PROPOSED BARN CONVERSION AT MONEY BRIDGE LANE, WEST PINCHBECK
FOR MRS J CASSIDY

March 2022
Revision: A February 2023

GENERAL SPECIFICATION NOTES

NOTE: All specifications & installations are to comply with all relevant Building Regulations, British Standards, manufacturers' recommendations.

These drawings and notes are for the purposes of obtaining Building Regulations approval only, and do not purport to show all detail necessary for construction. No responsibility can be accepted for construction detail not included in these drawings and notes.

FOUNDATIONS

Each area of ground relied to support the structure depicted must be investigated by the contractor and suitable methods of foundation provided. The contractor is to check for soil contamination prior to the commencement of works and any suspected contaminates are to be investigated by a suitable expert.

All vegetable matter is to be removed from the area covered by the building.

All foundation depths to be taken down to firm loadbearing strata and agreed with the Approved Inspector.

New engineered raft foundations to be in strict accordance with Structural Engineers design.

Concrete to be as specified by the Engineer within the foundation notes section of their drawings. Foundations to be installed in accordance with "Approved Document A1." Section 1E".

Precautions against root damage to be agreed on site with the Inspector and in accordance with NHBC Standards Chapter 4.2 "Building near trees".

DAMP PROOF COURSE

To new walls build in 2000 gauge black polythene to BS 6515 to all walls minimum 150mm above ground level externally.

All dpcs to be bedded on mortar.

All vertical and horizontal cavity closures to incorporate a 2000 gauge DPC.

At roof to wall abutments, flexible cavity trays are to be used and are to rise 225mm up the cavity.

Where water pipe runs through the under floor void, pipe should be sleeved and surrounded by insulation to prevent freezing.

GROUND FLOOR CONSTRUCTION

Over raft foundation provide and lay 1200 gauge damp proof membrane to be taken up the face of the wall and lap over the DPC with 150mm Kingspan Kooltherm insulation(λ=0.018) or similar approved insulation laid over, in accordance with the manufacturer's guidelines. Floor to be finished with 50mm sand and cement screed reinforced with A142 mesh. Perimeter insulation to be provided with 25mm Kingspan Kooltherm insulation upstand at perimeter of floor slab. Provide and lay 500 gauge slip membrane between insulation and screed. The membrane to act as vapour control layer and prevent moisture from the screed penetrating the insulation.

CEILINGS

To be 12.5mm plasterboard with skim finish ready to receive decoration. All joints to be fully supported on all edges. Fixings to be 63 x no.8 wood screws at max 200mm cts. All unrestrained edges to be supported by noggins.

Provide 500 gauge visqueen vapour barrier between insulation and plasterboard.

WALLS

Walls to be to dimensions shown and in strict accordance with BS 5628:Part 3:1985.

Below DPC (in 1:3 cement/sand)

Foundation walls blocks are to comprise external and internal skins Thermalite High Strength 7 minimum. strength 7N/mm2 or similar approved 100mm block. External skin to be taken within 150mm of ground level then continue in 103mm facing brickwork to DPC. Internal skin (including internal 100mm walls) to continue in block to DPC.

Walls Above DPC (in 1:1:6 cement/lime/sand)

Corrugated Wall

New walls to comprise of 13/3 Corrugated 0.7 Thick Polyester Paint Coated Sheet cladding fixed to 38 x 38mm horizontal timber battens at 600 cts. Followed by vertical 25 x 38mm counter battens at 600 cts, reflective breather membrane fixed to 9mm OSB board on a 38 x 140mm timber frame at 600 cts, void between studs fully filled with 140mm Knauf Frametherm Slab 32 (λ=≤0.022). To inside face provide and fix 25mm Kingspan Kooltherm K12 Framing Board (λ=≤0.021) with a vapour control later. 25 x 38mm battens to create a 25mm service void. All to achieve a U-value of 0.16 W/m^2.

