BUILDING REGULATION NOTES

IN
SUPPORT OF APPLICATION
FOR

EXTENSION AND ALTERATION TO DWELLING

AT

'STONE BARN', LONDON ROAD ASHINGTON, WEST SUSSEX RH20 3JR

Contents:

Building Regulation Notes:	Sections 1.0 to 18.0
Drawings:	2982 - 10, 11 and 12
Structural Engineers Information:	Sisan Associates Calculations and Mark Ups Ref: 25032024
Supplementary information	Therm Energy CE-11 Compliance and calculations CE1101 and CE1102

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2982 BUILDING REGULATIONS NOTES:

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1.0 GENERAL NOTES:

- The Contractor is responsible for taking and checking all levels, dimensions, etc., prior to ordering materials and starting work.
- Planning and Listed Building Conditions: The Contractor is to acquaint himself with the relevant Planning Consent before starting work and assure themselves that all the Conditions have been discharged before work starts.
- Where approval of materials by the Local Authority is a Condition of the Planning Consent, samples must be supplied to the relevant Officer for approval in writing before the relevant works are commenced.
- Building Regulation Consent: The Contractor is to acquaint himself with the Building Regulation Consent before starting work and ensure that all Conditions have been discharged before work starts.
- A plan of Inspections must be agreed with Sussex Building Control prior to commencement of the works
- Building Control should be notified not less than 48hours before Commencement of the Works. Failure to notify Building Control may result in the Local Authority fining the Contractor.
- All work (materials used for the works) is to be in accordance with the requirements of the Local Authority, current Building Regulations, British Standards and the British Standard Code of Practice, the Construction Products Directive (89/106/EEC), European Standards and Technical Approvals and the recommendations or publications of recognised institutes or trade associations, even where these supersede those shown on the drawing or in these notes.
- Where proprietary materials are specified, they are to be used in strict accordance with the manufacturer's detailed recommendations.
- This drawing is to be read in conjunction with all other consultants' drawings as applicable to the project.
- This drawing is prepared for submission to Building Control for review and approval under the Building Regulations only it is not a "working drawing" and further consideration may need to be given to constructional details.
- Home insurance. The Client / Builder must advise their insurance company about the proposed works before any work starts and if you are project managing or doing the work yourself, you will need conversion insurance.

2.0 HEALTH AND SAFETY:

- The Construction (Design and Management) Regulations 2015 apply to this project.
- The Contractor must comply with all current Health and Safety legislation and with the following Health and Safety Executive Approved Codes of Practice:-
  Management of Health and Safety at Work.
  Managing Construction for Health and Safety.

3.0 FIRE:

- Linings to have a fire spread in accordance with Table 4.1 an 4.2 of Approved Document, Part B1. To include walls, ceilings, rooflights and light diffusers.
- Internal fire spread to the structure:
  Fire resistance of loadbearing elements of structure to include walls and floors, to be in accordance with Appendix A of Approved Document B3.
- Smoke and heat detectors to comply with British Standard Code of Practice.

4.0 EXISTING STRUCTURE

- The existing foundations are to be opened up for inspection by the Local Authority Building Control Officer/Approved Inspector and / or Structural Engineer. If found necessary, underpinning work to be carried out to provide a suitable foundation to carry the additional loadings. The inspection and works are to be carried out prior to the other works commencing.
- Key elements of existing structure such as Beams and/or lintols to be exposed for consideration by the Building Control Surveyor and upgraded/replaced if found necessary.

5.0 STRUCTURAL TIMBER:

- All structural timbers have been sized by Structural engineer and show on accompanying sheets by Sisan Associates.
- All timber must be seasoned unless agreed otherwise.
- All structural timber to be treated with preservative in accordance with NHBC Practice Note 5 (1982, Section 5 or subsequent up-date).
- All cross-cuts, notches, borings, etc., to be liberally treated with preservative compatible with initial treatment.
- Timber to be pre-treated against longhorn beetle with Wykamol or other treatment, all in accordance with manufacturer's instructions

6.0 BEAMS AND LINTELS:

- All structural details to be in accordance with Sisan Associates design details.
- Lintels are to be by Catnic in accordance with the schedule attached and are to be to the design and type as recommended by the manufacturer, with suitable bearings as recommended.
- Steel joists to be to BS 5950: Part 1: 1990.

7.0 SURFACE WATER DRAINAGE:

<u>Roofs:</u>

- Run-offs to be collected in minimum 100 mm deepflow pvc gutters fixed to fascia and laid to fall.
- Gutters to discharge into 65 mm diameter downpipes with roddable shoes at base. Sizes to be calculated in accordance with manufacturer's recommendations.

