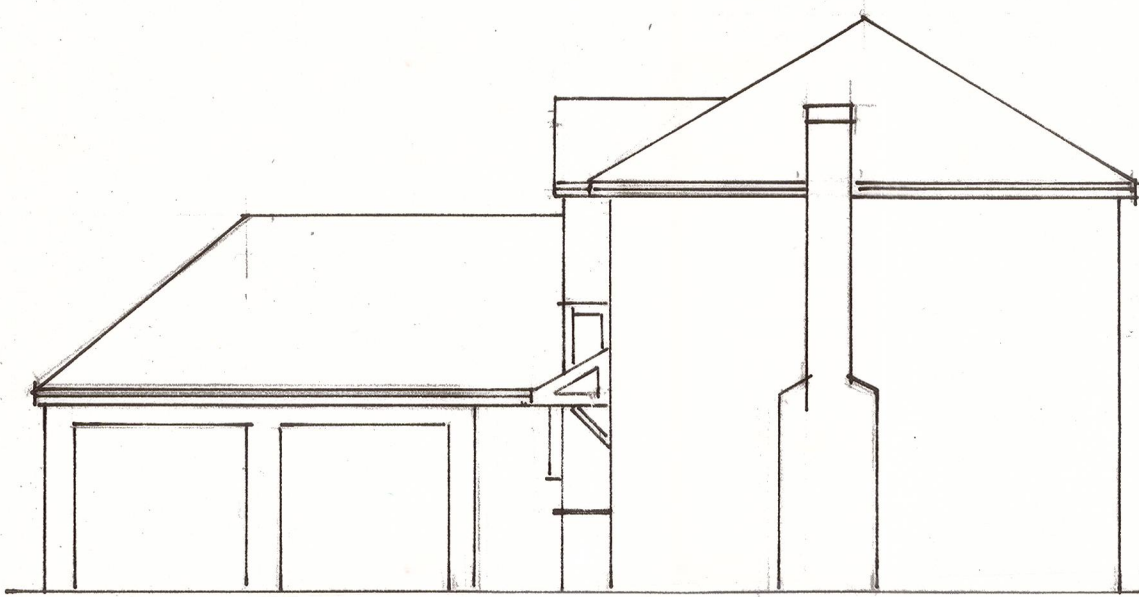
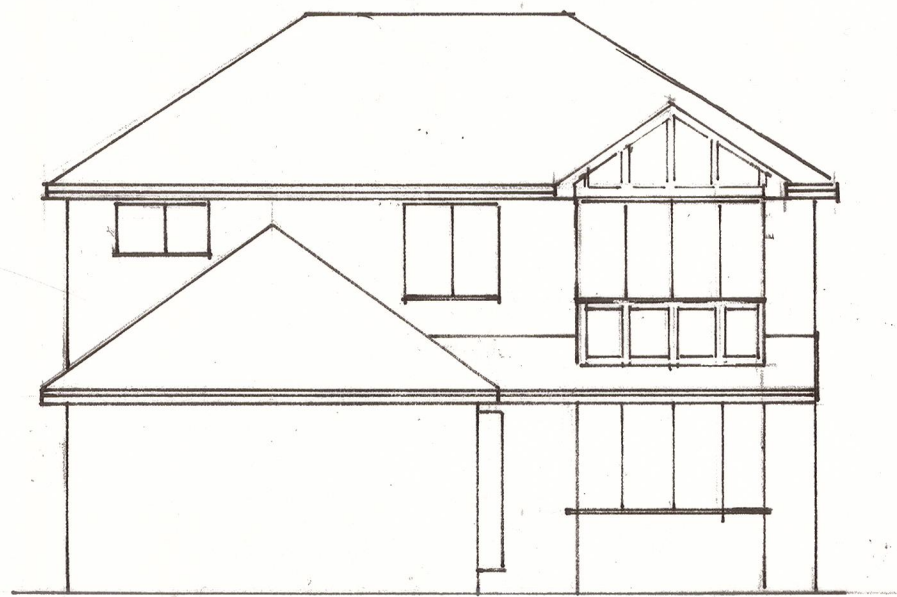
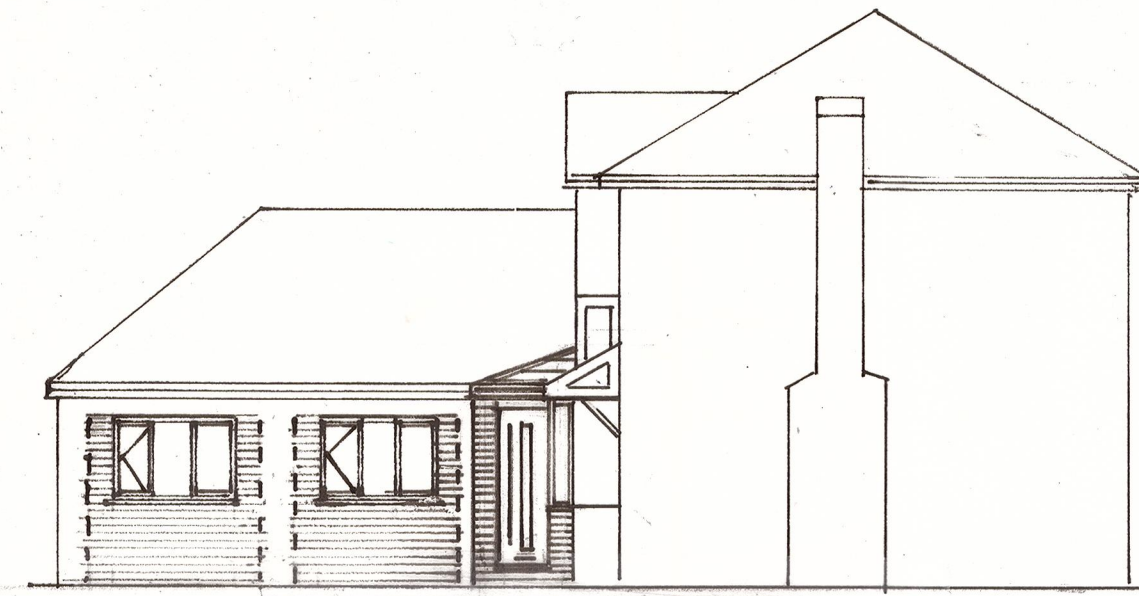




