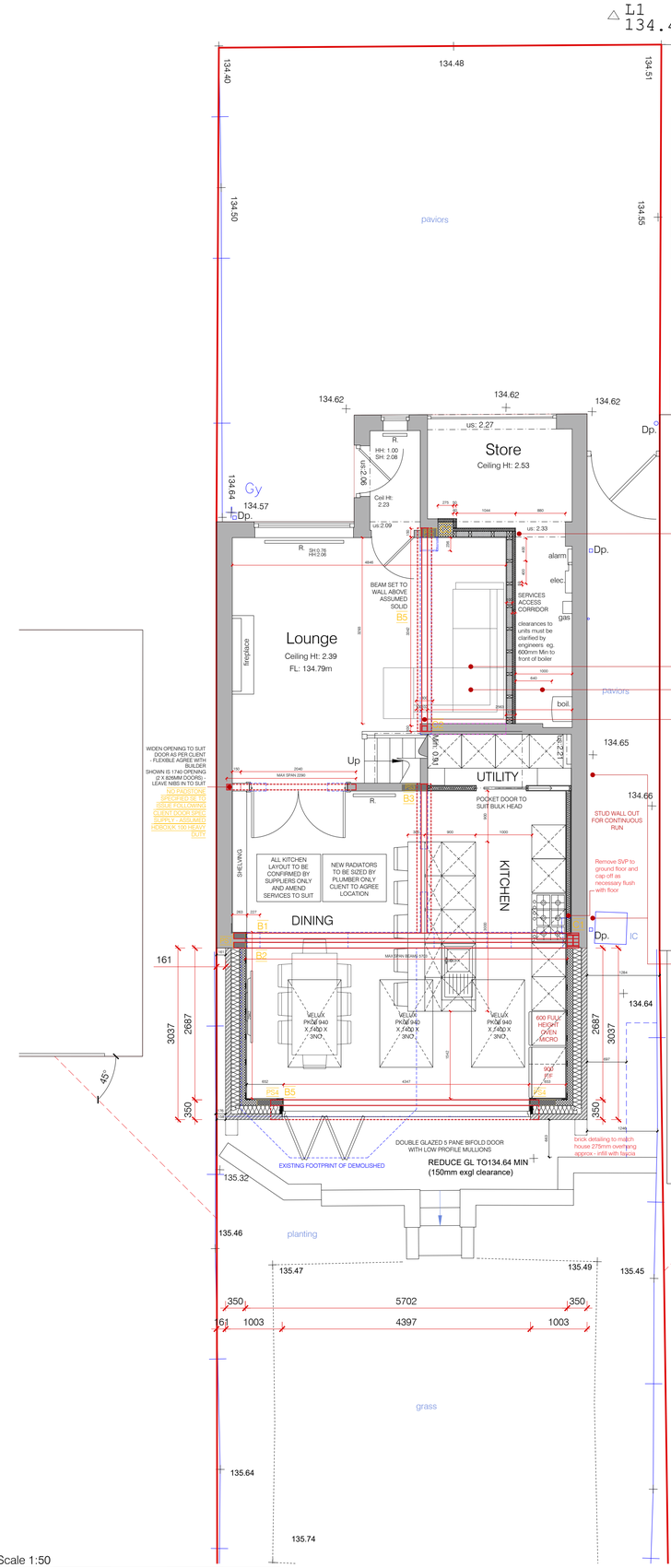


STUD WALL BETWEEN HOUSE AND GARAGE
To achieve minimum U Value of 0.18 W/m²K
Construct stud wall using 100mm x 50mm head and sole plates and vertical studs (with noggins) at 400mm ctrs or to s/engineers details and calculations. Insulation to be 90mm Celotex GA4000 between studs with 50mm Celotex GA4000 over. Provide vcl and 12.5mm Fire-Line over both faces of stud wall. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally.
Note: These walls need to go full height and be fire stopped against the roof or floor above. A lesser provision of insulation may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room.

UPGRADING EXISTING SOLID FLOOR
To meet min U value required of 0.25 W/m²K
The existing solid floor slab must be checked for stability and be free from defects as required by Building Control. The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss. Provide 1200 gauge polythene DPM or 3 coats RIW over existing concrete slab (if required). DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 75mm thick Celotex GA4000. 25mm Celotex insulation to continue around floor perimeters to avoid thermal bridging.
A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Care should be taken to ensure any existing airbricks for the main house are not obstructed by this work. If so, they should be extended through the new floor to external air. Where drain runs pass under floor provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain. A lesser provision may be appropriate where meeting such a standard would create significant problems in relation to adjoining floor level.

UPGRADE OF EXISTING CEILINGS (ENSURE COMPLIANCE TO EXISTING AND PREVIOUS WORKS)
Intermediate floor to be upgraded by the provision of 150mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floors joists, (additional 50mm Celotex to be provided under joists if required by BCO).
Ceiling to be 12.5mm plasterboard with a minimum mass of 10 kg/m3 with skim plaster set and finish. Ensure the existing timber flooring of the room above has a minimum mass of 15 kg/m3.

