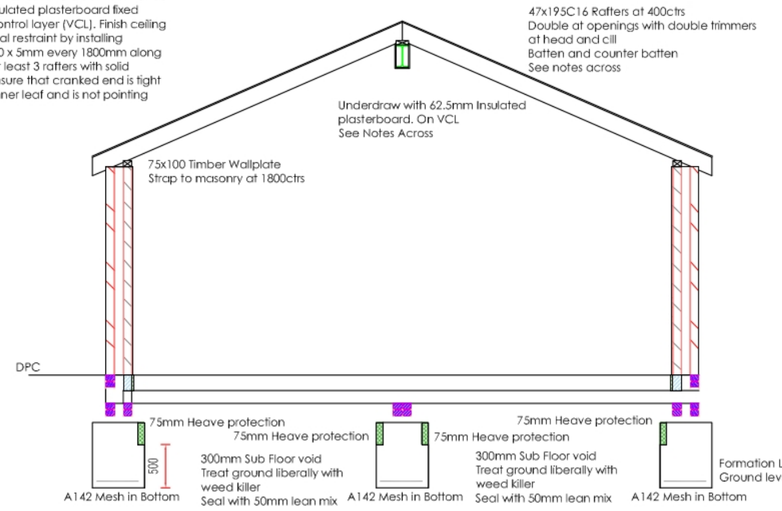
Do Not Scale - If in Doubt Ask

PITCHED ROOF
Roof pitch 22.5°
Concrete tiles to match existing be fixed and lapped strictly in accordance with the manufacturer's instructions on 50 x 38mm tanalised sw treated counter battens on breather roofing membrane with BBA or other approved accreditation on 50x38 tanalised sw treated battens on 12mm exterior grade ply
Supported on 47 x 195mm C16 softwood treated timber rafters at 400 centres. Rafters fixed with framing anchor over 100 x 50mm wall plate that is mortar bedded and strapped to inner leaf with 1000 x 30 x 5mm galvanised mild steel straps at maximum 1800mm centres. 140 mm Celotex XR4000 PIR insulation laid between rafters and 50 + 12.5mm Celotex PL3000 insulated plasterboard fixed across face of rafters over vapour control layer (VCL). Finish ceiling with 3mm skim plaster. Provide lateral restraint by installing galvanised mild steel straps 1000 x 30 x 5mm every 1800mm along the wall. Straps to be carried over at least 3 rafters with solid noggins and to be built into walls. Ensure that cranked end is tight in contact with cavity face of wall inner leaf and is not pointing upwards.

U-VALUE 0.14 W/m²K



Trench fill foundations to have a minimum width of 600 mm. To be a minimum of 1300mm below existing or final ground level whichever the lowest.
Foundation work to comply with BS 8000:1, 2 and 5 and BS 8004. General purpose concrete mixes for non hazardous conditions to comply with BS 8500 and BS EN 206-1.
Foundations should be situated centrally under the wall. Any ground water is to be pumped out prior to concreting. Base of excavation must be clean and sound prior to concreting (i.e. not disturbed by rainwater or mechanical means). Trenches shall be adequately propped and shored. Any services passing through trench fill concrete should be ducted or sleeved or wrapped in flexible material. Ensure foundations are constructed below invert level of any adjacent drains. Building Control to inspect the foundation prior to any pouring of concrete

Full fill cavity wall with brick finish.
New external walls to be minimum 102.5 mm suitable facing brick externally. Fully filled insulated cavity using 100 mm Knauf Dritherm 32 Ultimate. Cavity wall insulation installed in accordance with manufacturers details. Inner skin of 100mm Thermalite Shield 3.6N Blocks. Stainless steel brick ties to BS EN 845 at 900 horizontal ctrs and 450 vertical ctrs. Finish walls internally using 30 + 12.5mm Kingspan Kooltherm K118 insulated plasterboard dabbed to walls using wall adhesive in accordance with manufacturers instructions. Once the dabs are set, it is recommended that additional secondary fixings be applied to insulated plasterboard. Taped and jointed complete with beads and skim plaster finish.