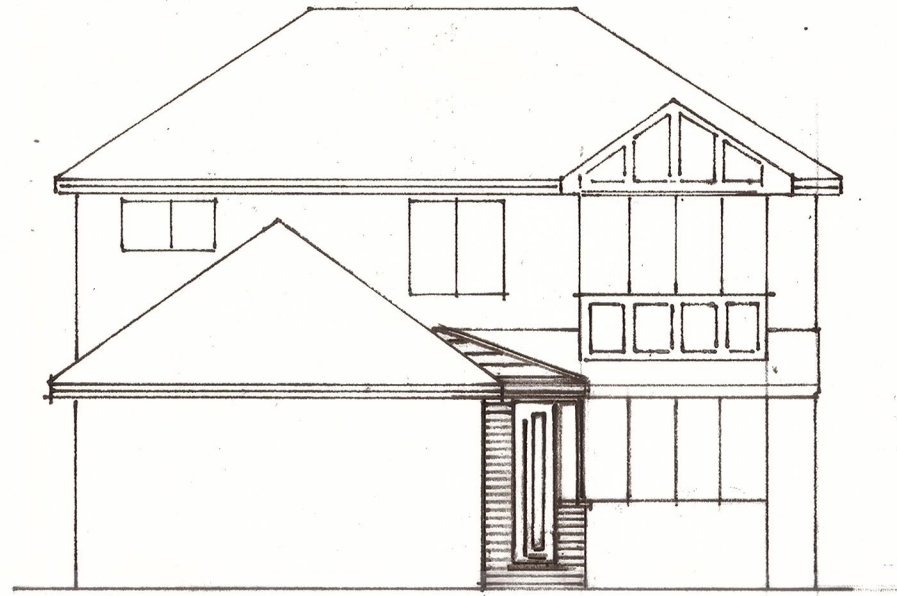
EXISTING SIDE ELEVATION 1:100



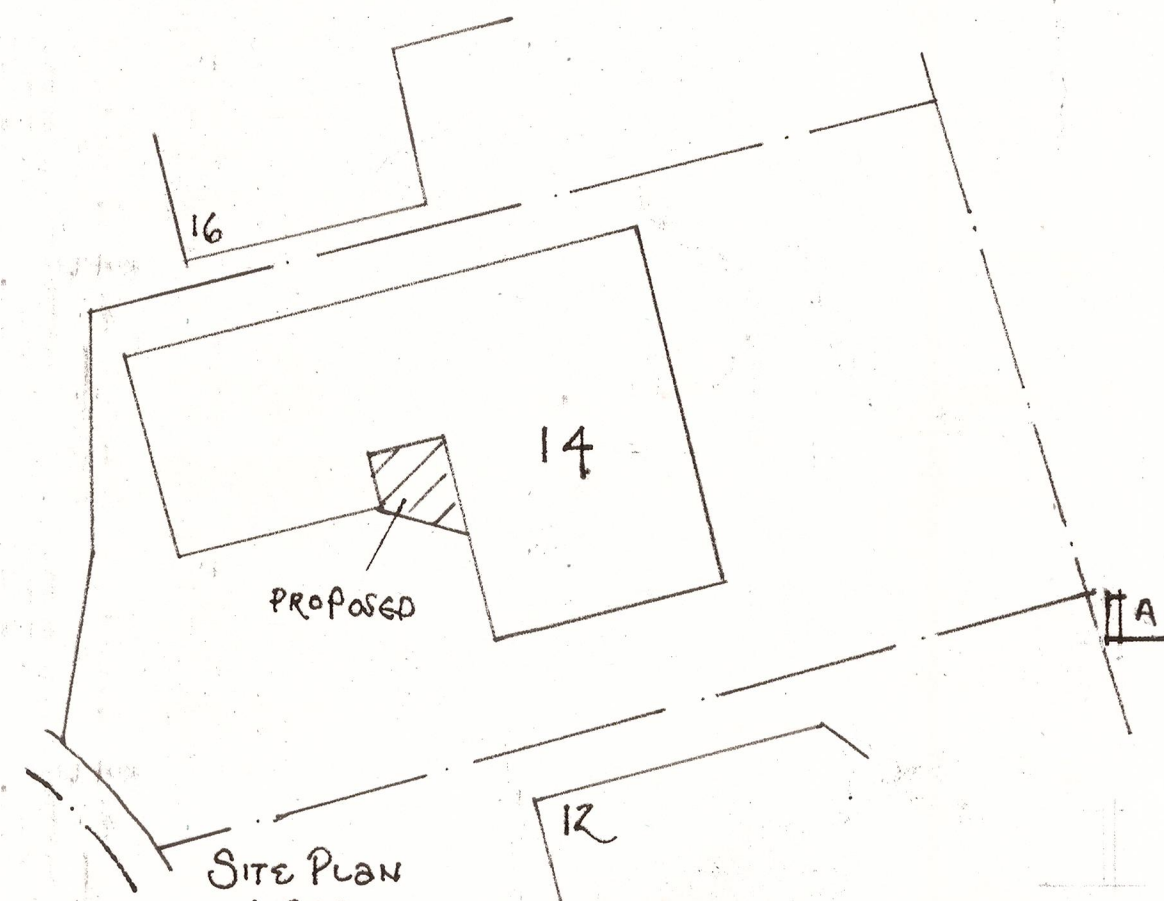