Cladded Walls

Horizontal Larch Rainscreen cladding boards fixed to 38 x 38mm horizontal timber battens at 600 cts, reflective breather membrane fixed to 9mm OSB board on a 38 x 140mm timber frame at 600 cts, void between studs fully filled with 140mm Knauf Frametherm Slab 32 (λ=≤0.022). To inside face provide and fix 25mm Kingspan Kooltherm K12 Framing Board (λ=≤0.021) with a vapour control later. 25 x 38mm battens to create a 25mm service void. All to achieve a U-value of 0.16 W/m^2.

Moisture resistant plaster board fixed to Bathroom walls.

Exiting Walls

Existing Solid Wall, 75 x 38mm timber battens at 600 cts with 25 x 25mm battens either side and remaining cavity filled with 50mm Kooltherm K8. Followed by 25mm Kooltherm K118 and finished with 15mm plasterboard ready for skim and decoration.

STUD PARTITIONS

Internal stud partitions to comprise 38 x 89mm C16 studs with head and sole plates and 15mm Gyproc WallBoard to room side. Studs to be spaced at 600mm cts. Provide noggings at all board joints. Where partitions are provided in Kitchens/ Bathrooms the stud work is to be sheathed in 9mm plywood to allow for fixing of kitchen units and or bathroom rails. All joints to be taped and filled. Boards to be finished with skim.

To all stud partitions, suspend an absorbent layer of unfaced mineral wool batts or quilt (minimum thickness 25mm with a density of 10kg/m^3) which may be reinforced within the cavity.

Ensure that all joints are well sealed to reduce transmission of sound.

ROOF CONSTRUCTION

Existing roof to be upgraded in accordance with Structural Engineers design.

Lateral restraint straps to be provided at gables at 2000mm cts maximum, to be 'Bat' straps or similar 5 x 30mm to span over 3no trusses at roof and ceiling level and to be turned down 100mm into cavity, provide noggins between structural members and edge packing.

Wall plate to be 140 x 38mm and to be fixed by 'Bat' straps 30 x 5mm x 1000mm long at 2000mm cts.

All timbers to be Celcure treated or similar.

All structural timbers to be kept 40mm clear of chimneys/flue blocks etc.

ROOF ACCESS

Construct roof access between pair of ceiling joists as shown. Fix 125 x 75mm trimmers and line out opening with 32mm rebated sw lining to form min 750mm x 550mm wide opening between trusses. Roof access to be a proprietary roof hatch, Manthorpe or similar approved.

ROOF INSULATION

Provide and lay between existing ceiling joists 150mm fibreglass quilt insulation, cross laid with 150mm quilt insulation at 90 degrees cross laid with a further 150mm quilt insulation (450mm total Knauf Loft Roll 44 or similar approved with a λ=0.044). All to give a minimum U-value of 0.14W/m^{2}K.

Quilt insulation is to meet cavity wall insulation at eaves level but care should be taken to ensure insulation does not restrict eaves ventilation. Where required provide a proprietary ventilator to ensure that adequate ventilation is provided to the loft space.

To sloping ceilings provide and fix 100mm Kingspan Kooltherm insulation (λ=≤0.02) between existing rafters with a further 50mm Kingspan Kooltherm insulation board below. Care should be taken to ensure that a 50mm ventilated air gap is provided between insulation and the underside of the roof covering.

ROOF COVERING

To comprise of 13/3 Corrugated 0.7 Thick Polyester Paint Coated Sheet on 50 x 50mm treated softwood battens having sawn ends nailed with non ferrous nails through vapour permeable underlay in accordance with BS EN 13859-1, Klober or similar approved underlay. All joints both horizontally and vertically to overlap minimum 150mm in accordance with BS EN 5534:Part1:1990 and secured with clout nails. Provide underlay support tray at eaves/gutter to prevent ponding and UV damage to underlay.

Provide lead flashings to roof/wall abutments taken up wall min 150mm.

