

Main Heating
Bulk LPG individual combination boilers to each unit
Worcester Greenstar 25SI compact or similar (92.6% efficiency) to radiators

Water Heating
Direct from combination boiler

Ventilation
Natural ventilation with extract fans. Specific fan power not exceeding 0.29 w/l/s (e.g. Manrose Lowwatt)

Lighting - LED GU10 downlighters Minimum 90 lm/w with 95% output to fittings

Lighting Controls - Manual control with exception of WC, Photoelectric occupancy sensing (Auto On – Auto Off) to WC

All internal light switches / power point sockets to be a min - max height between 450mm and 1200mm heights

NOTE - All electrical fittings - types / positions / numbers etc to be agreed with client.

Mains operated self-contained, inter connected smoke alarms to BS5446, Part 1, located as indicated on drawings.

100% of artificial lighting within the dwelling to be low energy.

The contractor is to liaise with his domestic sub-contractor and allow for attendance upon M&E installation works.

New Path to perimeter to client requirements

Outline of foundations shown thus

Partitions to be 89x38mm vertical timbers at 600mm centers with head and sole plates and horizontal noggings at maximum 1200mm centre, infilled with Rockwool RW3 rock-fibre slabs, density 33 Kg/m3, covered with 12.5mm Duplex board

Allow for fixing noggings to timber frame to suit layout of kitchen units in accordance with client kitchen layout and timber frame layout

Suggested span of joists shown thus - to specialist timber frame design

All dimensions shown on drawings to face of blockwork or face of studwork where applicable.

Foundations below internal load bearing walls, timber frame manufacturer to confirm requirements prior to sub structure works

PS concrete lintel over drains passing through walls minimum 50mm space around pipe filled with compressible sealant to prevent gas entry and masked both side with rigid sheet material to prevent entry of vermin.

Partitions to be 89x38mm vertical timbers at 600mm centers with head and sole plates and horizontal noggings at maximum 1200mm centre, infilled with Rockwool RW3 rock-fibre slabs, density 33 Kg/m3, covered with 12.5mm Duplex board