- Gutters to discharge into 65 mm diameter downpipes and thence into drainage channel system.

Final Discharge:

- Rain Water Downpipes / channels to discharge to existing settling pond. Route for stormwater drainage pipework to be determined on site.

Building Control Inspections

- Building Control should be notified not less than 48hours before any drainage is covered and after the drains are completed.

8.0 FOUNDATION DETAILS:

- The following notes are for guidance only. The final depth, width and thickness of foundations to be subject to ground conditions found on site.
- Foundation details to be agreed with Local Authority Building Inspector on site.
- Concrete generally to be to BS EN 206-1 and BS 8500-2.
- Foundation excavations to be taken down to a minimum depth 1000 mm below ground level or to suit site conditions to BS 8004: 1986.
- The foundation trench above the foundations to be backfilled internally with well compacted hardcore.
- Where depth of fill exceeds 600 mm the oversite concrete is to be reinforced with fabric mesh as indicated on plan in accordance with BS 4483 & 8666.
- The foundations are to be trench fill with clay board slip barrier and polythene sheet protection all in accordance with the Structural Engineer's specification and manufacturer's recommendations.
- All vegetable matter to be removed from the area of the site covered by the building.
- Any sub-soil drainage encountered during excavation of the building to be relaid, re-routed or diverted as necessary.
- See special note where building is being constructed in a Radon area.

Building Control Inspections

- Building Control should be notified not less than 48hours before commencing work to the following stages:-
  At excavation of foundations
  After concreting the foundations
  At damp proof course level
  When hardcore is laid over the site

9.0 GROUND FLOOR STRUCTURE:

- Only Clean Hardcore is permitted with no deleterious material. Use broken brick or gravel fill only, minimum 150 mm thick.
- Fill to be well compacted, maximum 150 mm layers, and blinded with 25 mm sand.
- Maximum fill permitted 600 mm. When it is necessary to provide more than 600 mm of fill to achieve the ground slab level set, the Contractor is to provide a suspended concrete floor.
- The oversite concrete is to be a minimum of 150 mm thick, thickened or reinforced as necessary, to suit site ground conditions, laid over the damp-proof membrane.
- The oversite concrete is to be laid so that the top surface is at or above ground level.
- The damp-proof membrane is to be 1200 mm gauge polythene laid on top of oversite concrete insulation. Polythene to be adequately lapped and jointed with approved tape and taken up walls and under damp-proof course.
- Change in levels of oversite concrete to be adequately tanked with material and method to accord with BS 8102: 1990.
- Insulation to be (see later)
- A separating 500mm gauge polythene separating layer laid over insulation to be adequately lapped and jointed with approved tape.

- Min 65mm sand/cement screed to be finished at suitable height to match existing floor levels.

Insulation:
- Insulation to be 150 mm Celotex GA4000 suitable for underfloor use and to be laid in accordance with manufacturer's recommendations. average 'U' Value 0.13 W/m² °K.
- A minimum thickness of 25mm Celotex TB4000 must be provided as perimeter upstand insulation to the screed or concrete slab.

Note: Insulation to be continuous at floor/wall/ceiling junctions

10.0 EXTERNAL WALL STRUCTURE:

Timber Construction:
- Weatherboarding on sw battens and counterbattens as drained and vented cavity
- Breather membrane
- 12mm Cementitious board
- Insulation between studs 100mm Celotex GA4000
- 100mm Timber studs
- Insulation inside studs
- 50mm Celotex GA4000 Inside of studs
- 25 x 47mm service void fixing batten (void air space)
- 12.5mm Gyproc Wallboard with joints sealed as VCL and air leakage barrier
- U-value = 0.16 W/m².K

Timber Boarding:

- External finish to be pre-treated softwood weatherboarding fixed to 38 x 25 mm pre-treated battens and felt. All fixing by aluminium alloy nails.

11.0 SOAKERS AND FLASHINGS:

- Wall dpc to be 150 mm minimum above finished ground level, continuous to both leaves and well lapped and jointed with existing wall dpc.
- Flexible Sheet DPC to be installed in the bed joint below the coping, capping or sill units.
- The DPC to be laid in one piece where practicable. Any joints should be lapped and sealed. Creasing tiles, slates or DPC bricks are not an acceptable alternative.
- Lead to be installed by contractor approved by the Lead Contractors Association.
- Provide dpc's to jambs of all openings.
- Lintels to heads of doors and windows in external walls to be Catnic pattern as described in 'Beams and Lintels' with integral trays.
- Where roofs abut walls provide Code 4 min lead flashings linked to cavity trays in the wall.