ROOF VENTILATION

Main roof area to be vented in strict accord with BS 5250.

Provide Klober roof ventilators or similar approved to provide the equivalent of 10mm continuous roof ventilation along eaves level together with fly proof screen or equivalent. Where roof pitches are 35˚ or greater or the roof span is greater than 10m provide in addition the equivalent of 5mm continuous roof ventilation at ridge level.

To sloping ceilings provide Klober roof ventilators or similar approved to provide the equivalent of 25mm continuous roof ventilation along eaves level and 5mm continuous roof ventilation along ridge level together with fly proof screen or equivalent.

Maintain 50mm min air gap over insulation and ceilings and provide 500 gauge visqueen vapour barrier between insulation and plasterboard.

WINDOWS/DOORS OPENINGS

To be sizes as indicated on drawings, weather stripped and beaded for double glazing with minimum 16mm argon filled gap to sealed units and incorporating low 'E' coated glass to give a minimum total/whole frame average minimum U-value of 1.6W/m^2K. All windows to be casement type which open in excess of 30 degrees.

All first floor habitable rooms are to have windows which allow for means of escape. They should have an unobstructed openable area of at least 0.33m^2. and have a minimum dimension of at least 450mm. The bottom of the openable area should be between 800mm and 1100mm above finished floor level. Where narrow module casement windows are specified, a flying mullion is to be provided so that the minimum unobstructed openable area can be achieved.

Sealant is to be provided to the front and back of frame/sill to prevent air leakage. Continuous ribbons of adhesive are to be used to fix the Dry lining around the perimeter of openings on external walls.

All doors (pedestrian and garage) are to be manufactured to a design that has been shown to meet the security requirements of British Standards publication PAS 24:2016.

Principle entrance to be fitted with door viewer unless clear galls or adjacent window provided view of callers. Principle entrance also to be fitted with door chain or door limiter. Letterplates where provided to have a maximum aperture of 260mm x 40mm and fitted with a flap to restrict access.

All ground floor windows are to be manufactured to a design that has been shown to meet the security requirements of British Standards publication PAS 24:2016.

GLAZING

Glazing within 1500mm of floor level to doors and sidelights and within 800mm of floor level for windows to be laminated or toughened to BS 6206 1981.

VENTILATION

All windows to be casement type which open in excess of 30 degrees. All window opening lights to exceed 1/20th room floor area for purge ventilation. Background ventilation to be provided in accordance with Table 1.7 of Approved Document F1 of the Building Regulations. Kitchen to have either 60 litres/second extractor fan, manual switched or ducted cooker hood giving 30 litre/second extraction. Bath/Shower/WC rooms to have opening window and 15 litres/second extractor manual switched or where no window, mechanical extractor wired to light switch with 15 minute overrun timer to give three air changes per hour. Utility to have opening window and 30 litres/second extractor manual switched or where no window, mechanical extractor wired to light switch with 15 minute overrun timer. All ducting within roof space to be insulated of twin wall construction or incorporate a condensation trap.

LINTELS

Masonry lintels to be Catnic or similar approved to BS 5977. Lintels to have minimum 150mm end bearing and to be installed in accordance with manufacturer's details and instructions.

Lintel schedule to be provided by manufacturer for review and to enable submission to Building Control body to be made.

Lintels to timber frame to be specified by Structural Engineer.

HEATING – GENERAL

Air Source Heat Pump, Daikin or similar approved system (size to be checked by heating engineer). Heat Pump to be fitted with HW +CH programmer together with Time and Temperature Zone Controls.

Heating system to be designed to have a flow temperature of less than 35°C.

Radiators to be steel panel type fitted with convectors by Stelrad or similar approved. Output from the central heating system controlled by Time and Temperature Zone Controls. Hot water cylinder (where provided) in airing cupboard to be factory insulated. Hot water pipes to be insulated with a material having a thermal conductivity of not greater than 0.45 w/mk in accordance with doc. L1:sec 1.