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CAVITY WALL CONSTRUCTION

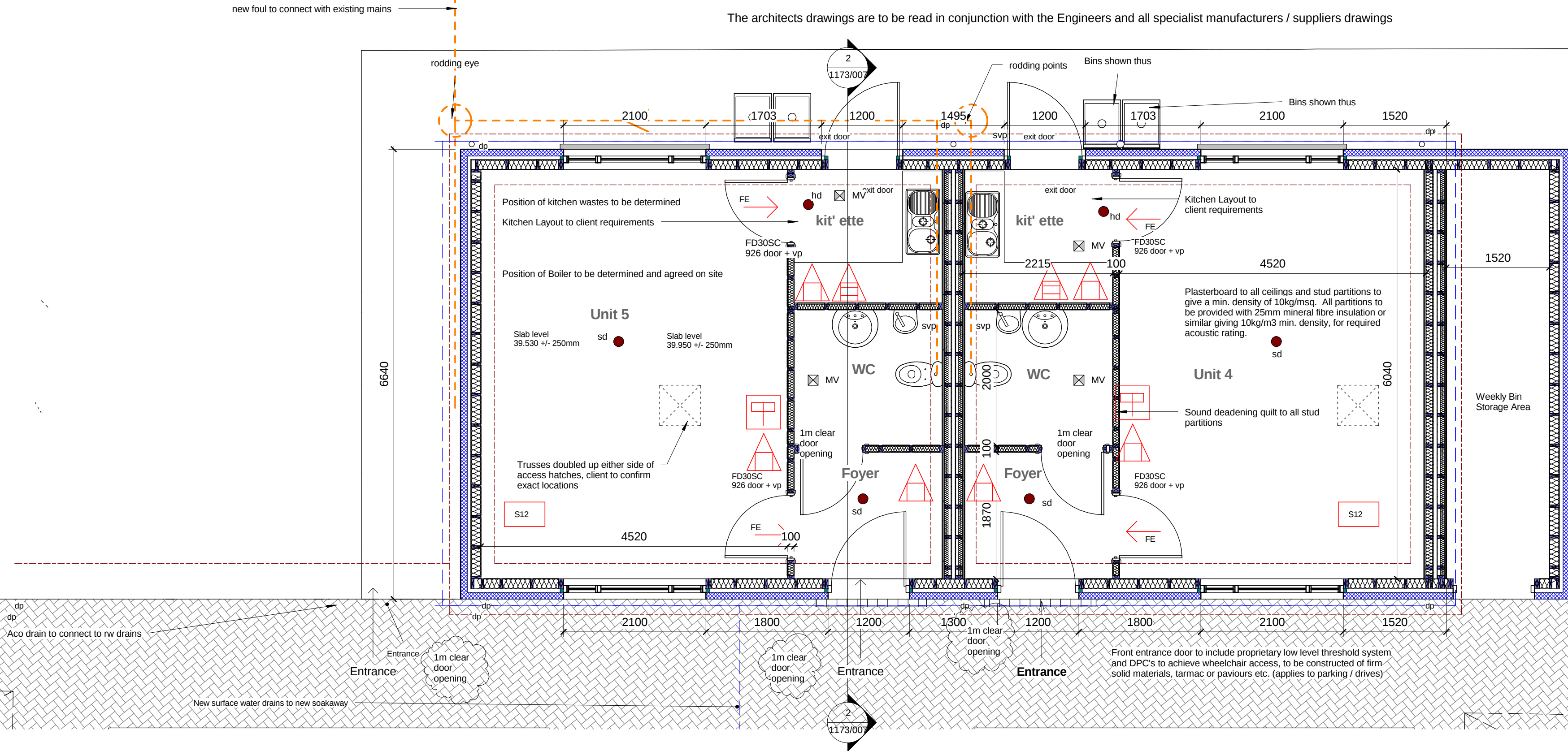
Cavity wall construction: Marley Eternit Cedral Cladding on battens on 100 mm dense concrete block outer skin, rendered and painted, 50 mm clear cavity breather paper over 9.5mm OSB on 38 x 140mm timbers at 400 centres as timber frame specialists specification. 140mm full fill Knauf Frame Therm 35 between studs, Superfoi 19+ multifoil internally with 25mm counterbattens, plasterboard, skimmed and decorated internally. (U-Value = 0.19W/m2K). Vents to top and bottom of block outer skin, vents below dpc level and at eaves and verge level with the equivalent of an open brick perpend every 1.5m (or brick vents). Avoid mortar blocking ventilation. Make certain vents are placed so they are protected from ingress of rain or are below the lowest timber.

Catnic/G insulated lintels, or similar approved, include flexible dpc tray over with turned up ends, to all openings in cavity walls/conc lintols. All lintels to be prepared by lintel manufacturer. 150 mm min end bearing both ends

Front entrance door to include proprietary low level threshold system and DPC's to achieve wheelchair access, to be constructed of firm solid materials, tarmac or pavours etc. (applies to parking / drives)

Units 4-6 Floor Plan

1 : 50



New Surface water drains to connect to new soakaways to be min 1m3 and to be min 4.5m away from any structure

New foul drains to connect with existing mains, exact location of existing drains to be determined on site

110mm diameter Upvc and soil and vent pipe in accessible duct, (including sound deadening quilt) connected to roof vent via 100mm diameter flexible pipe through roof void, or air admittance valve in vented box at high level.

New foul drains to connect to existing main system

Trenches for drains not to be excavated deeper than the foundations of the building.

Drains shallower than the above depths to be bridged by concrete paving slabs or RC as appropriate with minimum 75mm pea shingle above top of pipe.

110mm Upvc foul / surface water drains laid in pea shingle to min. 1:40 fall. Min. depth - 900mm under drive, 600mm under garden.

Inspection chambers over 900mm in depth to be constructed in engineering brick, 450 x 600mm, with concrete benching, haunching and Upvc channels, and single sealed cover and frame.

All gullies to be roddable, Upvc bottle gullies. Roddable back inlet gullies where indicated bedded in concrete.