EXISTING FRONT ELEVATION 1:100



PROPOSED SIDE ELEVATION 1:100

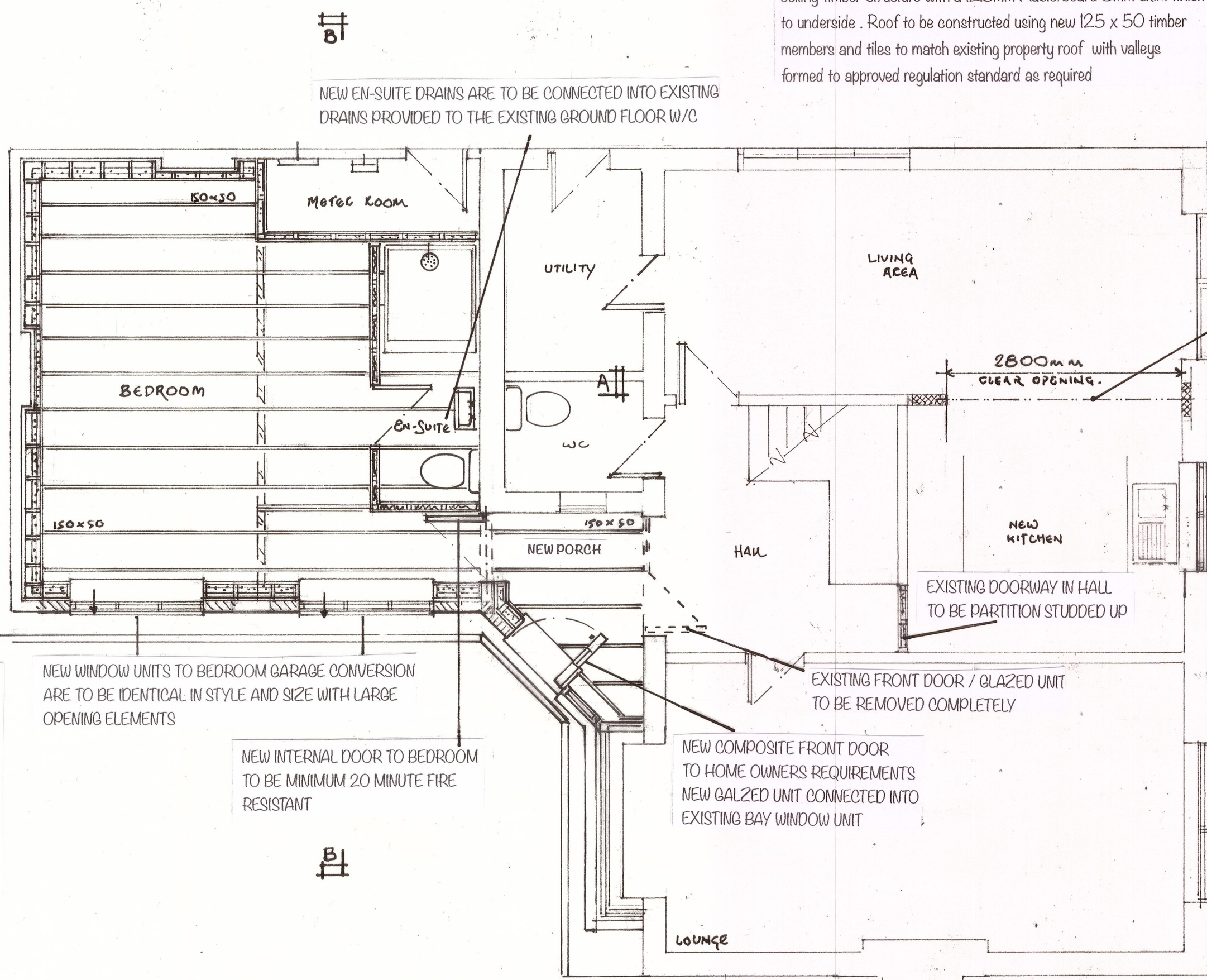
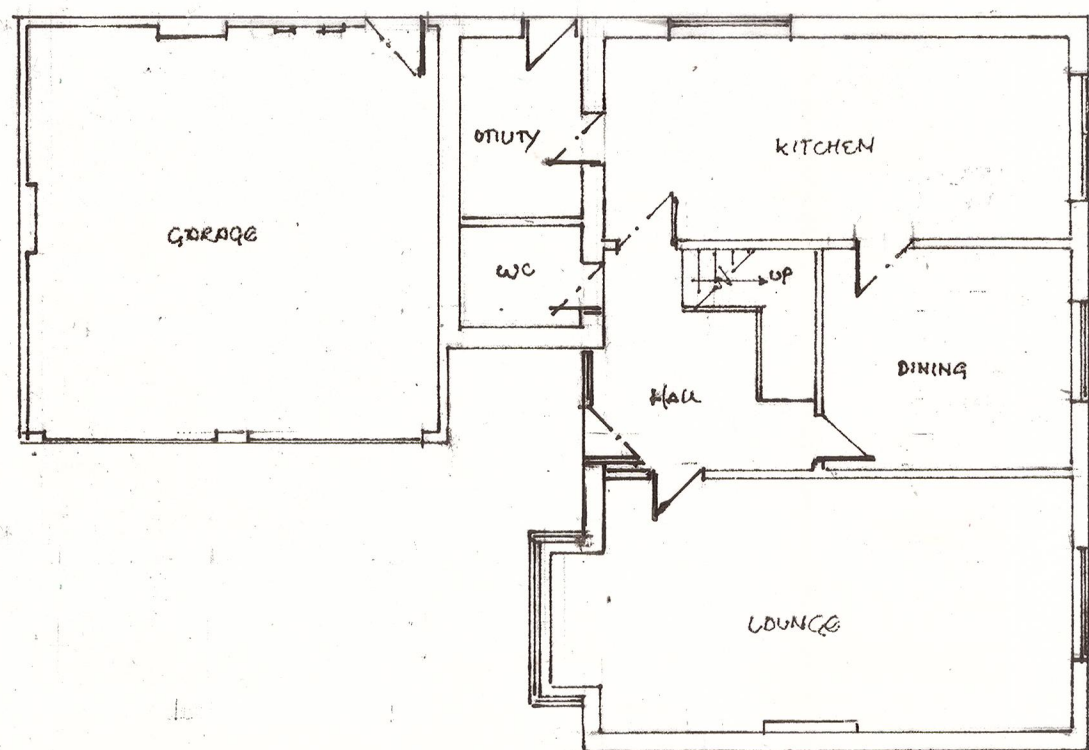


