

Bridging valley joint between new roof and existing is to be constructed to approved Building regulation / LA Authority approval standards using suitable materials to ensure the joint is weather proofed , is Code 4 lead flashed valley on weather treated 18mm plywood etc Builder is to liaise with Building Inspector to ensure compliance.

New Rear Extension floor Specification (Floor to be level with existing house floor)
'U' Value achieved 0.16 W/m²K Calculated in accordance with BS EN ISO 6946:2017
Inside surface down - 100mm Sand cement screed with 0.5mm Polythene separation layer beneath then 90mm Kingspan Kooltherm K103 Insulation with 150mm Concrete 12-4 2000kg/m³ laid on Visqueen Ultimate Geosol 0.9mm DPM (Gas protection to BS8102:2009 CIRCA C748 & BS 8485 :2015) DPM on 150mm sand blined consolidated stone hardcore.

NOTE: Due to No prior Knowledge on ground soil conditions the foundations are shown at a minimum depth required , Builders to confirm exact depth on site with Building control. If Mini piles are a requirement to support below the concrete foundation beam the builder is to provide Piling design & details to the Building Inspector for prior approval before works commence.Builder is to liaise with Building control on any questions / queries on the required foundations

New Extension Cavity walls Specification
'U' Value achieved 0.17W/m²K
Calculated in accordance with BS EN ISO 6946:2017
300mm Cavity construction comprising 102.5mm facing Brick to match & key into existing, 100mm cavity with stainless steel wall ties to BS 1243 1978 with: Number of Anchors per m² 3 , Diameter of Anchors (mm) 3.99mm Maximum spacing 750mm Horizontal 450mm Vertical and 300mm vertical near any openings. The inner leaf to be 100mm Aerated Concrete Block (K-Value 0.15W/mK) Cavity Insulation to be 90mm Kingspan Kooltherm K106 Insulation with a minimum of 10mm airspace. The cavity must be clear of mortar. Inside to 12.5mm plasterboard & skim

BUILDER MUST READ BEFORE ANY WORKS COMMENCE
• THE STEEL BEAMS SHOWN ARE SINGLE LENGTH BEAMS. IF BUILDER WISHES TO SPlice THE BEAMS TO ALLOW EASIER HANDLING THEY MUST PROVIDE FULL DESIGN DETAILS OF THE SPICES WITH RELEVANT DOCUMENTATION TO BUILDING CONTROL BEFORE ORDERING, PURCHASING OR ACTUAL SPlicing THE STEELWORK
• JRHESLOP IS NOT ABLE TO PROVIDE THIS SPECIALIST AREA OF BEAMWORK DESIGN & WILL NOT BE HELD RESPONSIBLE FOR ANY ON SITE DECISIONS MADE BY THE BUILDER WITHOUT BUILDING CONTROL CONSENT / PRIOR APPROVAL.
• SUPERBEAM PROGRAMS HAVE BEEN USED IN THE DESIGN THE BEAMS REQUIRED IF BUILDING CONTROL STIPULATE A 3RD PARTY STRUCTURAL ENGINEER MAY BE REQUIRED TO CONFIRM ELEMENTS OF DESIGN . JRHESLOP IS NOT RESPONSIBLE FOR ANY COSTS THAT MAY COME FROM THIS.

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 JRheshop 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.

New Rear extension Roof Specification -
'U' Value achieved 0.14W/m²K Minimum pitch 20 degrees
Interlocking Marley roofing tiles on treated timber battens with 38mm counter battens on Kingspan Niven Breathable membrane on New Timber Grade C16 Construction quality 175mm x 50mm Timber roof joists @ 400mm Centres
Vaulted Roof Insulation as follows:
(Calculated in accordance with BS EN ISO 6946:2017)
Ventilation rafter cavity with 120mm KOOLTHERM K107 Pitched roof insulation between joists with KOOLTHERM K1R8 52.5mm (12.5 Plasterboard internal finish) secured to underside of joists(Note : 6 x 600mm x 1000mm or equivalent size Valux roof windows to be trimmed out with double roof joistswith 80mm x 50mm C16 Timber ceiling struts fitted to stop roof spread

New Extension Ridge Beam
Clear span 3850mm
178 x 102 x 19 UB Beam Grade 43.
(Using 440 x 215 x 100mm H4 strength reinforced concrete padstones with Blockwork pier constructed in 7kn Dense load bearing Concrete Blocks down to beam

Rear Extension Door unit opening Beam:
Clear opening 4m (Actual beam length 4.3m)
203 x 133 x 30 UB Beam Grade 43.
with 6mm x 27.5mm MS Plate welded off centre to Underside to form catnic style lintel with Beaming secured to 330 x 215 x 100mm H4 Strength concrete padstones , with Block work below constructed in 7kn dense concrete load bearing Concrete Blockwork

Large span Internal Beam: C
Clear opening 5.85m (Actual length 6.15m)
254 x 254 x 73 UC Beam Grade 50 with 6mm x 27.5mm MS Plate welded to top surface centrally with Beaming secured to 600 x 600 x 215 x 100mm 'U' Shape corner H4 Strength corner concrete padstones , with the wall below completely reconstructed in 7kn dense concrete load bearing Blockwork keyed together from floor up (see small detail).