Underfloor heating to be provided to ground. Output from the central heating system controlled by Time and Temperature Zone Controls. Hot water cylinder (where provided) in airing cupboard to be factory insulated. Hot water pipes to be insulated with a material having a thermal conductivity of not greater than 0.45 w/mk.

All water pipes within roof space or other unheated areas to be similarly insulated.

HEARTH

The Hearth of the fire place should be built in accordance with 2.23-2.28 of Approved Document J of the Building Regulations.

NOTICE PLATES FOR HEARTHS AND FLUES

Provide and fix a notice plate in accordance with Diagram 16 of Approved Document J of the Building regulations. Notice plate is to be placed in an obvious location adjacent to the house consumer unit or water stopcock and is to be robust and indelibly marked. The notice plate is to include the following minimum information:

- location of the hearth, fireplace or appliance;
- category of the flue and the generic appliances that can safely be accommodated;
- the type and size of the flue including the manufacturers name.

CARBON MONOXIDE ALARMS

Carbon monoxide alarms should comply with BS EN 50291:2001, fixed wired mains powered with a sensor warning when the device fails. Carbon monoxide alarms should be located in the same room as the appliance(s), on the ceiling at least 300mm from any wall or, if located on a wall as high as possible (above all doors and windows) but not within 150mm of the ceiling, between 1m and 3m horizontally away from the appliance.

SMOKE AND HEAT DETECTORS

To be mains operated, self-contained to conform to BS 5839-6 2019 (with battery power backup) grade D2 category LD2 system. Smoke alarms should be interconnected so that they are triggered simultaneously in the event of a fire detected. Alarms should be permanently wired to a separate fused circuit at the distribution board. Wiring to conform to BS 7671. Smoke detectors to be sited min 300mm away from any light fitting central positions preferred, reachable for maintenance purposes. Away also from extreme temperatures and any condensated area – or cooking area. Alarms should be within 7m of doors which open out into rooms which have the potential for fire to start (Kitchens, Living Room, etc), and within 3m of bedroom doors, measured horizontally. Living Room to be provided with a smoke alarm and Kitchen to be provided with heat detector.

COLD/ HOT WATER SUPPLY

To all sinks, basins and baths provide a 'Wholesome Water' supply in accordance with the *Water Supply Regulations 2000* and Approved Document G of the Building Regulations.

All hot water installations are to comply with Approved Document G of the Building Regulations. Water temperature within the hot water distribution system is to be restricted to a maximum temperature of 60°C.

Hot water supplies to baths are to be provided with an in-line blending valve to BS EN 1111:1999 which restricts the maximum temperature of the water to 48°C.

WATER EFFICIENCY

All sanitary installations within each dwelling are to be sufficiently efficient so as to ensure that the maximum wholesome water consumption is 110 litres/ person/ day.

All WC's are to be dual flush type with a maximum full flush of 4 litres and a maximum partial flush of 3 litres. Baths are to be restricted to a maximum 140 litres capacity to overflow and all taps (except kitchen taps) are to have flow restrictors, restricting flow capacity to 5 litres/ minute.

The contractor is to provide an estimated water calculation based on '*Water Efficiency Calculator for New Dwellings'* outlining the wholesome water consumption within the dwelling per person, per day in accordance with the guidance outlined in Approved Document G of the Building Regulations. Calculation to be forwarded to the Building Control Department no later than 5 days after completion.

FOUL DRAINAGE

Internal waste pipes to be Osma or equal approved uPVC connected to the appliance in the approved manner with 75mm deep seal traps (anti-syphon traps at 3m + from outlet). Wastes to be: wash hand basin 32mm, shower 38mm, sinks and bath 40mm, WC 100mm dia. Soil and vent pipes to be 100mm dia terminating at tile vents or min 900mm above opening lights fitted with plastic balloon. S&VP's to have access plates at the base. Where floor drains are specified they are to be 100mm upturned bends. Basins, Sinks and Showers are to connect to floor drains/SVP's with sealed caps and appropriate reducers.