PROPOSED FRONT ELEVATION 1:100



Drainage:-
All new above ground drainage and plumbing to comply with BS 5572:1978 (Sanitary pipework) All new drainage to be in accordance with Part H4 of the building regulations. Wastee to have 75mm deep anti-vac bottle traps & rodding eyes to be provided at changes to direction. Size of waste pipe and max length of branch connections.
(If max length is exceeded then anti-vacuum traps to be used)
Wash Basin- 17m for 32mm pipe, 4m for 40mm pipe
Bath/Shower- 3m for 40mm pipe, 4m for 50mm pipe
W/C - 6m for 100mm pipe for single W/C
All branch pipes to connect to 110mm soil & vent pipe terminating min 900mm above any openings within 3m Or to a 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that outlet is above the trap of the highest fitting. Waste pipes not to connect on to SVP within 200mm of the W/C Connection.
Supply hot and cold water to all fittings as appropriate.

EXISTING FLOOR PLAN 1:100



PROPOSED FLOOR PLAN 1:50

Steelwork:
In addition to the usual risks associated with building works and materials, of which a competent builder should be aware, the following site and work specific health and safety risks have been identified:
The calculations are not to be used as working drawings and any setting out dimensions should be checked by the builder on site prior to work commencing/ordering materials. Where these calculations are used to obtain local authority/Building control approvals, no reliance shall be placed upon them and contained herein are not to be used until such approval have been given in full. Contractor to provide all lifting equipment, temporary support and Personal Protective Equipment for all people who may be impacted by the installation of heavy steel beams, particularly when working at height. Demolition, excavation drilling and cutting into existing structure or materials should be carried out carefully in case there are any unknown services hidden in the area. Also JR Heslop is NOT responsible if builder chooses to use existing brick and blockwork as load bearing Elements without input / confirmation of Building control to confirm suitability.

SPECIFICATION

Insulating / Upgrading of existing Single leaf Garage wall

U Value 0.18W/m2K

Existing single e leaf brick wall to have Min 50mm Clear Cavity formed with Breathable membrane not more than 0.6MMsq with Inner leaf of Timber stud work to be 100mm x 50mm C16 Treated timber studing frame work at 400mm ctrs using head & sole plates and noggins

Insulation between & over studs 90mm Celotex GA4000 Between with 40mm celotex TB4000 over with a VCL Membrane finished with 12.5plasterboard /3mm Skim Finish

New Internal Timber Wall Specification to Meter Room

(External surface inwards)

3 mm skim finish on 2 x British gypsum layered boards staggered joints on Approved vapour barrier on 12mm Marine plywood on 100mm x 50mm Treated timber frame with 90mm Celotex GA400 Between studs and 50mm Celotex GA400 over stud frame with VCL Fitted with internal surface finished with 12.5mm plasterboard and 3mm skim finish.

New internal Timber floor in Garage conversion & Poroh -

'U' Value achieved 0.18 W/m2K

(Floor to be level with existing house floor)

Inside surface down :

22mm Floor grade T&G Chipboard on 0.3 Polythene separation layer on 147mm x 47mm Grade C16 Construction quality Treated timber floor joists at 400mm ctrs with 140mm Celotex XR4000 Laid between joists, Air gap below then Visqueen Ultimate Geosole DPM (Gas protection to BS8102:2009 CIRCA C7-48 & BS 8485 :2015) Laid over existing concrete slab D.P.M to be lepped into D.P.C Dwarf Load bearing blockwall to be constructed mid span of floor to support new floor joists

