



**THISTLE HOUSE, WOODSIDE ROAD
BRIDGE OF DON
ABERDEEN AB23 8EF**

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SPECIFICATION NOTES

Contract Number	40393
Specification Revision	0
Description of Work	Proposed Orangery
Client	Mr & Mrs Peplow
Address	24 Woodlands Drive, Ellon AB41 9EN

215MM CONCRETE BLOCK EXTERNAL WALL – KINGSPAN INSULATION BRIDGED

External walls to comprise of 20mm roughcast to match existing on 215mm dense concrete blockwork, 25mm air space, 50x95mm treated framing at 600mm centres with 90mm Kingspan TW55 (or equal & approved) polyurethane infill, 40mm Kingspan TW55 (or equal & approved) continuous insulation polyurethane infill layer, 45x45mm treated framing to create service void and 12.5mm duplex plasterboard with vapour control layer backing, 100x12mm wp skirting to match existing. Blockwork to be 7.3 N/mm² strength and 1500 kg/m³ density built in 1:4 cement mortar below DPC and 1:6 above DPC. New walls to be tied to existing walls with 2No. vertical rows of BAT Expamet (or equal & approved) stainless steel Multi-Starters, type MSSS (fixed to wall per manufacturer's instructions in MSSFIX pack), with "turn n slide" ties at 330mm maximum vertical centres. End frames to be fixed to existing walls with Hilti (or equal & approved) HRD-U 8 frame anchors, with a minimum embedment into existing wall of 60mm, at 300mm vertical centres. [0.16 W/m²K U-Value]

FOUNDATIONS

Concrete foundations to be cast in RC 28/35 grade concrete and reinforced with 1No. layer of A393 mesh, bottom, 50mm min. cover to a minimum depth of 200mm, with 200mm minimum scarcements. Foundations to be taken down to firm natural bearing ground with a minimum cover of 450mm, from finished ground level to top of foundation, or to the invert level of any adjacent drainage whichever is the lower. All vegetable matter to be removed from the footprint of the proposals. Whilst the highlighted areas are indications of services below ground there may be others out with, therefore all excavations should incorporate extreme care and diligence.

SITE WORKS

Any neighbouring footpaths to be regularly cleaned and kept free of building debris and related materials. Any unfinished or partially complete works to be kept safe and secure. All in accordance with Regulations 14 & 15.

DRAINAGE

Key terrain or equal PVC soil and waste system with both 140 & 141 holderbats at specified distances both vertically and horizontally. All drainage and sanitary pipework to be tested in accordance with BS EN 12056-2:2000. All new gutters and rainwater pipes to be constructed and installed in accordance with the recommendations described in BS EN 12056-3: 2000. All new manholes to BS EN 12056-1:2000. PVC drainage to be surrounded with 5-10mm pea gravel and laid as per manufacturers printed instructions. Pipes to be lintelled over when passing through walls. Any existing drains to be suitably protected, re-routed, or re-constructed.

CONCRETE FLOOR

Floor to comprise 100mm concrete slab, cast in grade RC 28/35 concrete and reinforced with 1No. Layer of A142 mesh mid depth of slab, on 125mm Kingspan TF70 (or equal & approved) floor insulation on 1200g polythene DPM on blinded and consolidated upfill. Floor DPM to be turned up walls and lapped with wall DPC. Wall DPC to be 150mm minimum above finished ground level. All joints in the DPM & DPC to be suitably sealed to prevent excessive radon gas from entering the extension – all in accordance with part 3.2.1 & 3.2.2 of the Building Standards. Any existing sub floor ventilators covered by works to be re-routed to external air/ new 215x150mm / 215x75mm sub floor vents to be provided where shown. Insulation must be installed between the sub floor vent and the concrete floor to prevent thermal bridging. 25mm thick Kingspan TF70 (or equal & approved) insulation to be fitted around perimeter of concrete floor. [0.?? W/m²K U-Value]