All brickwork and blockwork is to be carried out in accordance with the latest amendments of BS 5628.

All mortar for external and internal walls shall be class 3 designation and be consistent in colour and quality throughout.

U-VALUE 0.17 W/m²K

Beam and block ground floor with screed finish.
Finishes to be 75mm sand/cement screed (mix between 1:3 - 1:4) to BS 8204-1:2003+A1:2009 on 500g polythene separating layer (VCL). Install 100 mm Celotex GA4000 or similar flooring grade PIR insulation on 1200g continuous polythene damp proof membrane (DPM) and radon gas proof barrier is to be laid over beam and block floor, lapped and sealed at all joints and linked to DPC's in walls. PCC beam and block supported on internal leaf of cavity wall, supplied and installed to BS EN 1997-1:2004 + A 1:2013 and BS EN 1992-1-1:2004. Blocks used in suspended floors to be medium density concrete blocks within a minimum compressive strength of 7.3N/mm² and a minimum density of 1450kg/m3. PCC beams to have 100mm minimum bearing onto DPC course and load bearing walls. Below non-load bearing parallel partitions provide double beams. Grout all joints with 1:4 cement/ sand mix. All sleeper walls to have honey combed construction and min. 7 N/mm2 dense concrete for use below DPM/DPC level.

Proprietary plastic air bricks at max 1.8m centres and 450mm from wall corners to provide cross ventilation of voids below suspended floor. 300mm ventilated void below slab. Weed killer treat reduced level.

U-VALUE 0.17 W/m²K

DRAINAGE

PIPEWORK

All drainage system carried in Osma drain by Wavin Building Products Ltd. or equal approved system. New drains and components in UPVC to BS 4660 and BS 5481. Nominal size of drains 100mm diameter unless otherwise shown. Falls for foul drainage are 1:40 you can go to 1:80 for surface water if required. Falls given are absolute minimum's and shallower gradients must not be used. Surrounded in granular material min. 100mm pea shingle (size 5-10mm) or alternative fill to BS 882:1983 Table 4 or BS 8301:1985 Appendix D.

Minimum depth of pipe cover 600mm in fields and 900mm in drives.

Where pipes have less than the minimum recommended cover, the pipes should, where necessary, be protected from damage by a 100mm reinforced concrete cover slab.

Surface water disposed via nearby drain Soakaway not available

CHAMBERS AND MANHOLES

Access should be provided at the following points:

- on or near the head of each drain run
- at a bend and at a change of gradient
- at a change of pipe size (but see below if it is at a junction)
- at a junction unless each run can be cleared from an access point (some junctions can only be rodded through from one direction)
- at 45m maximum spacing in straight runs up to 1.2m in depth

Form manholes with uPVC round or 50 precast concrete units backed with 150 concrete. uPVC manholes to be surrounded with 150 pea shingle. Manhole bases to be 150 concrete on 150 granular material if concrete. Encase drains below building in concrete under building.

Trapped rainwater gullies to have pea shingle surround as before and have rodding eye for cleansing.

Inspection chambers Polypropylene Hepworth or similar approved. Dimensions to BS 8301:1985.

Depth to invert: 0.6m or less - 190mm diameter; 1.2m or less - 450mm diameter.

Manholes: 1200 x 750mm int. 215mm brick unless otherwise indicated; 450x600mm clear cover size.

Inspection chambers or manhole covers are to be mechanically fixed and suitable for vehicular loads. where located internally to the building covers are to have double seal and bolt down covers. To be fully accessible after floor coverings are installed.

