

DRAINAGE

Access is to be provided to all traps and rodding is to be provided at all bends in waste pipes. No waste connections are to be made to the soil & vent pipes within 200mm vertical distance of W.C. branch connections. Soil stacks are to be in 100mm diameter P.V.C. Waste run in P.V.C generally as stated in the Building Regulations H.1, Table 9 & to BS 5372.

WC 100mmØ waste with P trap to soil waste

Hand Basin 32mmØ trap and min. 75mm seal

Shower 40mmØ trap and min. 50mm seal

All drains laid at 1:60 min fall in uPVC with rodding access points to all straight runs

Where drainage pipe passes through the wall the opening is to be supported with lintels, and filled with compressible material, and the pipe is to have a joint either side of the wall to allow for any differential movement

SURFACE WATER DRAINAGE

All surface water drainage runs are to be laid to a minimum fall of 1:60 and are to run to the new surface water drain to discharge into new soakaways. Pipes are to be set in a 100mm single bed. New soakaway to be located more than 5m from all buildings and structures.

Construction Risks

Allow for sufficient propping and support

Structure to be confirmed with Architect/Structural Engineer/Building Control Officer prior to demolition of walls. All temporary works to be designed by a qualified / competent person

Deep excavations of foundations. Do not enter and ensure stability of all trenches and do not undermine existing structures. Carry out investigations to ensure no undermining occurs. Gain Party Wall Awards as appropriate.

Working at height - provide all required access scaffolding / support to enable safe working at height

Heavy loads - provide all necessary machinery to ensure safe lifting of heavy loads

Pre-construction intrusive demolition asbestos survey is to be carried out prior to works commencing

GLAZING

Windows - U-Value 1.4 or Window Energy Rating(10) Band B minimum, see ventilation section for trickle vent details
Doors - U-Value 1.4 or Doorset Energy Rating(10) Band C minimum

NOTE: Rockwool Cavity closers to be applied to all window and door openings and party walls

Any areas of glazing within 300mm of a door horizontally, or within 800mm from finished floor level are all to be toughened glass to BS 6206. All windows to habitable rooms are to have trickle vents fitted to allow for background ventilation.

Fixed glazing to be designed to act as barrier to falling and resist loads given in BS EN 1991-1-1 and PD 6688-1-1 and to BS6180 requirements for impact resistance.

DOORS & WINDOWS

All doors and windows to be designed to PAS 24:2016 and Part Q of the building regulations.

ESCAPE WINDOWS

All escape windows to have a minimum opening area of 0.33m² with a minimum opening dimension of 450mm. The bottom of the opening will be between 800 - 1000mm above finished floor level

Wall Ties & Straps

Wall ties to be inserted in accordance with BS EN 845-1

Wall ties to be inserted above and below DPC, spaced max. 900 horizontally and max. 450mm vertically generally.

Within 225mm horizontally from an opening and not more than 300mm vertically

Wall plates to be strapped to masonry with galvanised steel straps with a min. cross section of 30 x 2.5mm at min. 2m centres fixed to wall or turned into a bed joint

HEATING

Existing heating system to be extended to serve new radiators within new extension. New radiators to have TRVs. Garden room to have separate heating system. Outbuilding will have independent electric panel heaters.

NOTE: All dimensions to be checked on site prior to commencement of works

KEY TO SYMBOLS

(H) Mains powered battery backup interlinked heat detector to below specification and BS 5446

(S) Mains powered battery backup interlinked smoke detector to below specification and BS 5446

FIRE

New detectors to comply with BS 5839-6:2019 & A1:2020. Should an existing hardwired interlinked fire alarm system not already be installed in accordance with BS5839-6:2019. A new hardwired interlinked fire detection system will be required in accordance with BS 5839-6:2019+A1:2020. Which should comprise the following: A heat detector in the kitchen, smoke detection in the principal habitable room(s) along with smoke detection in the circulation areas.

ELECTRICAL

Height of sockets and light switches to be agreed on site with client but must be between 450 and 1200mm above floor level & 150mm above work surfaces.

All electrical wiring is to be undertaken by a competent electrician in compliance with part P of the building regulations and BS7671. A test certificate must be produced on completion with all information provided for the home owner.

All light fittings are to be only capable of being fitted with low energy bulbs to comply with part P.