GRP FLAT ROOF – “CURE IT” SYSTEM

Cure-IT roofing resin on 18mm OSB3 boards. 170mm Kingspan Celotex FR5000 (or equal & approved) insulation on 1000 Gauge vapour barrier. 12mm thk. OSB boarding on 0-70mm firing pieces on (unless specified otherwise) 47x200 C16 grade timber roof joists at 400mm centres. 12.5mm duplex plasterboard with vapour control layer backing to internal finish. Joints and nail holes taped & filled. 150mm glasswool MINIMUM to be packed into verge between timber lintel and fascia to provide thermal continuity between wall & roof insulation. All doubled up members to be spiked together using M4mm dia. galvanised nails x 90mm long at 300mm maximum staggered centres. All structural timber to be grade C16 (unless otherwise stated). [0.12 W/m²K U-Value]

GLASS LANTERN

‘ULTRAFRAME’ UltraSky Lantern to comprise (External matt grey / Internal white) uPVC glazing bars with REFLECTIVE glazing units. Roof glazing is AA fire rated. (1.0 W/m²K U-value).

RUBISLAW RANGE WINDOWS

Window units to be External Anthracite Grey / Internal White uPVC Optiwhite argon gas filled double glazed with ‘KS’ inner pane coating with warm air edge spacer (1.40 W/m²K U-value). Bottom rail to be fixed to wallhead with M6mm dia. x 130mm long Lightning Bolts (by Forgefix Ltd) at 400mm centres. Top and sides rails to be fixed to timber eaves beam / lintel and support posts with 4.5mm dia. (9 gauge) x 100mm min. long woodscrews at 400mm centres. Trickle vents to be fitted to opening sashes as shown to achieve 12000mm². Opening parts as per shown on drawing. Glass in doors and any adjacent windows to be toughened on inside pane; laminated on outer, designed to resist human impact and where all, or part, of a pane is: within 800mm of floor level; or part of a door leaf; or within 300mm of a door leaf and within 1.5m of floor level to be toughened on inside pane as set in BS 6262 Part 4: 2005. Low threshold door(s) to be fitted on ramps and / or at low level access. 25mm Kingspan insulation to be fitted at jamb, head and cills to prevent thermal bridging.

uPVC PATIO DOOR SET

Patio Doors to be External Anthracite Grey/ Internal White Optiwhite argon gas filled Double Glazed with 'KS' inner pane coating with warm air edge spacer (1.40 W/m²K U-value). Opening parts as per shown on drawings. Glass in doors and any adjacent windows to be toughened on inside pane; laminated on outer, designed to resist human impact and where all, or part, of a pane is: within 800mm of floor level; or part of a door leaf; or within 300mm of a door leaf and within 1.5m of floor level to be toughened on inside pane as set in BS 6262 Part 4: 2005. Low threshold door(s) to be fitted on ramps and / or at low level access. 25mm Kingspan insulation to be fitted at jamb and head to prevent thermal bridging.

WINDOWS & DOORS SECURITY

4.13.1 to 4.13.4 Windows and doors meet recommendations for physical security in Section 2 of 'Secured by Design' (ACPO, 2009) for 4.13.2, OR PAS 24: 2007 (doors)/ BS7950: 1997 (windows) for 4.13.3.

4.13.4 Windows and doors to be installed in accordance with the general recommendation in BS 7412: 2007; openable windows to be fitted with a removable key locking system, together with a glazing with incorporating toughened glass or similar robust glazing material, hinges fitted to an outward opening doors to be of a type that does not permit the hinge pin to be removed unless the door is open, use multipoint locking system to BS EN 1303: 2005, secondary leaf of French door to be secured at head and foot to allow primary leaf to be securely locked.

4.13.5 Windows and doors to be installed in accordance with BS8213-4: 2007 or manufacturers written instructions where these meet or exceed the Recommendations of the British Standard.