BEAMS
Supply and install new structural elements such as new 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.

FOR COSTING (TO BE CONFIRMED AND SPECIFIED BY SE ONLY
100x100 box section column to be cladded 178 x 102 x 19 UB over with 6mm x 300(w) plate welded under with 100mm joist loading to take garage and living room joists expected side to side - exposure work required before S.E inspection
- SE to confirm if Nb adjacent to Front door can be removed as shown
- Infill Nb and padstone (tied into existing) in 7.3n blocks (and concrete pad if required)under Garage steel due to possible clash of steels and inadequate nib
CLIENT TO AGREE GLASS INFILL DESIGN FOR BALLUSTRADE AND CLADDING TO STEEL VERTICAL COLUMN

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation to external air with an extract rating of 60l/sec or 30l/sec if adjacent to hob, sealed to prevent entry of moisture.
Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic ventilation compliance guide. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO UTILITY ROOM
To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 litres per second. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic ventilation compliance guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

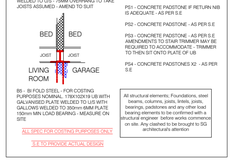
DRAINAGE ROUTE TO BE ASSESSED AND CONFIRMED THAT CAN BE RE ROUTED AND IS NOT SHARED AS PER CLIENTS INITIAL CONFIRMATION

BEAMS

B1 & B2 - NOM. 2NO BOLTED 305X102 X 33 UB BEAM SHOWN FOR COSTING AND COORDINATION. DO NOT BUILD FROM THIS SIZE ACTUAL BEAM TO BE DESIGNED BY STRUCTURAL ENGINEER. STEEL POSITION TO BE ADJUSTED ACCORDINGLY IF NO BULKHEAD IS REQUESTED - ADJUST COLUMN LENGTH TO SUIT.

B3 - FOR COSTING PURPOSES NOMINAL 178X102X19 UB WITH GALVANISED PLATE WELDED TO UB. 175MM OVERHANG TO TAKE JOISTS ASSUMED - AMEND TO SUIT. 6NO M16 CONNECTION PLATE REQ. TO B1.

B4 - FOR COSTING PURPOSES NOMINAL 178X102X19 UB WITH GALVANISED PLATE WELDED TO UB. 175MM OVERHANG TO TAKE JOISTS ASSUMED - AMEND TO SUIT



B5 - BI FOLD STEEL - FOR COSTING PURPOSES NOMINAL 178X102X19 UB WITH GALVANISED PLATE WELDED TO UB WITH GALLOWS WELDED TO 350mm 6MM PLATE 150mm MIN LOAD BEARING - MEASURE ON SITE

ALL SPECIFICATIONS FOR COSTING PURPOSES ONLY

S E TO PROVIDE ACTUAL DESIGN

COLUMNS & PADSTONES

C1 - FOR COSTING NOM. 254 X 254 X 107MM UC - STRUCTURAL ENGINEER TO PROVIDE ACTUAL SIZE. 215MM WIDE PIER WITH RETURN MASONRY - TIE TO CORNER AS PER S E

C2 - FOR COSTING (TO BE CONFIRMED AND SPECIFIED BY SE ONLY - 100X100 BOX SECTION AND PLATES / CONNECTIONS AS PER SE

C3 - 7.3N BLOCKS - S E TO SPECIFY NEW COLUMN TO TAKE EXISTING GARAGE LINTEL TO ENABLE CUTTING BACK OF EXISTING TO ALLOW FOR FLUSH WALL IN EXTENDED LIVING SPACE

PS1 - CONCRETE PADSTONE IF RETURN NIB IS ADEQUATE - AS PER S E

PS2 - CONCRETE PADSTONE - AS PER S E

PS3 - CONCRETE PADSTONE - AS PER S E AMENDMENTS TO STAIR TRIMMER MAY BE REQUIRED TO ACCOMMODATE - TRIMMER TO THEN SIT ONTO PLATE OF UB

PS4 - CONCRETE PADSTONES X2 - AS PER S E

All structural elements: Foundations, steel beams, columns, joists, lintels, joists, bearings, padstones and any other load bearing elements must be approved by a structural engineer before works commence on site. Any clashed to be brought to SG architecture's attention

GLAZING ALLOWANCES

A SAP ASSESSMENT WILL BE REQUIRED

Internal Floor Area - 15.32m2
x 25% allowance to total glazing - 3.831m2
Plus existing openings:
Existing Door - 1.96m2
Existing Window - 0.95m2
Existing Arch Opening to original footprint - 2.23m2

TOTAL LIMIT - 8.97m2

NEW REQUIRED:

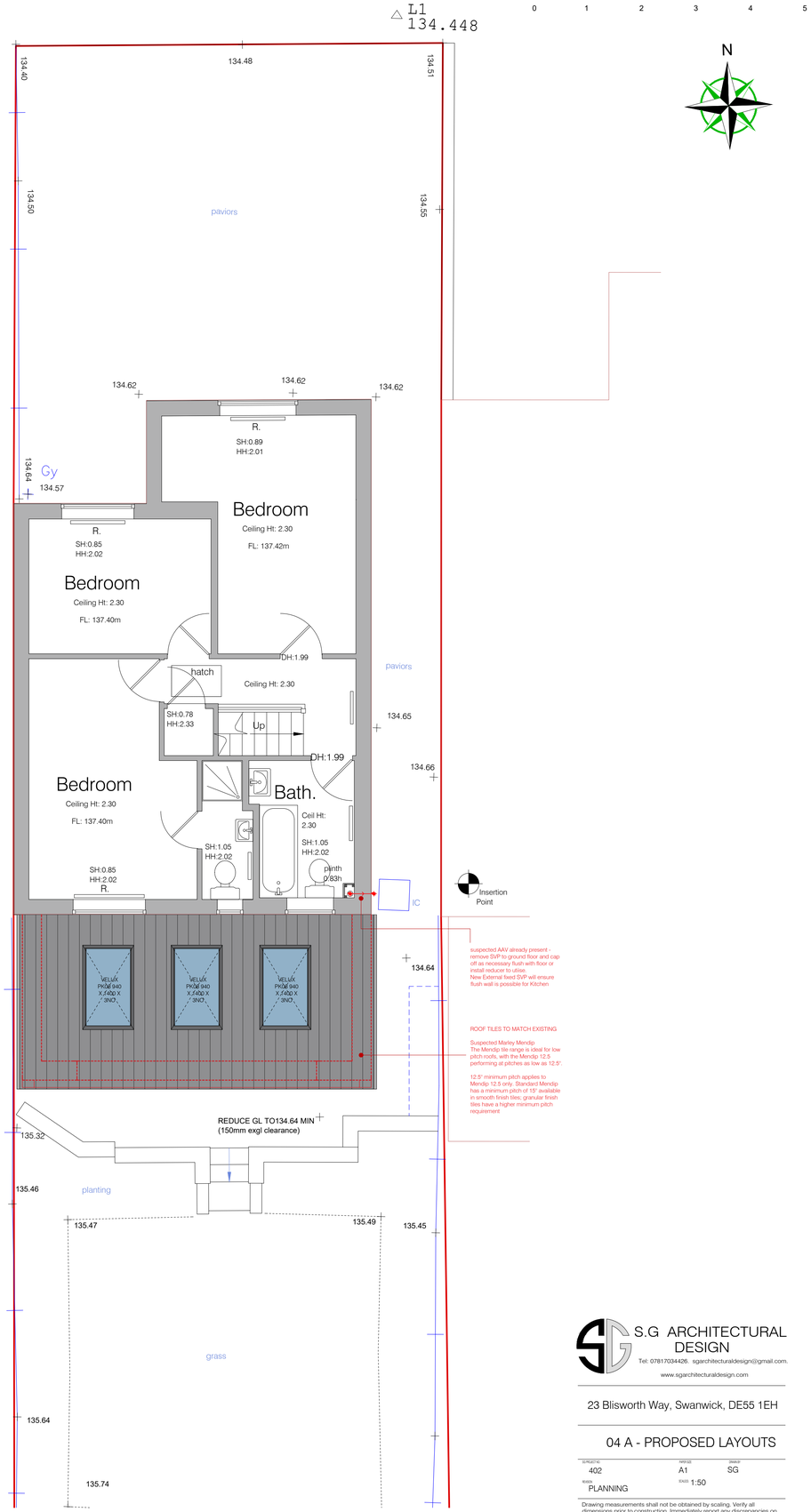
Bi fold - 9.23m2
Velux 1.316m2 x 3no - 3.948m2
TOTAL PROPOSED - 13.178m2

FAO SAP ASSESSORS:

Floor Insulation is upgraded to compensate for overglazing to 120mm XR400 Celotex - Please down size this to minimum for cost reasons to nearest compliance

Roof insulaiton cannot be increased due to pitch restrictions and head heights

Walls are 350mm full fill 100mm cavity - Cannot be thickened up.



Scale 1:50
0 1 2 3 4 5

N

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04 A - PROPOSED LAYOUTS

SURVEY NO	PAPER	DRAWN
402	A1	SG
STATUS	SCALE	
PLANNING	1:50	

Drawing measurements shall not be obtained by scaling. Verify all dimensions prior to construction. Immediately report any discrepancies on this document to SG ARCHITECTURAL DESIGN.

REV.	DESCRIPTION	DATE	BY	CHKD