VENTILATION

Windows and doors to include trickle vents supplying total equivalent ventilator area across entire dwelling in accordance with Part F of the Building Regulations with a min. 8000mm² to each habitable room and 4000mm² to each wet room.

To outbuilding vents are to provide min. 10,000mm² to each habitable room and 4000mm² to each wet room.

WC 15l/s with light switch overrun

kitchen 30l/s adjacent to hob 60l/s elsewhere with light switch overrun

Construction Details

Roof Build up (Outbuilding and Bay Window)

- [EXTERNAL] - To Outbuilding: Lay Marley Eternit Lincoln Pan tiles in rustic red (exposed interlocking nib to verge to be carefully ground off and verges laid with full mortar bed).
- To Bay Window: Reclaimed pan tiles to bay window to match existing.
- 25x38mm treated roofing battens
- Breather membrane as Tyvek Supro, draped between rafters as manufacturers recommendations [GREEN LINE]
- 95 x 45mm C16 rafters at 400mm c/c
- The beams TBC by structural engineer
- 50mm GA4000 Celotex tightly fixed between rafters maintaining 50mm ventilation gap to membrane
- 100mm GA4000 Celotex insulation beneath rafters with all joints lapped with Vapour barrier tape to form continuous vapour barrier. [RED LINE]
- 25x50mm fixing battens
- 12.5mm plasterboard with skim finish. [INTERNAL]

Roof / Ceiling Build up (Rear Porch)

- [EXTERNAL] - Lincoln Pan Tiles laid with headlap to match pitch. (interlocking nibs to verges carefully ground off).
- 25x38mm treated roofing battens
- Breather membrane as Tyvek Supro, draped between rafters as manufacturers recommendations [GREEN LINE]
- 120 x 45mm C16 rafters at 400mm c/c
- Tie beams TBC by structural engineer
- 70mm GA4000 Celotex tightly fixed between rafters maintaining 50mm ventilation gap to membrane
- Vespene vapourcheck vapour barrier or similar, taped at edges.
- 12.5mm plasterboard with skim finish. [INTERNAL]

Eaves

- Install tilting filets to ends of rafters to match spay of existing dwelling
- Install black uPVC eaves carrier to dress feeding into gutter with breather membrane dressed and taped over (ensure eaves carrier is fully supported throughout) [ORANGE LINE]
- To dwelling leave rafter feet exposed with 9mm marine ply over rafters, all decorated to match joinery.
- To outbuilding install 25mm sw treated fascia and 9mm plywood WBP soffit. (NOTE: To areas within 1m of boundary install 12mm MASTERBOARD to fascia and soffit.)
- New alumasc or similar gutters and downpipes feeding into existing surface water drainage soakaway for existing roof slopes and new surface water soakaway for outbuilding and extensions TBC on site with building control.

Internal Studwork

- 100x50mm C24 studwork at 400mm c/c with nogginns every 900mm
- install 90mm acover acoustic insulation between studs
- line over with wallboard TEN plasterboard either side of studwork with skim finish.
- NOTE! Where timber touches existing fabric and floors install DPC strips, allow min continuous 25mm clearance around timbers to existing fabric to allow air flow.

Wall build up (OUTBUILDING)

- [EXTERNAL] - Corrugated (sine wave) 0.7mm gauge PVC plastisol coated anthracite sheeting by accord steel cladding or similar installed as manufacturers requirements. Install insect mesh at openings
- 50x38mm treated battens and counter battens forming ventilated void with SS insect mesh at top and bottom (reduce battens depth where masterboard applied).
- install rockwool cavity closers to all openings in the cladding, located behind insect mesh. Barriers as Rockwool TCB or FWCB size to match cavity and to form continuous seal around all windows, doors and edges/junctions of cavities as manufacturers details and recommendations.
- Breather membrane as Tyvek housewrap or similar installed as manufacturers guidelines. [GREEN LINE]
- 9mm OSB3 or equivalent. [NOTE] To area within 1m of boundary and to wall between store and studio install additional 12mm MASTERBOARD to timber frame.]
- 150x50mm C24 timber frame @ 400mm c/c
- 140mm XR4000 celotex insulation tightly fixed between timber frame, forming vapour barrier [RED LINE]
- skim finish.