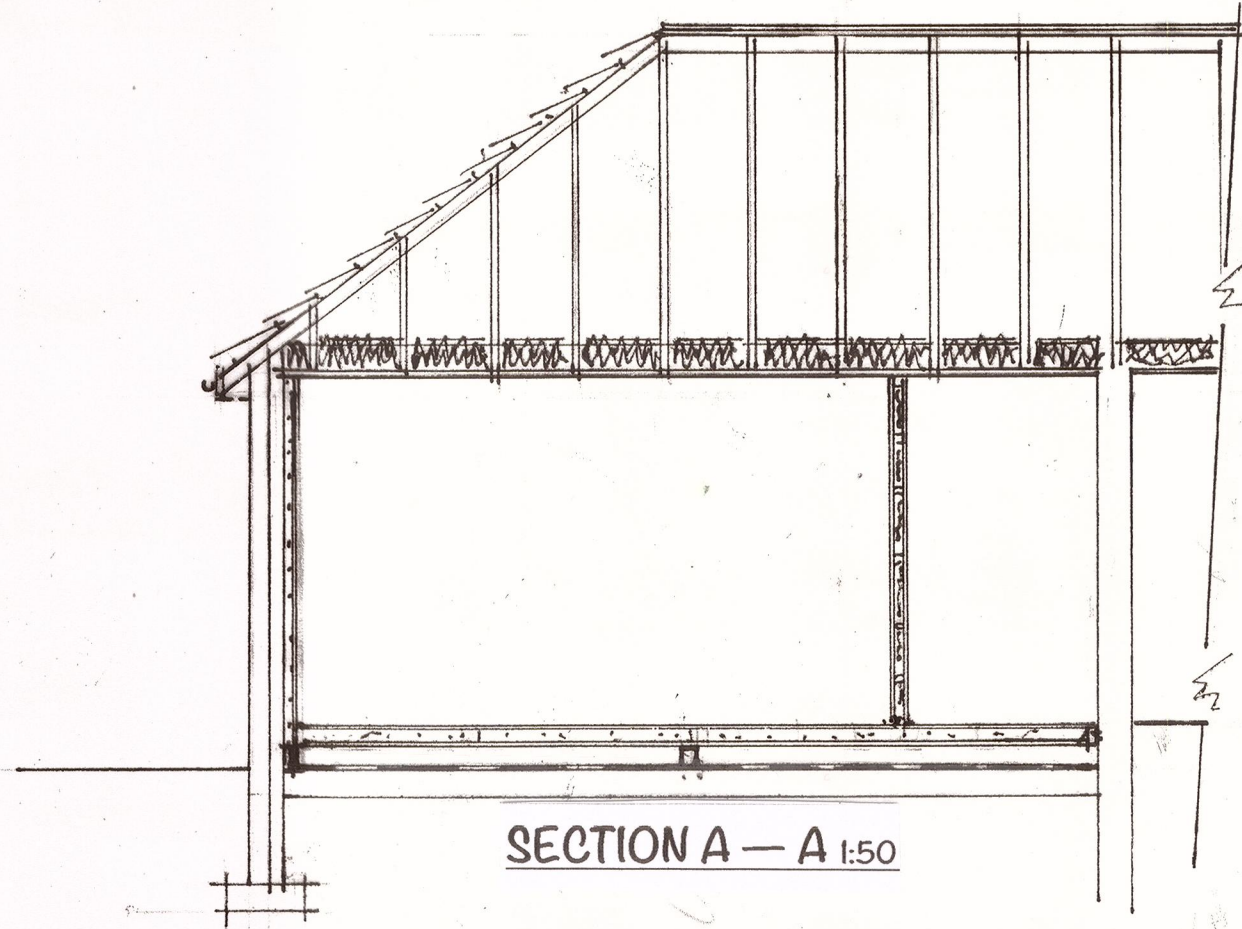
Upsoaling of Insulation to Existing Garage roof

300mm Roof quilt insulation laid over / between existing roof ceiling timber structure with a 12.5mm Plasterboard 3mm skim finish to underside

New Poroh roof

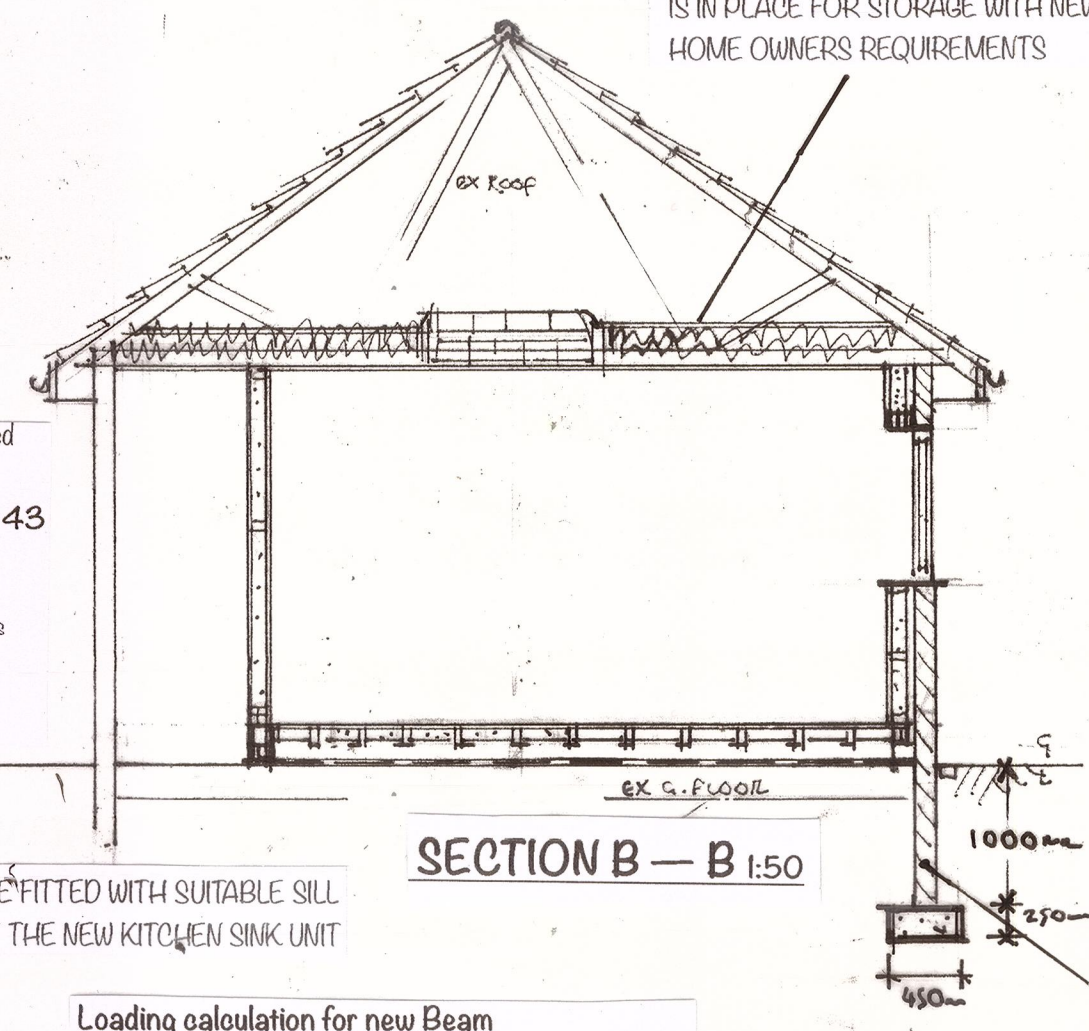
300mm Roof quilt insulation laid over / between existing roof ceiling timber structure with a 12.5mm Plasterboard 3mm skim finish to underside . Roof to be constructed using new 125 x 50 timber members and files to match existing property roof with valleys formed to approved regulation standard as required