GUTTERS AND DOWNPIPES

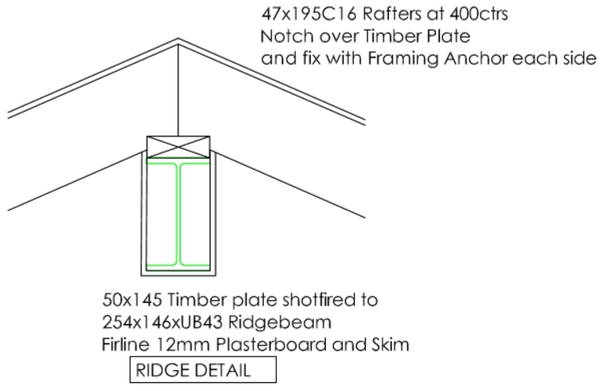
A drainage system is to be used to carry all rain water away from the surface (roof or paved area). All design of rain water goods are to be carried out in accordance with BS EN 12056.

The gutters should be a 100mm UPVC half round section connected into 68mm dia UPVC downpipes. Gutters should be laid with any fall towards the nearest outlet. Surface water drainage should discharge to a soakaway or other infiltration system where practicable. Details are to be confirmed on site.

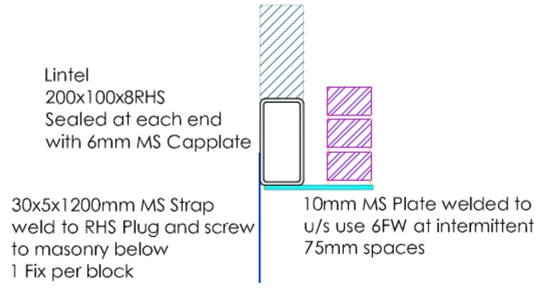
Gutter sizes and outlet sizes

Max effective roof area	Gutter size, dia	Outlet size, dia
18 m2	75 mm	50 mm
37 m2	100 mm	63 mm
53 m2	115 mm	63 mm
65 m2	125 mm	75 mm
103 m2	150 mm	89 mm

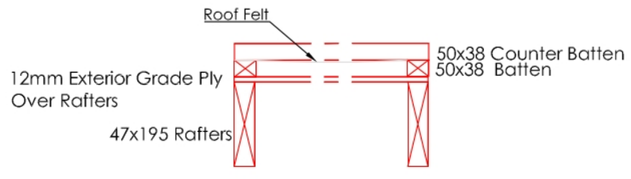
Note: The sizes above refer to half round gutters and round rain water pipes



RIDGE DETAIL



LINTEL OVER BIFOLD DOORS



ROOF COVER DETAIL

NOTES

DO NOT SCALE FROM THIS DRAWING
This drawing is copyright and may not be altered, traced, photographed or used for any purpose other than that intended. The General Contractor is to check all dimensions on site and report any discrepancies to this office. All details shown are based on typical upon typical site conditions related to the location. No responsibility can be accepted for any abnormalities that may be discovered whilst construction is in progress and any such abnormalities should be reported to this office immediately so that design amendments can be considered.Site investigations are recommended in respect of foundation work to establish specific site conditions before commencement of work.
It is the client or their appointed representative responsibility to control workmanship,substitution of materials, adherence to specification or variations to contract etc. All materials to be installed in strict accordance with manufacturers details and shall conform to all appropriate standards. The Employer/Client shall ensure the selected contractor is conversant with and adopts all necessary measures to com ply with Health and Safety legislation for building sites and workplaces. The Employer/Client is advised should the works need to comply with Construction Design and Management Regulations a Principle Designer will need to be engaged. QUARRINGTON DESIGN Ltd DOES NOT ASSUME THIS ROLE.
Should the works need to comply with The Party Wall Act a Party Wall Surveyor will need to be engaged. QUARRINGTON DESIGN Ltd DOES NOT ASSUME THIS ROLE.
We point out it is THE CLIENT responsibility to provide an asbestos report for the existing buildings affected by the works.
The General Contractor MUST be Asbestos Aware to the latest codes.
These drawings remain the property of QUARRINGTON DESIGN Ltd until full payment is received.