Plinth (OUTBUILDING)

- 140mm dense concrete block internally with 50mm void to external face of masterboard. concrete fill below periscope vents falling to exterior.
- Wienerberger Olde Essex Red Multi Brick skin externally and cant brick to top laid in Flemish bond using 1:3 white cement to well graded sand mortar
- Marmox 1400mm wide insulating block beneath wall plate installed as manufacturers guidelines and specifications.
- Telescopi undefcor vent with vermin grille, fitted as manufacturers recommendations every 2m c/c and within 450mm of corners. [Purple dotted line]
- DPC [BLUE LINE] lapped up inside face of timber frame under vapour barrier 150mm
- DPM [RED LINE] applied up inside face of wall and under wall plate DPC
- Seal between skirting board and screed
- Lay min code 4 lead flashing [ORANGE LINE] over external brick plinth and up inside face of wall min 150mm under breather membrane. Lay additional breather membrane under lead and down timber frame, to lap past timber frame.

Floor Build up (OUTBUILDING, GARDEN ROOM, BAY WINDOW AND PORCH)

- [INTERNAL] - 75mm screed
- Vapour barrier [PURPLE LINE] lapped up inside face of plinth and 150mm up timber frame
- 150mm Celotex FF4000
- 1200 gauge DPM [RED LINE] lapped up inside face of wall and wrapped over plinth
- Proprietary beam and block floor. beam ends to be capped with plastic end caps as k-kap or similar installed as manufacturers guidelines. Install continuous DPC below beam ends [blue dotted line]
- Min 25mm ventilated void [EXTERNAL]

Wall build up / Plinth (PORCH)

- [External] - Lime render as warmcoat scratch coat and limecoat finish by 'best of time' following manufacturers guidelines and specifications. Install drips to base as recommended by best of time.
- 25mm woodwool board as heraklith or similar installed as manufacturers guidelines and specifications.
- 25x38mm treated battens forming ventilated void with SS insect mesh at top and bottom
- install rockwool cavity closers to all openings in the cladding, located behind insect mesh. Barriers as Rockwool TCB or FWCB size to match cavity and to form continuous seal around all windows, doors and edges/junctions of cavities as manufacturers details and recommendations.
- 9mm OSB3 or equivalent
- 150x50mm sw timber frame with hempwool tightly packed between.
- 25mm woodwool board as heraklith or similar installed as manufacturers guidelines and specifications.
- Plaster with warmcoat scratchcoat and limecoat finish as manufacturers details and specifications.
- Code 4 leadwork dressed over cant brick and lapped up face of timber frame.
- DPC 150mm from ground level, lapped up inside face of sole plate.
- Wienerberger Olde Essex Red Multi Brick skin externally and cant brick to top with 1:2.5 NHL 3.5 to well graded sand mortar, below DPC

Wall build up / Plinth (GARDEN ROOM, BAY WINDOW)

- [EXTERNAL] - Blockwork outer skin above DPC with Lime render as warmcoat scratch coat and limecoat finish by 'best of time' following manufacturers guidelines and specifications. Install drips to base as recommended by best of time. (min 150mm from ground level)
- Olde Essex Wienerberger with 1:2.5 NHL 3.5 to well graded sand mortar, below DPC
- 100mm Hempwool to cavity above DPC, 50mm EPS insulation below DPC fixed to inner leaf with suitable wall ties.
- 100mm blockwork with lime mortar
- Plaster with warmcoat scratchcoat and limecoat finish as manufacturers details and specifications.
- DPC min 150mm from ground level, DPM lapped up inside face of wall and under DPC [INTERNAL]

SPECIFICATION AND DESIGN CONSIDERATIONS

- Single Step Flashings Minimum code 4, in lengths not exceeding 1500mm
- Where deeply profiled tiles are used and additional thickness is required for bossing and for Historic or Listed Buildings minimum code 5 should be specified.
- Exposed Locations Free edge clipped to suit exposure, one clip per tile.
- Patination oil. Consider use for flashings to reduce risks of staining.
- Abutments. If in a severe exposure single step flashings should be detailed, see Detail Sheet No.4 Single Step and Cover Flashings
- Cavity Brickwork ensure flashings are fitted in correct relation to any tray system. See Publication Reference.