REMEDIAL WORK TO EXISTING GARAGE WALL , ROOF TILES / MEMBRANE TO BE CARRIED OUT IF REQUIRED TO ENSURE EXISTING EXTERNAL ELEMENTS ALL COMPLETELY WEATHER SEALED



SECTION A - A 1:50

EXISTING ROOF SPACE IS TO BE BOARDED OUT ONCE INSULATION IS IN PLACE FOR STORAGE WITH NEW HATCH L/LADDER FITTED TO HOME OWNERS REQUIREMENTS



SECTION B - B 1:50

Loading calculation for new Beam

Clear span 2800mm

Actual beam length 3100mm

Load = floor + Bedroom & Bathroom stud walls above

Load = 2.8m x 2.9m x 2kn +

2.8m x 2.6m x 1kn +

2.8m x 2.6m x 1kn

Load = 16.24kn + 7.28kn + 7.28kn

Load = 30.8kn

Load = 11 kn/m

Superbeam 4.501 441850

Beam: To remove internal wall

Load name Loading w1 Start x1 Loading w2 End x2

U T floor walls 11 0 L 15.40 15.40

Load types: U:UDL T: Total (positions in m. from R1)

Maximum B.M. = 10.8 kNm at 1.40 m. from R1

Maximum S.F. = 15.4 kN at R1

Total deflection = 8.80 x 1e8/EI at 1.40 m. from R1 (E in N/mm², I in cm⁴)

Steel calculation to BS449 Part 2 using S275 (Grade 43) steel

SECTION SIZE : 178 x 102 x 19 UB Grade 43

D=177.8 mm B=101.2 mm I=4.8 mm T=7.9 mm Iy=1,360 cm⁴ ry=2.37 cm Zy=153 cm³

Ly/r_y = 2.80x100/2.37 = 118 D/T = 22.5

Permissible bending stress, p_{bx} = 117.5 N/mm² (Table 3a)

Actual bending stress, f_{bx} = 10.78 x 1000/153.0 = 70.5 N/mm² OK

Maximum shear in web, f_v = 15.40 x 1000/(4.8 x 177.8) = 18.0 N/mm² OK

Check unstiffened web capacity with load of 15.40 kN

Bearing: p_b = 210N/mm² (Table 9); C1 = 27.1 kN; C2 = 1.01 kN/mm

Buckling: p_b = 141N/mm² (Table 17a); C1 = 60.2 kN; C2 = 0.677 kN/mm

Unstiffened web bearing capacity: P_u = 27.1 kN; no minimum stiff bearing length required

Total deflection = 8.80 x 1e8/(205,000 x 1,360) = 3.2 mm (U887) OK

Combined bending and shear check (14.c): (f_{bx}/p_{bx})² + (f_v/p_{sv})² = 0.380 at 1.40 m. (<=1.25 OK)

Bearing details

Factor reactions by 1.55 (user selected value)

Local design strength of masonry (factored) = 0.700 N/mm² (User-entered value)

R1 (15.40kN unfactored): 425 x 100mm padstone

Factored stress under padstone = 1.55 x 15.40 x 1000/425 x 100 = 0.56 N/mm²

R2 (15.40kN unfactored): 425 x 100mm padstone

Factored stress under padstone = 1.55 x 15.40 x 1000/425 x 100 = 0.56 N/mm²

Drawn by
J R Heslop
jrheslop@live.co.uk
jrheslopdesign@woodpress.com
SCALE 1:50 / 1:100 @ A1

NOTES (WHERE APPLICABLE)

HOME OWNER/CLIENT & BUILDER MUST READ

ONLY THE PLAN APPROVED BY BUILDING CONTROL

TO BE USED FOR CONSTRUCTION PURPOSES.