OUR DESIGN IS CARRIED OUT IN ACCORDANCE WITH CURRENT BUILDING REGULATIONS AND OTHER RELEVANT CODES OF PRACTICE, SUBJECT TO PROFESSIONAL JUDGEMENT
IT IS USUAL THE DESIGN IS CHECKED FOR COMPLIANCE BY BUILDING CONTROL OR AN APPROVED INSPECTOR.
DUE TO DIFFERENT INTERPRETATIONS OF STANDARDS MODIFICATIONS MAY BE REQUIRED TO OUR SUBMITTED DETAILS
WE THEREFORE RECOMMEND THAT WORKS ON SITE ARE COMMENCED ON RECEIPT OF APPROVAL FROM BUILDING CONTROL

STEEL HOLLOW SECTIONS
ALL HOLLOW SECTION STEEL TO BE SEALED AT EACH END WITH USE OF 6MM MILD STEEL PLATE WELDED OVER OPENING
UNLESS SPECIFICALLY SHOWN DIFFERENTLY ON DRAWINGS

CDM REGULATIONS 2015
The client MUST abide by The Construction Design and Management Act 2015.
If more than one contractor is involved the client will need to appoint a main (principal Contractor) to plan, manageand coordinate the construction and ensure procedures are in place for organising the project
DOMESTIC CLIENTS
The domestic client must appoint a principal designer and principal contractor, if not your duties will automatically transfer to the contractor. The designer can take on responsibilities for principal designer so,long as a signed written agreement exists between you and the designer.
The Health and Safety Executive must be informed as soon as possible if
A) The project lasts more than 30 working days and has more than 20 workers working simultaneously
B) The project exceeds more than 500 person days

STEEL PROTECTION

1. All Structural steel to be GRADED S355 AND fire protected minimum in accordance with architect details
2. STEELWORK TO BE SHOT-BLASTED SA2½ AND TREATED WITH SUITABLE PRIMER AS SPECIFIED BY THE CONTRACTOR THAT WILL GUARANTEE A MINIMUM OF 10 YEARS TO FIRST MAINTENANCE. FINISHED COLOUR OF ALL EXPOSED STEELWORK IS TO ARCHITECT'S SPECIFICATION. IN RESPECT OF A CORROSIVE ENVIRONMENT GALVANISING OR 2-PART EPOXY PRIMER IS PREFERRED. CONTRACTOR TO CONFIRM PROPOSALS.ALL STEELWORK PERMANENTLY ENCAPSULATED IN A CAVITY TREAT AS CORROSIVE ENVIRONMENT
3. ALL STEELWORK BELOW FFL TO BE TREATED AS IN CORROSIVE ENVIRONMENT
4. STEEL COLUMNS TO BE CONNECTED TO MASONRY INCLUDING OUTER BRICK LEAF BY USE OF PROPRIETARY SYSTEM SUCH AS ANCON 25/14 OR NON DRILL SYSTEM. USE TIES WITH DEBONDING SLEEVES AS PER MANUFACTURERS RECOMMENDATIONS
5. STEEL BEAMS TO HAVE A MINIMUM BEARING OF 150MM UNLESS OTHERWISE SHOWN
6. PADSTONES TO BE PRESTRESSED CONCRETE 50N/MM²

BS 5534
Altitude 15m above Sea Level

ALSO REFER TO SEPARATE A4 NOTES

DRAWING TO BE READ IN CONJUNCTION WITH STRUCTURAL CALCULATIONS AND ALL ARCHITECT DETAILS

REV	BY	DATE	DESCRIPTION
P2	I.B.	06.04.22	For Building Control Approval
P1	I.B.	30.03.22	For Approval

CLIENT	S. Morgan and C. Bryans
ADDRESS	Morstead House - Cheal Road - Gosberton
PROJECT	Proposed Extension
TITLE	Sections and Details
PLOT	
DRG STATUS	For Approval
DRAWN I.B.	SCALE As Shown
CHECKED	DATE 28.01.19
DRAWING NO 21.310-06	REV P2

Quarrington Design Ltd
Unit A
Holdingham Barns
Sleaford
Lincs NG34 8NP

01529 300375
ian@ianbutlerdesign.co.uk