Lead Sheet Association Telephone 01892 513351 Fax 01892 535028	Standard Detail Sheet No. 3F Title Step and Cover Flashing Over Single-Lap Tiles	Contract Information	Practice Details
Publication Reference Lead Sheet Manual Volume ONE Page Nos 6 to 8, 10, 14, 20 to 22 and APPENDIX A			

SPECIFICATION AND DESIGN CONSIDERATIONS

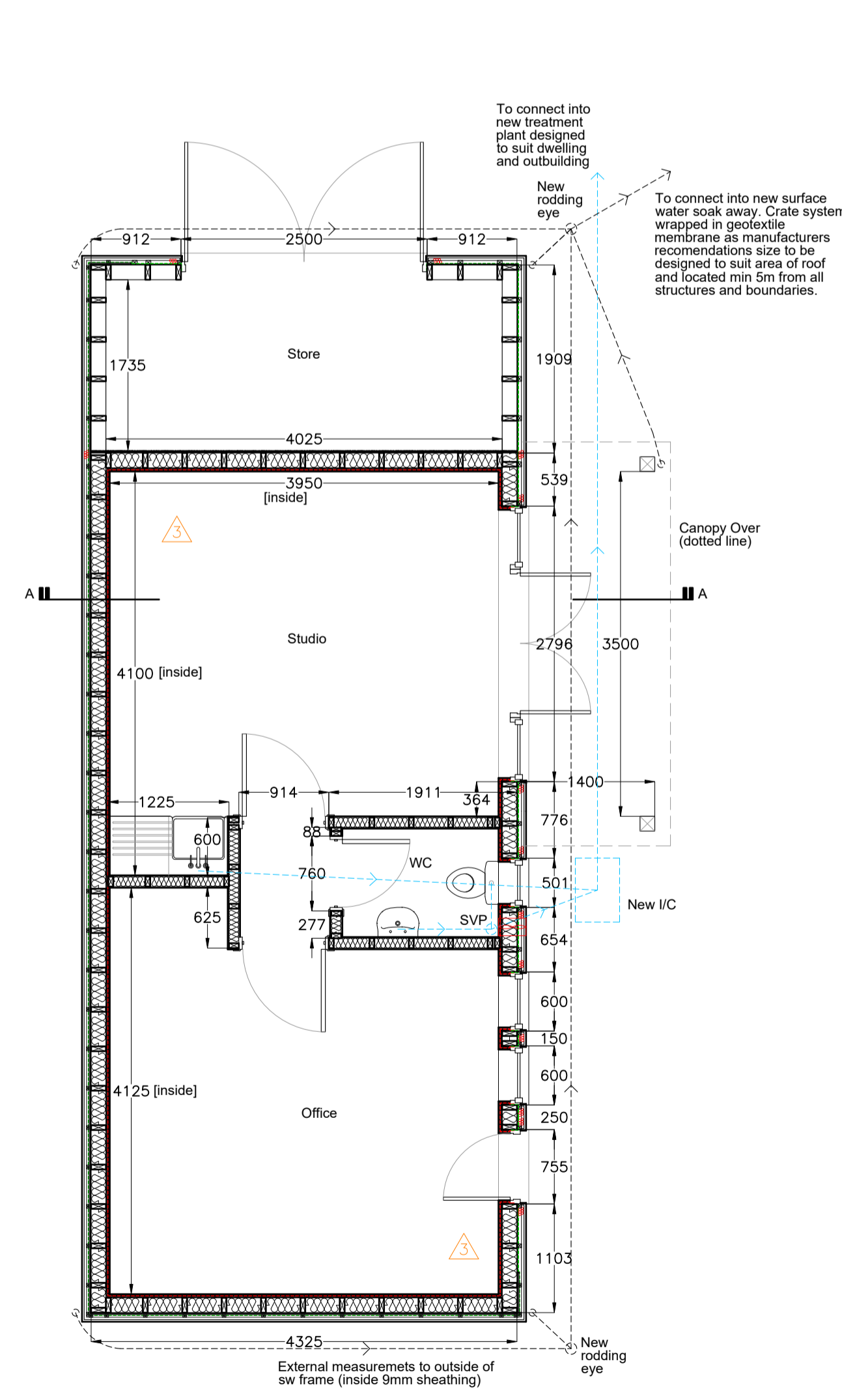
- Cover Flashings Minimum code 4, in lengths not exceeding 1500mm.
- Where deeply profiled tiles are used and additional thickness is required for bossing and for Historic or Listed Buildings minimum code 5 should be specified.
- Free edge clipped to suit exposure, at between 300mm to 500mm centres. Lead is only suitable for sheltered situations, copper or stainless steel for moderate to severe exposure. An additional tile batten may be required where screw fixing is needed for moderate and severe exposures.
- Where lead is used for clips consider use of one code thicker than Flashings
- Patination oil. Consider use for flashings to reduce risks of staining
- Cavity Brickwork ensure flashings are fitted in correct relation to any tray system. See Publication Reference.