ALL DIMENSIONS ARE TO BE SITE CHECKED BY BUILDER

DO NOT SCALE DRAWING

- ANY NEW BLOCKWORK IS TO MATCH & KEY INTO EXISTING.
- WINDOWS & DOORS TO BE DOUBLE GLAZED WITH 20mm GAP BETWEEN FRAMES FILLED WITH ARGON GAS WITH INNER FRAME HAVING LOW E COATING TO ACHIEVE U VALUE OF 1.4 W/m²K INNER FRAME 1) CONTROLLABLE TROUBLE VENTS OF 6,000mm² TO HABITABLE ROOMS AND KITCHEN WITH 4,000mm² . ELSEWHERE VENTS SET 1700mm FROM FLOOR LEVEL AND 500mm FROM ANY EXTRACT FAN . NEW INTERNAL DOORS TO HABITABLE ROOMS TO BE MIN 20 MINUTE FIRE RESISTANT STANDARD.
- ALL NEW BEAMS & LINTELS TO HAVE A MIN BEARING OF 150mm . TIMBER MEMBERS MUST HAVE A 100mm MIN BEARING
- ROOF & FIRST FLOOR MUST BE TIED DOWN TO WALLS WITH MS GALVANISED STRAPS OF 32mm x 5mm AT 1500mm CENTRES.
- NEW ROOF SPACE TO BE VENTILATED TO B.S. 5260 . BACKGROUND VENTILATION 8000cm² EQUIVALENT AREA TO BE PROVIDED TO HABITABLE ROOMS
- NEW FOUNDATIONS/ WALLS ARE TO CONFORM TO BUILDING REGULATION 1 & 2 / APPROVED DOCUMENT A
- THE FOUNDATION DIMENSIONS SHOWN ARE MINIMUM ONLY AND ARE GIVEN WITHOUT ANY KNOWLEDGE OF ON SITE SOIL CONDITIONS IF THE EXISTING FOUNDATIONS OF THE PROPERTY HAVE TO TAKE ANY ADDITIONAL LOADS THEY SHOULD BE EXPOSED AND PASSED BY THE LA OR PRIVATE BUILDING CONTROL INSPECTOR ON SITE.
- ANY UNDER-SITE DRAINAGE MUST BE EXPOSED & ENCASED IN 150mm CONCRETE.
- NEW WALL CAVITIES MUST BE INSULATED AS PER SPECIFICATION OR WITH B.C APPROVED INSULATION TO ACHIEVE THE MIN 'U' VALUE FOR WALLS.
- NEW STEELWORK MUST HAVE A MINIMUM FIRE RESISTANCE OF 30 MINUTES.
- ALL WALL CAVITIES ARE TO BE CONTINUOUS.
- ALL CAVITY BARRIERS TO E2/E3/E4 APPENDIX D2
- R.O LINTELS BUILT INTO WALLS OVER DRAINS
- FOUNDATIONS WITH 1000mm OF DRAINS TO BE TAKEN DOWN TO TO DRAIN INVERT LEVEL.
- CAVITY CLOSURES TO HAVE VERTICAL & HORIZONTAL DRAINS . INSULATED TYPE.
- ALL NEW PLUMBING IS TO COMPLY WITH BS 5572.
- ALL MATERIALS USED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- NEW DRAINAGE LAID TO SELF CLEANSING FALLS WITH ROODING ACCESS.
- NEW INSULATION TO BE INSTALLED AS PER "ROOF DETAIL" APPENDIX D2
- LIGHTING MUST BE LOW ENERGY LIGHT FITTINGS WITH A MINIMUM LUMINOUS EFFICIENCY OF 75 LIGHT SOURCE LUMENS PER CIRCUIT -WATT
- MAINS OPERATED INTERLINKED SMOKE DETECTORS TO BS 5446- DOMESTIC or BS5446-12000 or BS5446-2:2003/COMMERCIAL DETECTORS INTERLINKED WITH BATTERY SHOWN AS
- THE CLIENT / HOME OWNER MUST INFORM THEIR NEIGHBOURS OF WORK TO BE CARRIED OUT ON OR NEAR TO BOUNDARY AS REQUIRED BY THE PARTY WALL ACT IN WRITING 2 MONTHS BEFORE WORKS BEGIN.
- THE CLIENT / HOME OWNER IS RESPONSIBLE FOR CORRECT LOCATION / ACCURACY OF THE BOUNDARY SHOWN.
- THE BUILDER MUST BE AWARE OF THE REQUIREMENTS OF THE PARTY WALL ACT AND MUST STUDY THE BOOKLET AVAILABLE FROM THE LOCAL AUTHORITY BEFORE COMMENCING THE PROJECT.
- ELECTRICAL WORKS BY "NON-COMPETENT PERSON SCHEME" MEMBER.
- THE CLIENT / HOME OWNER MUST SATISFY THEMSELVES THAT THE ELECTRICIAN (WHETHER EMPLOYED VIA THEMSELVES OR BUILDING CONTRACTOR) IS QUALIFIED TO CARRY OUT ALL OF THE PARTS OF THE PROPOSED ELECTRICAL WORKS & TEST THE WORKS IN ACCORDANCE WITH BS 7671 THE IEE 18th EDITION WIRING GUIDANCE AND ARE FULLY AUTHORISED TO ISSUE RELEVANT CERTIFICATES AS REQUIRED BY PART D OF THE BUILDING REGULATIONS EFFECTIVE 1/10/15. ALL ELECTRICAL WORKS MUST MEET THE REQUIREMENTS OF PART D ELECTRICAL SAFETY AND WILL BE DESIGNED , INSTALLED , INSPECTED , TESTED BY A PERSON COMPETENT & QUALIFIED TO DO SO AND A SELF CERTIFICATION CERTIFICATE BE SUBMITTED / ISSUED TO THE LOCAL AUTHORITY BY THE COMPETENT PERSON WITH 30 DAYS OF COMPLETION OF THE ELECTRICAL WORKS. THE CLIENT / HOME OWNER MUST ALSO RECEIVE A COPY OF THE SELF CERTIFIED CERTIFICATE & A BS 7671 ELECTRICAL INSTALLATION TEST CERTIFICATE

ELECTRICAL WORKS BY "NON-COMPETENT PERSON SCHEME" MEMBER
ALL WIRING & ELECTRICAL WORKS MUST BE DESIGNED , INSTALLED , INSPECTED & TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF BS 7671 IEE 18th EDITION WIRING REGULATIONS & PART D ELECTRICAL SAFETY ON COMPLETION OF THE WORKS A COPY OF THE INSTALLER TEST CERTIFICATE COMPLIANT WITH BS 7671 IS TO BE PROVIDED TO THE CLIENT / HOME OWNER & LOCAL AUTHORITY AND PRIOR TO ANY COVERING OF THE WIRING & CABLES OF THE INSTALLATION BE INSPECTED BY A INDEPENDENT "COMPETENT PERSON" AND ON COMPLETION OF THIS INSPECTION IN ADDITION TO THE ABOVE STATED CERTIFICATE A ADDITIONAL "COMPETENT PERSONS ELECTRICAL INSTALLATION CERTIFICATE COMPLIANT WITH BS 7671 TO BE PROVIDED TO THE HOMEOWNER / CLIENT & LOCAL AUTHORITY. COMPETENT PERSON MEANS A MEMBER OF CDD M ELECTRICAL COMPETENT PERSONS SCHEME.

MECHANICAL VENTILATION TO BE FITTED AS FOLLOWS: BATHROOMS TO HAVE 15L/SEC/2ND AIR CHANGE, KITCHENS AND OTHER AREAS TO HAVE A MIN OF 15 L/SEC/2ND AIR CHANGE DUTIED TO EXTERNAL AIR . FANS TO HAVE A 15 mins OVER RUN TIME IN ADDITION THE WINDOWS TO THESE AREAS TO HAVE CONTROLLABLE VENTS OF MIN 2500cm².