PS concrete lintel over drains passing through walls minimum 50mm space around pipe filled with compressible sealant to prevent gas entry and masked both side with rigid sheet material to prevent entry of vermin.

Accessible plasterboard ducting on swd framing to all soil and vent pipes. All wastes to be boxed out. Low level boxing to all wastes or run behind units where possible. All S&VP to terminate at slate/ridge vents, including ducting through roof voids. Incl. mineral wool insulation quilt between stud framing for improved sound reduction.

low level boxing to all new wastes on all floors

All windows to be upvc double glazed, weather stripped, with trickle vents and friction hinges/ironmongery. Opening lights indicated on elevations.

Opening lights to all rooms to provide total ventilation area of min 5% (refer to elevations for opening lights).

Double glazed argon filled PVC units assumed - minimum C rated, min U value 1.5

Glazing to windows below 800mm measured from the highest adjacent ground/floor level to be toughened or laminated glass in order to ascertain compliance with this part of the regulations. Glazed doors to be double glazed, laminated glass.

precast concrete cill on DPC's where applicable to all windows.

Cavities at door/window openings to be closed by cavity barriers with dpc's

Cavities at door/window openings to be closed by 100 mm dense block, with horizontal & vertical dpc's insulation backed or proprietary cavities ins. closers (clients preference). Dpc to project min 25 mm beyond cavity closer.

Windows to habitable rooms to generally achieve minimum requirements for emergency egress through windows in case of fire. Minimum unobstructed opening area of 0.32m sq and at least 450mm wide x 450mm high with cill heights no greater than 1100mm above finished floor levels.

Accredited Details

The appropriate adherence to Accredited Details has been assumed for calculation of thermal bridging. Signed detail sheets to be provided to Building Control confirming compliance. See Appendix in construction notes

Design Target - 4.0 m3/h.m2 (at 50Pa). Air pressure test to be carried out.

Legend

Dry Powder Type Extinguisher

Fire Blanket

Fire Alarm Call Point

Smoke Detection

Heat Detection

Final Exit

Detection Alarm System: An electrically operated fire alarm system should comply with BS 5839-1:2002 Fire detection and alarm systems' system design, installation commissioning and maintenance. System to be installed must be L1 - system installed throughout the building specialists.

Common areas to be fitted with Fire Exit signage and emergency lighting to comply with BS 5266 Part 1 2005. Fire exit signs to be fitted in accordance with AD B, BS 5588 and BS 5449 Part 1 1990. Positions of luminaries and exit signs to be confirmed on site.

Cavity Barriers will be provided between the units at the separating/external wall intersections using rockwool quilt or similar approved. Where pipe work and other services pass through the walls/floors these will be sealed using an instacoustic sealant and finished with an intumescent collar.

doors on escape routes should only be fitted with simple fastenings that can be readily operated from the side approached by people making an escape. The operation of these fastenings should be readily apparent; without the use of a key and without having to manipulate more than one mechanism. This is not intended to prevent doors being fitted with hardware to allow them to be locked when the rooms are empty. All locking devices to comply with Section 5 of the building Regulations and the Code of Practice: Hardware for Fire and Escape Doors, guidance is also available in Hardware for fire and escape doors published by the Builders Hardware Industry Federation and Guild of Architectural Ironmongers

SMOKE ALARMS Smoke alarms to comply with BS5446 : Part 1 : 1990. Alarms located in circulation spaces within 7.0m of door. Ceiling mounted alarms positioned min. 300mm from any wall or light fitting, wall mounted alarms to be not less than 150mm and not more than 300mm below the ceiling. All alarms min. to be min. 300mm from and not directly above a heater. Alarms to be mounted on surfaces normally at the ambient temperature of the room. Alarms permanently wired to a circuit which is electrically protected at consumer unit and to which no other equipment is connected other than a regularly used lighting unit. Alarms interconnected so that detection of fire by any one alarm operates the alarm signal in all of them. All alarms fitted with a battery backup.

Emergency lighting designed installed and commissioned to internal and external areas to BS5266-1:2005

All plastering is to be finished level and true.

The contractor is to include for all expantment plaster beads to corners.