Lead Sheet Association Telephone 01892 513351 Fax 01892 535028	Standard Detail Sheet No. 7F Title Apron Flashings at Abutment with Lean to Roof Tiles and Slates	Contract Information	Practice Details
Publication Reference Lead Sheet Manual Volume ONE Page Nos 6 to 9, 17, 23 to 25 and Appendix A.			

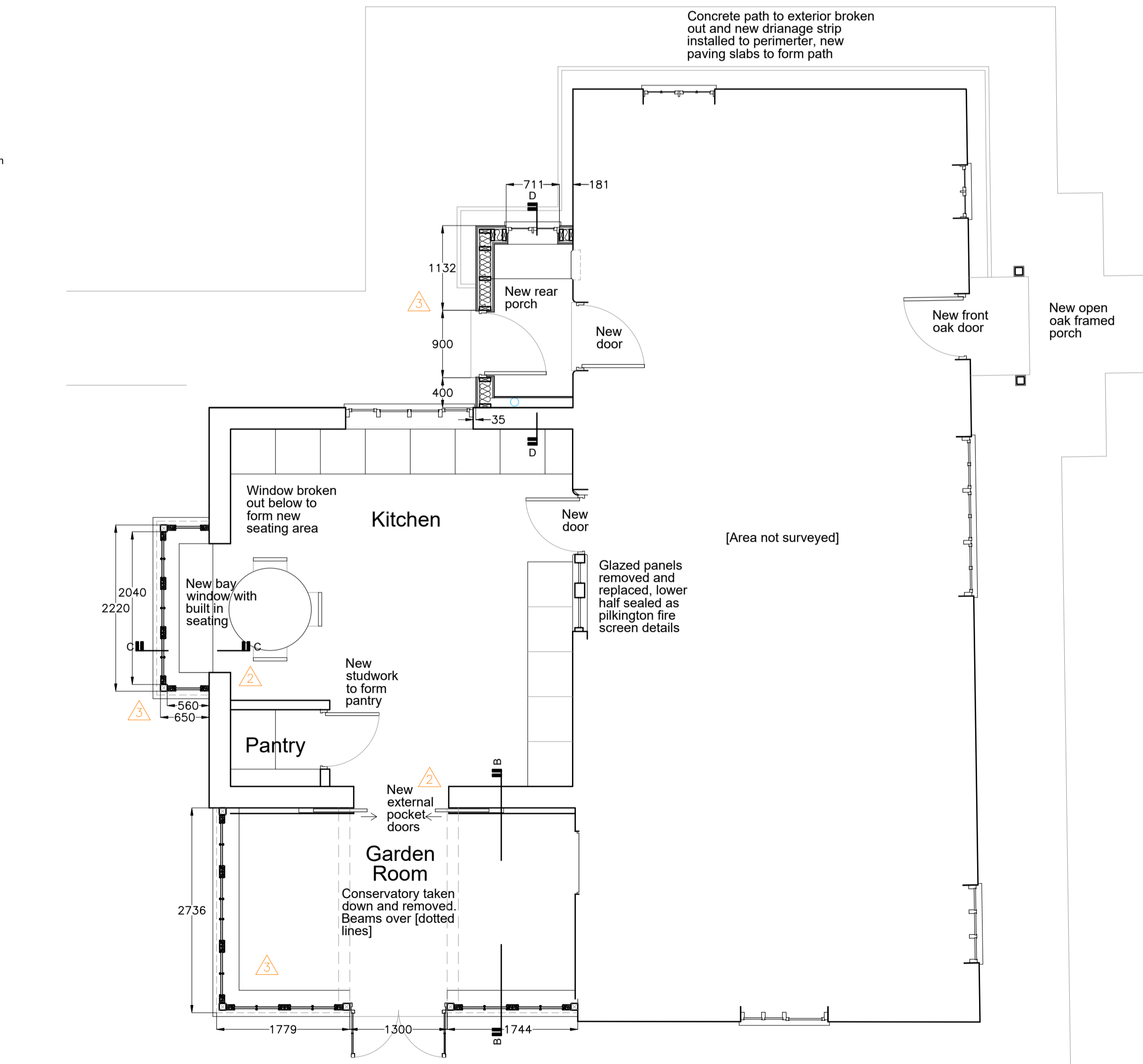
SPECIFICATION AND DESIGN CONSIDERATIONS

- Clips - The free edge of the lead flashing must always be 'adequately clipped' to prevent lifting and distortion in high wind conditions. Adequate clipping will depend on the location/orientation and exposure of the building and these, in turn will determine the material used for the clips. Their spacing and, most important, the method of fixing. Clips should be spaced at between 300 and 500mm centres depending on exposure. For sheltered exposures clips fixed at the top (as in Fig.1) with a clip at each lap joint and at about 500mm centres will be adequate. However in more exposed situations, this method will not prevent wind lift in storm conditions and additional restraint will be needed. The important principle: 'The lesser the fixing the stronger the clip' is illustrated in Fig.3. A typical example of extra fixings to clips are shown in Fig.2, therefore, although the spacing and the material used are important, the method of fixing is an essential factor to be considered if the clips are to provide effective resistance to wind lift in storm conditions.
- Patination of external leadwork - In rainy or damp conditions new lead sheet flashings will produce an initial, uneven white carbonate on the surface. This can be aesthetically unacceptable in some situations but, more importantly, the white carbonate can be washed off by rain to cause unsightly staining on materials below flashings. To reduce staining and also provide a pleasing appearance, a coat of Patination Oil should be applied to the flashings as soon as practical after fixing. Preferably the oil should be applied no later than the end of the day's work since overnight rain can cause the white stain to develop. Patination Oil should be applied evenly with a soft cloth and, in vulnerable locations such as mansard flashings, fixed over dark grey slates or tiles. It is important to oil