LOADBEARING FRAMING – TO FACE OF EXISTING “HOST” WALL

47x100mm C16 grade timber studs at 600mm centres with double bottom & top rails and 1No. row of dwangs at mid height of studs. 12.5mm duplex plasterboard with vapour control layer backing, 100x12mm wp skirting to match existing.

LEAD WORK

Lead flashing (Code 4) to be ragged & sealed (chased).

SMOKE & HEAT DETECTORS

Optical smoke detectors to be hardwired to mains and interlinked on a separate circuit to BS EN 14604:2005.

Heat detectors to be installed in accordance with BS 5446: Part 2:2003.

CONTRACTOR TO ENSURE THE FOLLOWING:

- at least 1 smoke alarm installed in the principal habitable room
- at least 1 smoke alarm in every circulation space on each storey such as hallways and landings
- at least 1 smoke alarm in every access room serving an inner room
- at least 1 heat alarm installed in every kitchen.
- at least 1 CO detector where the boiler is located with habitable accommodation

KITCHEN EXTRACT HOOD (BY OTHERS)

New Extractor hood to be fitted directly as above cooker to achieve minimum of 30 l/s extraction rate. Fan ducted to external air through wall/roof vent.

EXTERNAL STEPS

External steps to have 220mm maximum rise and 250mm minimum going. Aggregate of 2x rise plus going to be 550mm minimum, 700mm maximum. Handrail to be fitted if FFL to ground level exceeds 600mm.

HEATING & ELECTRICAL

Positions of items are shown on the plan for indicative purposes only. Final positions to be agreed with client on site. All electrical work to be carried out in strict accordance with the latest I.E.E regulations and to comply with the 18TH edition of the BS 7671: 2018 'The Requirements for Electrical Installations'. Radiator(s) fitted with thermostatic valve and with all new pipework insulated with rigid foam insulation.

Double Sockets	3No. Required
T.V. Socket	1No. Required
Light Switch	2No. Required
Ceiling Down Lights	8No. Required
Smoke Detectors	1No. Required
New Radiators	1No. Required

Outlets and controls of electrical fixtures and systems should be positioned at least 350mm from any internal corner, projecting wall or similar obstruction and, unless the need for a higher location can be demonstrated, not more than 1.2m above floor level. This would include fixtures such as sockets, switches, fire alarm call points and timer controls or programmers. Within this height range:

- Light switches should be positioned at a height of between 900mm and 1100mm above floor level.
- Standard switched or unswitched socket outlets and outlets for other services such as telephone or television should be positioned at least 400mm above floor level. Above an obstruction, such as a worktop, fixtures should be at least 150mm above the projecting surface.

Where socket outlets are concealed, separate switching should be provided in an accessible position, to allow appliances to be isolated.

An openable window and roof light, to have controls for opening, positioned at least 350mm from any corner, projection wall or any obstruction with a height of;

- No more than 1700mm above floor level where access to controls is unobstructed,
- No more than 1500mm above floor where access control is limited by a fixed obstruction, no more than 900mm High, 600mm max projection.
- No more than 1200mm above floor level, in unobstructed location, within an enhanced apartment or within accessible sanitary accommodation.

LIGHTING

A minimum of 75% of the fixed light fittings and lamps installed in a *dwelling* should be low energy type.

The fittings to be either:

Fixed internal lighting should either:

- Dedicated fittings which will have a separate control gear and will only take fluorescent lamps (pin based lamps);
or
- Fittings including lamps with integrated control gear (bayonet or Edison screw base lamps).

Fixed external lighting should either:

- Be rated at not more than 100 lamp-watts per light fitting with automatic control by both movement detection (e.g. PIR) and photocell to ensure operation only when needed or
- Have fittings with an efficacy of at least 45 lumens per circuit-watt, with automatically control by photocell to ensure operation only when needed.

In addition to the above, manual switching may be provided to override operation of automatic controls.