document “a” – table a1) at 400mm centres on 50mm x 100mm wall plate, on dpc, on brick pier sleepers at 1200mm centres min.

150mm min void between underside of joist and top of concrete.

Chipboard flooring in any bath/shower rooms should be moisture resistant.

Under floor insulation to be 100mm Celotex rigid board insulation “ between joists.

150mm x 225mm air blocks for venting of suspended floor to be equally spaced.

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Ground floor construction (solid)

100mm sand & cement screed to finish floor level, on 100mm Kingspan or Celotex insulation board to achieve u-value of 0.22W/m²K, on 1200 gauge (0.25mm) polyethylene damp proof membrane, on “Bison” block & beam, or on 100mm concrete oversite on 100mm scalplings.

First floor and loft floor construction

Floor to be t & g chipboard same level as same level as existing, on treated sc3 joist (to approved document “a” – table a1) at 400mm centres on 50mm x 100mm wall plate (position new wall) and to sit in joist hangers (position of existing wall)

Chipboard flooring in any bath/shower room should be moisture resistant.

For joists that span between 2.5m and 4.5m, one noggin between each joist is required at centre of span.

For joists that span over 4.5m, two noggins between each joist are required at equal distance of span.

Noggins to be fixed perpendicular to joists.

100mm “rockwool rollbatts” insulation quilt (10kg/m²) between ceiling joists for sound insulation and fire protection

Roof/floor joists should be strapped to walls using galvanised mild steel lateral restraint straps (30mm x 5mm strip) at 2000mm centres on both sides of joists.

Flat roof construction (warm type)

13mm limestone chippings all bonded in bitumen, on 3 layers of roofing felt to bs747/28, on 100mm thick “gebdeck” board, on furring pieces to give 1 in 40 fall min, on treated sc3 joists at 400mm centres, sit on 100mm x 50mm wall plate.

50mm PVC soffit vent behind PVC fascia board to be incorporated.

Ceiling to be constructed of British gypsum vapour check board (or vapour check and plasterboard)

roof/floor joists should be strapped to walls using galvanised mild steel lateral restraint straps (30mm x 5mm strip) at 2000mm centres

Where flat roof meets wall/pitched roof, lead flashing code 4, and 150mm min to be used.

Flat roof construction (cold type)

13mm limestone chippings all bonded in bitumen, on 3 layers of roofing felt to bs747/28, on 22mm thick plyboard, on furring pieces to give 1 in 40 fall min, on 200x50mm treated sc3 joists at 400mm centres, sit on 100x50mm wall plate. 50mm soffit vent behind fascia board.

Ceiling to be constructed of british gypsum vapour check board (or vapour check and plasterboard) with 200mm thickness mineral fibre insulation or 100mm rigid insulation board.

Roof to have 2 no. vent holes with cowling to provide roof with cross ventilation.

Windows and doors

Windows and door to be double-glazed to achieve u-value of at least 1.6 W/m²K.

All double glazed units to be toughened glass to bs.6206 and to comply with N1 and N2 of building regulations.

An escape window with an unobstructed opening of at least 0.33m² and at least 750mm high and 450mm wide should serve all habitable rooms in the upper storey. Cill heights to be between 800mm min. to 1100mm max. above the floor.

Minimum opening size of windows for rapid ventilation to be 5% of floor area.

Door between garage and habitable rooms should be ¹/₂ hour fire resistant, self-closing and have a min 100mm threshold.

Safety glazing to be provided in critical locations in accordance with BS6206.

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Ventilation

Both controllable and secure windows will provide means of ventilation with double locking mechanism on the windows and located typically 1.75m above floor level.

The area of ventilation opening should be at least 8000mm² for habitable rooms and 4000mm² for kitchens, utility rooms, bath/shower and sanitary accommodation.

Kitchen extract fan capable of extracting at a rate not less than 60l/s to be fitted.

Utility room extract fan capable of extracting at a rate not less than 60l/s to be fitted.

If no openable window within WC then requirement of extract fan capable of extracting at a rate not less than 3 air changes per hour, which may be operated intermittently with 15 minutes overrun.