Tiles to client's requirements.Grout all joints with waterproof grout and seal to sanitary fittings with flexible joint sealant/silicone.

Clean down walls to a height agreed with client to all bathrooms, ready to receive ceramic wall tiling, to client requirements

Carry out all preparation works before commencement of decoration works.

Prepare and paint plastered ceilings with two coats of matt vinyl emulsion paint. Apply one mist coat to newly plastered surfaces.

Prepare and paint plastered walls with two coats of matt vinyl emulsion paint. Apply one mist sealer coat to newly plastered surfaces. Colour to owner's choice.

Prepare, prime and paint all joinery with two undercoats and one finishing coat gloss paint.

It is the Plumbing Contractors responsibility to ensure that the system as installed will give adequate hot water.

15mm and 22mm Hence / copper plastic pipe hot and cold distribution to all fittings to be BS2671, with isolating valves at each terminal.

All pipes in cold zones to be lagged with 25mm polythene foam, properly fitted and secured.

All hot water to be run off solar panel hot water cylinder, to be designed by specialist, Heating to be via electric heaters

Waste sizes - WC - 100mm, Wm - 40mm, sink - 40mm, WHB - 32mm. All fittings to have 75mm deep seal trap.

Hot and cold water risers brought up/down in ducts/cupboards where possible, i.e. to be concealed.

Accessible plasterboard ducting on swd framing to all soil and vent pipes. All wastes to be boxed out. Low level boxing to all wastes or run behind units where possible. All S&VP to terminate at slate/ridge vents, including ducting through roof voids. Incl. mineral wool insulation quilt between stud framing for improved sound reduction.

All new waste pipes to all new fittings internally within the new extension to run behind units/in low level accessible boxing or within floor zone as necessary. Layouts shown on drawings are indicative only (exact layout to be agreed on site).

Soil pipe vented to air at high level via flexible ducting to ridge vents or slate vents.

Overflows to WC cisterns to discharge through walls to outside.

Provide and install new sanitary fittings as per clients choice. All to include new waste and supply pipework etc.

All pipework to be in accessible ducts to WWA requirements, earthed and bonded in accordance with current IEE regulations.

All roof Bracing to be carried out to engineers details

New roof structure to be Prefabricated manufacturers specification/design - conditional approval

Supply and lay breather felt, or similar approved over roof structure, lapped at not less than 100mm horizontally and 100mm vertically, carried well into gutters and secured with clout nails. Ensure no troughs are formed.

Provide and lay to loft space,

100mm glassfibre wool quilt between ceiling joists and 300mm over joists overlaid, 12.5mm plasterboard (0.10W/m2K).

Raking ceilings to have minimum 150mm rafters size with with 100mm celotex and 50mm air gap and Kib Airflex below with counter battens and air space, foil backed plasterboard, skimmed and decorated (U-value = 0.16W/m2K), maintain 50mm min air space over insulation for permanent ventilation of roof space.

Provide Glidevale FV fascia ventilators to be used in conjunction with RV rafter ventilators to give 25mm clear opening at eaves. Ridge vents to give 5mm clear opening to ensure satisfactory ventilation to all roof spaces. Where it is impractical to fit fascia ventilators the use of slate vents may be appropriate.

Catnic insulated lintels, or similar approved, include flexible dpc tray over with turned up ends, to all openings in cavity walls. 150 mm min end bearing both ends.

New meter box in a position to be agreed on site

Partitions to be 89x38mm vertical timbers at 600mm centers with head and sole plates and horizontal noggings at maximum 1200mm centre, infilled with Rockwool RW3 rock-fibre slabs, density 33 Kg/m3, covered with 12.5mm Duplex board

S.S. wall ties at 750mm horizontal and 450mm vertical centres and at every course around openings.

Precast concrete cill on DPC's where applicable to all windows.

Lean mix concrete cavity fill

Backfill foundation trenches with compacted hardcore.

New cavity construction below ground to consist of 100mm block inner skin, 50mm cavity and 150mm block inner skin

Form concrete foundations in GEN1 mix to dimensions shown on drawings and at depths approved by Local Authority. Where bad ground is met with under foundations this is to be excavated and to be filled in with concrete as described above, properly levelled on top to receive structural concrete.