12.0 ROOF

12.1 STRUCTURE:

- Joists for flat roof to be as Engineer's design.
- Firring pieces to be fixed to joists to give 1 in 60 fall to outlet.
- Fix 22mm plywood roofing grade deck.
- As required to provide cross ventilation, batten with 50 x 50 mm treated softwood battens.

12.2 COVERINGS:

Lead Roofs:
- Lead to be installed by contractor approved by the Lead Contractors Association.
- Installation of roof must comply with BS6915
- All roof details to comply with the recommendations of the Lead Sheet Association's current handbook.

- Substrate to be minimum 18mm WBP plywood.
- Lead to be laid over Building paper to BS1521 Class A for plywood and smooth concrete. Polyester geotextile felt 200 to 220g/m² for timber boards and uneven surfaces.
- Underside of Roof to be provided with min 50mm ventilation zone.
- Roofs & gutters to be laid to a min 1:80 fall.
- Minimum drips on gutters to be 50mm.
- All lead rolls must extend to edge of roof
- ensure that lead thickness comply with BSEN 12588 2006 and are appropriate to position, note colour codes of rolls
    - Code 3 Green
    - Code 4 Blue
    - Code 5 Red
    - Code 6 Black
    - Code 7 White
    - Code 8 Orange

12.3 INSULATION:

- 50mm Ventilated Cavity above insulation.
- 170mm Celotex GA4000 (in two layers) between joists @ 400 ctrs
- 25mm Celotex TB4000 with joints taped to create VCL + Air Leakage Barrier
- 12.5mm Gyproc Wallboard
- U-value = 0.15W/m²K

12.4 VENTILATION:

- Flat roof soffit to have ventilation equal to 25 mm continuous gap on exposed sides at ends of joists with insect mesh. A minimum 50 mm space to be provided above insulation and below roof deck. If necessary, counter-batten to allow air flow.
- Perimeter Ventilation equal to 25mm continuous gap to be provided where roof abuts existing wall.
- Alternative circular vents with mesh to provide ventilation equal to 25 mm continuous gap.

13.0 VENTILATION TO ROOMS:

- Habitable rooms to have rapid ventilation provided by ventilation openings with a minimum one-twentieth of the floor area of the room (0.64m²) and with some part being 1.75 metres above floor level
- Room to have an equivalent background ventilation of not less than 10000 mm².

14.0 ELECTRICAL INSTALLATION:

- All new electrical work is to be designed, installed, inspected and tested in accordance with BS 7671:2008 (IEE Wiring Regulations 18th ed.)
- The works are to be undertaken by an Installer registered under a suitable electrical self-certification scheme or by a suitably qualified person.
- The works are to an extension and the existing electrical installation should be tested prior to work commencing to ensure suitability for upgrading to accommodate the additional ratings and loads.
- A Certificate of Compliance must be produced by the Installer above to Building Control on completion of the works.

15.0 LIGHTING REQUIREMENTS:

- Any downlighters installed must not compromise the thermal requirements of Part L.
- Low energy lighting (lamps having a luminous efficiency greater than 40 lumens per circuit-watt) to be provided at a ratio of 100% of the fixed light fittings

16.0 INSULATION / CONSERVATION OF ENERGY:

The works include more than 25% glazing for the floor area of extensions, therefore a SAP calculation has been prepared by Elmhurst Energy / Therm Energy Ltd to show compliance.

- The U values of the lintels, jambs and sills to achieve a value of 1.2 W/m² K All soffit sills and reveals to be insulated.
- Rooflights not to exceed 20% of roof area.
- Seal gaps where services and ducts pass through vapour check and insulation barrier.

17.0 WINDOWS & GLAZING:

- In accordance with calculations from Therm Energy Ltd all windows/glazed doors must be aluminium thermally-broken frame double-glazed units with 16mm cavity (argon gas fill) + soft coat low-E glass with warm edge spacer, or similar to achieve U-value of 1.20W/m²K (or better).
- Rooflight to be aluminium thermally-broken frame (or timber frame) double-glazed with 16mm cavity (argon gas fill) with soft coat low-E glass + warm edge spacer, or similar to achieve U-value of 1.20W/m²K (or better).
- Note : U-value must be glass + frame (not centre-pane).

- Where specification of windows is to be better than 1.4 W/m²K Manufacturers certification or confirmation of U-values should be provided.
- Windows to be installed by GGF and FENSA registered contractors.

<u>Safety Glazing:</u>

- Glazed areas below 1500 mm to any door or side panel or to windows below 800 mm above floor level to be laminated or toughened safety glass as defined in BS 6206.