- under the lower edge of the flashings and between the laps. Clips along the edges of flashings should be turned over other tile if it has been applied.
- Clips-copper - Copper or lined copper clips should be not less than 50mm wide. The thickness will depend on the exposure of the building. Normally 0.6mm thick tinned copper sheet (0.7 copper) should be specified.
- Clips-stainless steel - These should be cut from austenitic stainless steel sheet or strip not less than 50mm wide and 0.38mm thick. However, for high exposure situations a thicker sheet (0.6 stainless steel) should be used.
- Clips-lead - Lead is only suitable for clips in sheltered locations and the thickness of the sheet used should not be less than the thickness of the flashing.
- Nails - Nails should be large headed copper or austenitic stainless steel, with an annular ring, helical ring or shank not less than 18mm long. The shank diameter of copper nails should not be less than 3.35mm or, for stainless steel, not less than 2.65mm.
- Screws - Screws should be brass or stainless steel complying with BS2120, not less than 18mm long and 3.35mm in diameter.
- For further guidance on specifications of thickness of lead flashings. See detail sheet 1R.

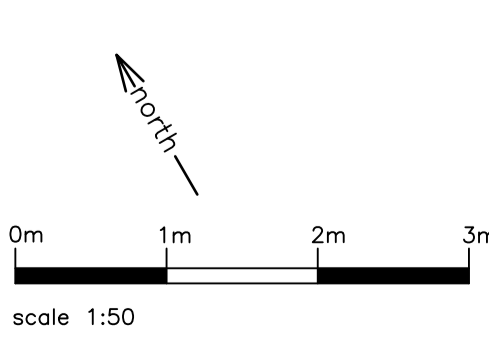
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Publication Reference Lead Sheet Manual Volume ONE Page Nos 8, 13, 14, 20 to 22 and APPENDIX A			



Outbuilding Construction Plan



Dwelling Construction Plan



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Note: Do not scale from this drawing, all dimensions to be confirmed onsite. Only to be used for the above purpose. Refer any discrepancies to the Architect and to be used in conjunction with relevant specifications, schedules and other drawings. Copyright protected.

Marsh.
Architects

Clients: Mr & Mrs Cherry
Project: Wood Cottage, Palgrave
Drawing Purpose: Planning Drawings
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