100mm x 225mm air blocks for venting of suspended floor to be equally spaced at 1.5m min.

WC fan to be ducted thru flat roof to cowling.

Heating

If new boiler required, boiler should achieve the seasonal efficient rating (A or B Sedbuk rating) of 86%.

Any new radiators should have new thermostatic valves located on each radiator.

Boiler location to have vent ducted through external wall/roof at high level to atmosphere.

No new boiler. Existing Boiler to remain.

Electrical

All electrical work will meet the requirements of Part "P" (Electrical Safety and to BS 7671:2001 Chapter 13). And must be designed, installed, inspected and tested by a person competent to do so. The council will not inspect the works but should be provided with a copy of the electrical installation certificate.

Alternatively, the electrician or installer should be registered with a registered trade body (such as NICEIC, ECA or NAPIT). In this case the council will carry out relevant inspections and should be provided with a copy of their design, installation & test certificate under BS 7671.

Lighting

Any new lights required should be low energy type or fluorescent tube.

Surface water drainage

Any drains through walls through to be bridged using precast lintels (150mm Deep x 100mm Wide) with minimum 150mm bearing.

New roof rainfall to discharge into new 100mm black PVC guttering to match existing which discharges into existing 100mm black pvc guttering which discharges into existing downpipe or into new roddable rainwater osma back inlet gulley, which is to connect into existing underground surface water system.

If soakaway to be added, it is to be a minimum of 6m away from any building. Soakaway to be a hole to the dimension of 1.5m x 1.5m x 1.2m deep and backfilled with brick/concrete rubble.

Any existing manholes featuring inside extension to have double seal boltdown manhole cover.

Any new underground surface water pipe to be installed shall be 100mm dia upvc osma pipe, fall 1:40 set in p-shingle 150mm all around pipe.

Any new roddable gulleys to have adequate rodding and cleaning access provided.

All bends to be roddable.

Foundation arrangements showing where the sewer/s pass through walls, should have 600mm clearance either side, and suitable bridging arrangements.

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Foul water drainage

Any drains through walls through to be bridged using precast lintels (150mm Deep x 100mm Wide) with minimum 150mm bearing.

Any new underground foul water pipe to be installed shall be 100mm dia upvc osma pipe, fall 1:40 set in p-shingle 150mm all around pipe.

40mm PVC waste pipe run from w/machine, sink and shower (both fitted with 75mm deep trap) to existing external soil gulley at a fall of 1:40.

Any new gulleys to be roddable and have adequate rodding and cleaning access provided.

Any existing manholes featuring inside extension to have double seal bolt-down manhole cover.

Soil vent pipe to extend 1000mm above highest opening window and provided with mesh cap.

If required – 110mm PVC waste pipe run from WC to soil stack with new manifold branch at a fall of 1:40.

All bends to be roddable.

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Pitched roof construction (Double storey Extension Roof)

New roof tiles to match existing onto treated battens onto breather membrane roofing felt to bs747/28, on 150mm x 50mm treated sc4 rafters at 400mm centres.

Rafters to be bolted against ceiling joists with m10 bolts and bs1579 toothed plate timber connector

Max rafter span is 4.0m for 150 x 50mm size rafter at 400mm centres.

Pitch roof to have a u-value of $0.30 \text{ w/m}^2\text{k} =$

50mm Celotex rigid board insulation (tuff-r ga3000z) between rafters.

If Loft room incorporated then 35mm thermal board with continuous fully sealed foil to be fixed to rafters.

50mm min. PVC soffit vent behind PVC fascia board to provide 10mm continuous gap to be incorporated.

Provide ridge ventilation tiles at 900 centres and staggered giving an equivalent 5mm of continuous gap.

Roof/floor should be strapped to walls using galvanised mild steel supports (30mm x 5mm strip) at 2000mm centres on both sides of extension.

Ceiling to be constructed of British gypsum vapour check board (or vapour check and plasterboard) at the junction of flat and pitch roof provide code 4 lead projecting 150mm min. under the tiles and lapping over the flat roof.

If no loft room then 150mm “rockwool rollbatts” insulation between ceiling joists and 150mm perpendicular to joists, or

If there is to be loft room then 150mm kingspan therma roof tr26 rigid insulation board between joists.