Excavate to reduce levels, provide and lay 200mm of well compacted hardcore, blind with sand + cover with 1200g polythene dpm turned up at edges and lay 100mm Celotex, 100mm GEN1 concrete, and finish with 65mm self levelling screed to achieve 0.16 W/m2K - No Radon Protection

DPC minimum 150mm above external ground level (stepped as necessary) and to lap with DPM barrier etc.

Finishing Schedule
Roof Covering - box profile sheeting - colour grey
Fascias/Bargeboards - anthracite
Rainwater goods - Half round light grey
Walls marley eternit cedral C15 Dark Grey
Plinth - Stafford blue engineering brick 450mm above fl
Windows/Doors - White upvc
Cills - white plastic
Road - Tarmac with brick pavements to car parking areas
c/cv camerson on each corner
Bin compound - Timber fence perimeter

Box profile capping ridge to have 5mm continuous vent.

Box profile roof sheeting, colour grey

Lateral restraint to gables by 30 x 5 x 150 x 1200 mm long galvanised ms straps at 2000 mm max centres at ceiling line and verge line, include s/w nogging (min half depth of joist) between rafters/posts for fixing. Straps to extend over min 3 No rafters/joists. Packer between after/joist and wall to ensure tight contact.

New trussed roof construction - trusses at 400mm c/c. NOTE: TRUSS MANUFACTURERS TO MEASURE EXACT REQUIREMENTS ON SITE FOR EXACT ACCURACY, AND NOT TO MEASURE OFF-DRAWING, including all required diagonal and longitudinal roof bracing. All trusses secured by truss clips to 100 x 50mm swd imp wall plate held down by 30 x 5 x 100 x 1000 long galv. m.s. straps at 1500mm c/c.

Secure new 100 x 50mm IMP SWD SC3 grade wall plates to new cavity walls using 30 x 5 x 100 x 1000mm long galv' MS straps at 1500mm centres. Cavities closed at eaves by block on flat and at verge by 12.5mm eternit slate.

12.5mm moisture resistant plasterboard to all wet rooms, i.e. bathroom etc. and sloping ceilings

UPVC anthracite fascias /soffits. Provide 25 mm continuous soffit ventilation and insulation stops ABD

Upvc r/wgs half round light grey

Allow for forming holes in cavity wall/roof, for extract ventilators, provide sleeves where passing through walls.

CAVITY WALL CONSTRUCTION

Cavity wall construction: Marley Eternit Cedral Cladding on battens on 100 mm dense concrete block outer skin, rendered and painted, 50 mm clear cavity breather paper over 9.5mm OSB on 38 x 140mm timbers at 400 centres as timber frame specialists specification. 140mm full fill Knauf Frame Therm 35 between studs, Superfoi 19+ multifoil internally with 25mm counterbattens, plasterboard, skimmed and decorated internally. (U-Value = 0.19W/m2K). Vents to top and bottom of block outer skin, vents below dpc level and at eaves and verge level with the equivalent of an open brick perpend every 1.5m (or brick vents). Avoid mortar blocking ventilation. Make certain vents are placed so they are protected from ingress of rain or are below the lowest timber.

Walls clad with Walls marley eternit cedral C15 Dark Grey

Backfill to all foundation trenches with compacted hardcore/clean broken stone. All backfilling to trenches to be well compacted in 200mm thick layers and free draining.

Upvc windows and doors

Windows to meet BS7950 and lockable unless designed as fire escape (cert to be provided)