Underground drainage to be 100mm Osmadrain or equal approved with flexible joints to a fall of 1:80 on main runs (1:40 where runs serve sinks). Drains to be laid on a regulating bed of pea gravel in accordance with current Building Regulations and manufacturers recommendations. Trenches to be backfilled with selected backfill. Where drains pass through walls to be protected by reinforced concrete lintels cast over giving 50mm space around the pipe. Mask opening both sides with rigid sheet material to prevent entry of fill or vermin. Where pipes pass under the building bed as normal and continue to surround and backfill up to the underside of the dpm sand blinding level, all in accordance with manufacturer's recommendations. Where pipes are not under a drive/traffic area and have less than 600mm cover, concrete paving slabs should be used as bridging above

the pipes with 100mm of granular material between the top of the pipe and the underside of the slabs. Where pipes are under the drive/traffic area and have less than 900mm cover reinforced concrete bridging should be used instead of paving slabs.

Inspection chambers to be 'Osma' Universal in polypropylene having cast iron covers and frames. Chambers to be bedded in minimum 150mm pea gravel and 150mm concrete around top of shaft to provide bed for frame. IC's to traffic/parking areas to have Grade B covers and frames.

For full details of underground drainage system see separate engineering drawing.

SURFACE WATER DRAINAGE

Rainwater goods to be Osma Roundline or equal approved UPVC rainwater system comprising 125mm half round gutter with 75mm round downpipes including all brackets etc fitted all in accordance with manufacturer's instructions.

Gutter laid to a fall of 1:600. RWP's sealed to drain at ground level.

Colour – black.

For full details of underground surface water system see separate engineering drawing.

ELECTRICS

To be in accordance with BS 7671 and installation is to be carried out by an NICEIC approved contractor.

All electrical work required to meet the requirements of Approved Document P (Electrical Safety) must be designed, installed, inspected and tested by a person competent to do so. Prior to completion of the works the Local Authority must be satisfied that either-

a) an electrical installation certified issued under a competent persons scheme has been issued; or
b) an appropriate electrical installation certificate has been issued for the work, and that it has been signed by a person competent to do so.
c) Consumer units must be mounted so that switched are located between 1350mm and 1450mm above the floor level.

PHYSICAL INFRASTRCTURE FOR HIGH-SPEED ELECTRONIC COMMUNICATIONS NETWORKS

Provide and lay 50mm PVC duct including draw strings and appropriate plugs from the plot boundary access point to the network termination point within the dwelling to allow the future installation of either copper or fibre cable.

LIGHTING

Energy efficient light fittings to be installed to all rooms which only accept lamps having a luminous efficiency greater than 45 lumens per circuit watt.

External lighting system shall automatically extinguish when there is enough daylight, and when not required at night. Lamp sockets to have a luminous efficiency greater than 45 lumens per circuit watt.

PART M

Access for disabled to be by the principle entrance.

Principle entrance door to have a minimum 775mm clear width, with accessible threshold.

All doors on the ground floor to be 838mm to meet with Part M Building Regulations.

Wall mounted switches and socket outlets to be located at a height between 450mm & 1200mm from floor level.

Consumer Units to be located so that switches are located between 1350mm and 1450mm above floor level.

Corridor & passageway widths to comply with Table 1.1, of Approved Document M4 (1) of the Building Regulations.

The disabled access arrangement to the dwelling will be constructed in accordance with Part M of the Building Regulations.
M4 (1)
1.6 GENERAL GUIDANCE AND APPROACH USING A DRIVEWAY
1.7 RAMPED APPROACH
1.8 STEPPED APPROACH

When there is a drop of more than 600mm all flights, landings and ramps should be provided with guarding at the sides as per internal staircases.