Mono roof construction (Single storey Extension Roof)

New roof tiles to match existing onto treated battens onto breather membrane roofing felt to bs747/28, on 200mm x 50mm treated sc4 rafters at 400mm centres.

Rafters to be bolted against ceiling joists with m10 bolts and bs1579 toothed plate timber connector
Max rafter span is 4.0m for 150 x 50mm size rafter at 400mm centres.

Pitch roof to have a u-value of $0.30 \text{ w/m}^2\text{k} =$

150mm Celotex rigid board insulation (tuff-r ga3000z) between rafters.

Ceiling to be 40mm Gyproc Thermaline Super with continuous fully sealed foil fixed to rafters.

50mm min. PVC soffit vent behind PVC fascia board to provide 10mm continuous gap to be incorporated.

Provide ridge ventilation tiles at 900 centres and staggered giving an equivalent 5mm of continuous gap.

Roof should be strapped to walls using galvanised mild steel supports (30mm x 5mm strip) at 2000mm centres on both sides of extension.

Where pitch roof meets existing wall provide code 4 lead projecting 150mm min. up the wall (below rendering) and 150mm lapping over the roof.

150mm "rockwool rollbatts" insulation between ceiling joists and 150mm perpendicular to joists, or 150mm kingspan therma roof tr26 rigid insulation board between joists.

Code 4 flashing to be a minimum of 150mm up-stand.

Dormer wall construction

Tiles to match existing,

On 50 x 25mm timber batten,

On tyvek breathable membrane/felt,

On 22mm water resistant marine plywood,

On 100 x 50mm stud wall at 400mm centres with 100mm thick rigid celotex (or equivalent) insulation between studs.

Internal board to be 35mm thermal board with continuous fully sealed foil fixed to stud wall.

Rafters either side of dormer to be 150 x 50mm under dormer cheeks to be bolted together.

6mm "Promat-Masterboard" to be fixed instead of the plywood only on the side of the new dormer, adjacent to the party wall.

Rooflight construction

Rooflight at the front to have a minimum openable area of 0.3m^2 and be located 1700mm max. From eaves and between 600 to 1100mm from floor level to bottom of openable area.

Doubled rafters and trimmings to rooflights.

Dormer roof construction

13mm limestone chippings all bonded on 3 layers of roofing felt to bs747/28, on 100mm thick "gebdeck" board, on 125 x 50mm treated sc3 joists at 400mm centres to give 1 in 40 fall min,

50mm PVC soffit vent behind PVC fascia board to be incorporated.

Ceiling to be constructed of British gypsum vapour check board (or vapour check and plasterboard).

Roof/floor joists should be strapped to walls using mild galvanised mild steel lateral restraint straps (30mm x 5mm strip) at 2000mm centres on both sides of joists.

At the junction of flat and pitch roof provide code 4 lead projecting 150mm min. under the tiles and lapping over the flat roof.

Loft conversion general

Mains operated interlinked smoke detectors should be provided to the dwelling in accordance with approved document 8. This should include a smoke detector located in the staircase enclosure at each storey. Staircase should be enclosed at each storey in accordance with approved document b.

A half hour fire resisting self-closing door should be provided to separate the loft room from the remainder of the house. (Beads to be 25 x 32mm glued and screwed).

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Loft staircase

All stair risers must be same dimension but must not be higher than 220mm.

Stair tread to be a minimum of 220mm.

Stairs with winders must have minimum 50mm going to winders.

Stair pitch must not exceed 42 deg.

Stair must have minimum headroom of 2m

Minimum guardrail height to be 1100mm for landings, 900mm for stair flights.

No opening in the balustrade should be larger than 100mm.

Note:

Contractor to ensure that the roof structure remains stable at all times and in particular during the removal of purlins and struts.

All work to be to local authority satisfaction.

New work to be bonded to existing and disturbances made good.

All BS to be complied with.

All timbers to be treated in accordance with bs5268.

Under the party wall act 1996 the adjoining neighbours must be notified in writing at least 2 months before work commences.

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