ANY WORKS CARRIED OUT ON THE GAS APPLIANCES OR CENTRAL HEATING SYSTEM MUST ONLY BE DONE SO BY A GAS SAFE REGISTERED CONTRACTOR.
GAS FIRED HEATING SYSTEMS REQUIRE 92% MINIMUM EFFICIENCY
GAS BOILERS FITTED IN EXISTING DWELLINGS REQUIRE ONE OF THE FOLLOWING:
FLUE GAS HEAT RECOVERY
WEATHER COMPENSATION
LOAD COMPENSATION
SMART THERMOSTAT WITH AUTOMATION & OPTIMISATION

IN ANY CASE THE REGISTERED INSTALLER MUST BE FAMILIAR WITH CURRENT APPROVED DOCUMENT L1
THERE MAY BE FEES DUE TO PAY TO THE LA or PRIVATE BUILDING CONTROL BEFORE THE BUILDING INSPECTOR PASSES / SIGNS OFF THE PROJECT, THE HOMEOWNER/CLIENT SHOULD CHECK WITH THEIR BUILDING CONTRACTOR.

THE BUILDER MUST TAKE REASONABLE MEASURES TO PREVENT AIR LEAKAGE FROM THE PROPERTY & AIR GAPS AROUND DOOR & WINDOW FRAMES TO BE SEALED. FLOORS MUST BE AIRTIGHT AND ANY HOLES IN THE EXTERNAL WALLS FOR DRAINAGE ECT TO BE FULLY SEALED. ALL INSULATION TO BE CONTINUOUS WITHOUT AIR GAPS.

PLYWOODS MUST MEET A MINIMUM STANDARD OF EN 1996 UNTIL THE TRADA TEST STANDARD HAS BEEN ESTABLISHED
THE DESIGNER (JR HESLOP) IS NOT RESPONSIBLE FOR ANY VOIDS / DRAINS OR OTHER UNDERGROUND OBSTRUCTIONS FOUND NEAR OR UNDER THE BUILD SITE.

A PROPER SUPPLY OF AIR IS TO BE PROVIDED TO THE KITCHEN IN ORDER THAT THE COOKING APPLIANCES CAN FUNCTION EFFICIENTLY WITHOUT CAUSING DISCOMFORT.
A CONTINUOUS SUPPLY OF HOT WATER TO BE PROVIDED TO THE KITCHEN THAT DOES NOT EXCEED THAT LAID DOWN.

ALL NEW STEELWORK IS TO BE 30 minute FIRE PROOF E 2 x 10mm PLASTERBOARD LAYERS AND SKIM ON 50mm x 50mm TIMBER JOISTING @ 400mm CENTRES

THE CLIENT MUST BE SURE THAT THE SIZES OF THE ROOMS SHOWN ARE SATISFACTORY
IF THE PROPOSED ROOF IS TO BE OF A GABLED TRUSS SYSTEM THE BUILDER MUST OBTAIN APPROVAL FROM BUILDING CONTROL FOR THE DESIGN / TRUSS CALCULATION BEFORE WORK COMMENCES

THIS PLAN IS PROVIDED FOR BUILDING REGULATION SUBMISSION / APPROVAL AND IF REQUIRED PLANNING PERMISSION AND DOES NOT TAKE INTO ACCOUNT ANY FAULTS IN THE EXISTING STRUCTURE OF THE PROPERTY

AMENDMENTS TO THE PLAN AFTER PLANNING PERMISSION HAS BEEN ACHIEVED MAY REQUIRE A NEW APPLICATION. IF CLIENT HAS INSTRUCTED DESIGNER (JR HESLOP) THAT PLANNING IS NOT REQUIRED DUE TO ADVICE FROM A 3RD PARTY JR HESLOP IS FREE FROM ANY OBLIGATIONS THAT MAY ARISE IF AN ISSUE FROM PLANNING DEPARTMENT HAPPENS DURING CONSTRUCTION.

IT IS THE RESPONSIBILITY OF THE BUILDING CONTRACTOR TO OBTAIN A COMPLETION CERTIFICATE FROM THE PRIVATE OR LA BUILDING CONTROL DEPARTMENTS ONCE THE FINAL CHECK HAS BEEN COMPLETED AND THE PROJECT IS SIGNED OFF BY THE BUILDING INSPECTOR.

IF REQUIRED THE HOMEOWNER / CLIENT MUST INFORM THE LEASEHOLDER OF THE PROPOSED WORKS/PROJECT THAT IS TO BE CARRIED OUT ON THE PROPERTY BEFORE WORKS COMMENCE

IF THE HOME OWNER / CLIENT OR BUILDER COMMENCES ANY WORK WITHOUT FULL PLANS APPROVAL IN PLACE THEY DO SO AT THEIR OWN RISK AND THE DESIGNER (JR HESLOP) WILL NOT ACCEPT ANY LIABILITY FOR ANY PERSONAL INJURY SUFFERED , ALTERATIONS , COSTS , DELAYS or LEGAL PROCEEDINGS RESULTING FROM THIS.

AS AGREED THE DESIGNER (JR HESLOP) WILL VISIT & MEASURE THE PROPERTY THEN DESIGN THE PROJECT TO THE CLIENTS WISHES . COMPLETE RELEVANT APPLICATION FORMS ARISE AS BEST ON FEES AND PREPARE APPLICATION PACKS READY FOR SUBMISSION BUT WILL NOT TAKE PART IN ANY BUILDING WORKS.

PROPOSED

ATTACHED DOUBLE GARAGE CONVERSION TO FORM
ADDITIONAL GROUND FLOOR BEDROOM WITH EN-SUITE
& NEW PORCH

INTERNAL WALL REMOVAL TO FORM LARGER
KITCHEN / LIVING SPACE

at

No 14, Parkstone Close

Bury

Manchester

BL8 2UR