Doors to meet PAS24

Accredited Details

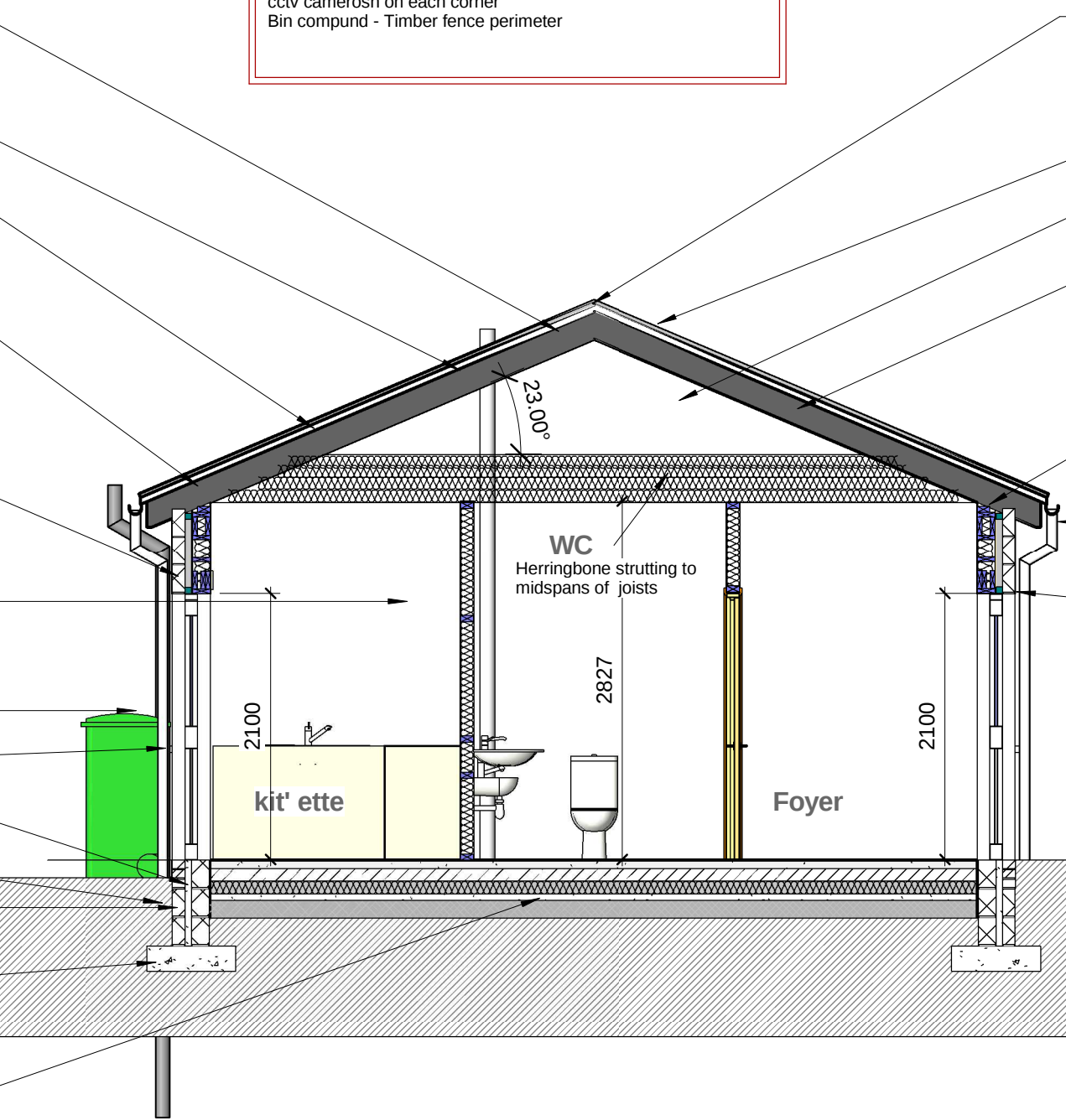
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Air Permeability

Design air permeability of 4.00 m3/h.m2 (at 50Pa) - an air tightness test will be required

Section B - B

1 : 50



0 0.5 1 1.5 2.0m 1:50

A1

1173/ 007

B

Scale 1:50

Date June 2010

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Drawing Number

Revision

Scale

Date

1173/ 007

B

Scale 1:50

Date June 2010

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Code Assessor for Sustainable Homes Licence Number GMWD-GW23

Proposed Shop Floor Plans

Proposed Units for Start Up Business at
Withybush Trading Estate, Haverfordwest
Pembrokeshire, SA62 4BS

Design & Build