New internal Timber floor in part Garage conversion -
'U' Value achieved 0.18 W/m²K
(Floor to be level with existing house floor)
Inside surface down :
22mm Floor grade T&B 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 Geosol DPM (Gas protection to BS8102:2009 CIRCA C748 & BS 8485 :2015) Laid over existing concrete slab DPM to be lapped into DPC

Roof Insulation
300mm Roof quilt insulation laid over / between existing roof ceiling timber structure with a 12.5mm Plasterboard 3mm skim finish to underside
New internal Timber Wall in part Garage conversion
(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 QA400 Between studs and 50mm Celotex QA400 over stud frame with VLC Fitted with internal surface finished with 12.5mm plasterboard and 3mm skim finish .

Drainage:
Existing Stack from Bathroom is to be adjusted to allow connection of new En-suite 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 H of the building regulations.
Wastes to have 75mm deep anti-vac bottle traps & rodding eyes to be provided at changes to direction.Size of waste pipes 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 WC
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 SVD within 200mm of the W/C Connection, provide hot and cold water to all fittings as appropriate.

UNDERGROUND FOUL DRAINAGE (Builder is to do on site investigation to locate existing property main drains & decide on best course of action to join new Rain water & foul water pipes.)
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS7158 and BS801, Builder is to liaise with the Building Inspector on any on site queries concerning the drainage for the extensions

- 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 BRICKWORK 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 IS CONTROLABLE TROCKLE VENTS OF 8000mm² TO HABITABLE ROOMS AND KITCHEN WITH 4,000mm² ELSEWHERE VENTS SET 700mm FROM FLOOR LEVEL AND 500mm FROM ANY EXTRACT FAN.
 - ALL NEW BEAMS & UNTELS 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 BS 5262, 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 & DIVIDED INTO 50cm 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 E2/3/4 APPENDIX B2.
 - RO LINTELS BUILT INTO WALLS OVER DRAINS.
 - FOUNDATIONS WITHIN 1000mm OF DRAINS TO BE TAKEN DOWN TO TO DRAIN INVERT LEVEL.
 - CAVITY CLOSURES TO HAVE VERTICAL & HORIZONTAL DPC'S INSULATED TYPE.
 - ALL NEW PLUMBING IS TO COMPLY WIT 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 " ROBUST DETAILS " ISSUED BY DEFRA
 - 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 2003/100COMMERCIAL 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 /HOMEOWNER 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 "COMPETENT PERSON SCHEME" MEMBER

THE CLIENT / HOMEOWNER MUST SATISFY THEMSELVES THAT THE ELECTRICIAN (WETHER 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 P OF THE BUILDING REGULATIONS EFFECTIVE 1/10/05. ALL ELECTRICAL WORKS MUST MEET THE REQUIREMENTS OF PART P (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 / HOMEOWNER 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 PART P OF THE BUILDING REGULATIONS & PART P (ELECTRICAL SAFETY) ON COMPLETION OF THE WORKS A COPY OF THE INSTALLERS TEST CERTIFICATE COMPLIANT WITH BS 7671 IS TO BE PROVIDED TO THE CLIENT / HOMEOWNER & 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 CDDP IN ELECTRICAL COMPETENT PERSONS SCHEME

- MECHANICAL VENTILATION TO BE FITTED AS FOLLOWS: BATHROOMS TO HAVE 15Ltr/SECOND AIR CHANGE, KITCHENS AND OTHER AREAS TO HAVE A MIN OF 60Ltr/SEC AIR CHANGE DUCTED TO EXTERNAL AIR. FAIS TO HAVE A 15 mins OVER RUN TIME IN ADDITION THE WINDOWS TO THESE AREAS TO HAVE CONTROLLABLE VENTS OF MIN 25000cm².
- ANY WORKS CARRIED OUT ON THE GAS APPLIANCES OR CENTRAL HEATING SYSTEM MUST ONLY BE DONE 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
- IF THERE MAY BE FEES DUE TO PAY TO THE LA OR PRIVATE BUILDING CONTROL FOR THE BUILDING INSPECTOR ASSESSES/ 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 IN 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.
- POWEROODS MUST MEET A MINIMUM STANDARD OF EN 15946 UNTIL THE TRADA TEST STANDARD HAS BEEN ESTABLISHED.
- THE DESIGNER (JRHESLOP) 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 LAD DOWN.
- ALL NEW STEELWORK IS TO BE 30 mins FIRE PROOF IE 2 x 10mm PLASTERBOARD LAYERS AND SKIM ON 50mm x 50mm TIMBER DOGMS @ 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 GANG NAILED 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 (JRHESLOP) THAT PLANNING IS NOT REQUIRED DUE TO ADVICE FROM A 3RD PARTY JRHESLOP 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 (JRHESLOP) WILL NOT ACCEPT ANY LIABILITY FOR ANY PERSONAL INJURY SUFFERED , ALTERATIONS , COSTS, DELAYS or LEGAL PROCEEDINGS RESULTING FROM THIS.
- AS AGREED THE DESIGNER (JRHESLOP) WILL VISIT & MEASURE THE PROPERTY THEN DESIGN THE PROJECT TO THE CLIENTS WISHES, COMPLETE RELEVANT APPLICATION FORMS, ADVISE AS BEST ON FEES AND PREPARE APPLICATION PACKS READY FOR SUBMISSION BUT WILL NOT TAKE PART IN ANY BUILDING WORKS.

PROPOSED SINGLE STOREY REAR EXTENSION

(Creating large kitchen / family room)

& Internal modifications

Ground floor : New Utility room , Additional shower to existing Ground floor WC & a New redirected Staircase to property .

First floor : Master Bedroom increased in size with the addition of an En-suite.

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Scale 1:50 & 1:100 @ A1 Paper size

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