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**Drainage**  
100mm dia. pvc-u svp's to 100dia below ground drainage (minimum gradient 1:80) to new i.c.s with FACTA Class A cover. All to existing mains sewerage via a 1200dia precast concrete manhole with built in steps to BS 5911 with 600 dia cover approx. 1700mm to invert (after site is leveled) sweep in 100mm dia UPVC pipes BSEN 1401 (UD) and test all new below ground drainage in accordance with BS 8000 Part 14 or BS EN 1610

S.v.p to terminate a minimum of 900mm above any opening into the building within 3000mm and to be fitted with proprietary cage or perforated cover.

**Rainwater downpipe as**  
Black cast iron effect guttering down pipes and minimum 125 gutter to fall to min. 63 indicated on drawing via new trapped gullies to new soakaway's soakaway system.

**Sustainable Drainage**  
Surface water runoff generated from the roof mass is to be disposed using a 3m x 2m x 1m deep geocellular grate soakaway for all storm events upto and including the 1 in 100 year event plus 40% allowance for climate change.

Soakaway design is based on an infiltration rate of 1.0 x 10<sup>-3</sup> m/s

**Pitch Roofs** 103m<sup>2</sup>/sq

Place and compact a 100mm thick bedding layer of either coarse sand of Class 6H selected granular material (with 100% passing through the 5mm sieve), in accordance with Manual of Contract Documents for Highway Works (MCHW), Volume 1, Series 600. Install the permeable geotextile, forming joints in accordance with the manufacturer's recommendations, making an allowance for the connecting pipework or adapters. Ensure units are arranged so that they are in the correct alignment with the adjoining pipework. Poly clips connect horizontally adjacent units while vertical connections are formed with Polypipe shear connector.

Polystorm units may be laid a 90 deg overlap with shear connectors being placed in the aligned corner of units. 160mm EN 1401-1 pipes connect directly into knock-out incorporated in the end of each cell. Connect to 110mm EN 1401-1 pipes or other products through the use of standard Polypipe adapters.

Complete the geosynthetic encapsulation of the entire Polystorm structure, using the same materials in the bedding layer, forming joints where appropriate. Re-examine the geotextile for damage and joint integrity.

Backfill around the sides of the encapsulated units, forming a 100mm thick layer of coarse sand or Class 6H selected granular material immediately adjacent to the units as appropriate. Where required, remaining excavated areas around these units should be backfilled with Class 6H selected granular material (with 100% passing the 5mm sieve), in accordance with MCHW, Volume 1, Series 600.

**Part M**  
Provide level wheel chair access from parking space within the boundary of the property with adequate maneuvering space into dwellings via ramped access (max 1:20) and level threshold as detailed on drawings. At no point should the access be less than 900mm.

wc to be provided on entrance storey within bathroom compliant with Part M4 of 2016 edition of Part M of the Building Regulations as amended 2016.

All electrical outlets, telephone points, tv points and light switches to be located between 450mm and 1200mm from finished floor level.

**Part K**  
Guarding on landing minimum of 900mm high and able to resist 1.5 kN/m<sup>2</sup> force as given in BS EN 1991-1-1, with a handrail complying with Diagram 1.13 of K1 of the Building Regulations and between 900mm and 1100mm high measured from the pitch line of the stairs ensuring that a 100mm sphere cannot pass through any opening. Ensuring at least 2 meters clearance measured from the pitch line to the underside of the ceiling.

**Cavity Walls**  
Outer leaf of 102mm brick and inner leaf of Celcon Standard or equiv. (λ=0.15W/mK with 10mm joints) with 100mm full fill cavity filled Dritherm 32. Finish internally with 3mm skim coated 12.5mm plaster board on dabs.

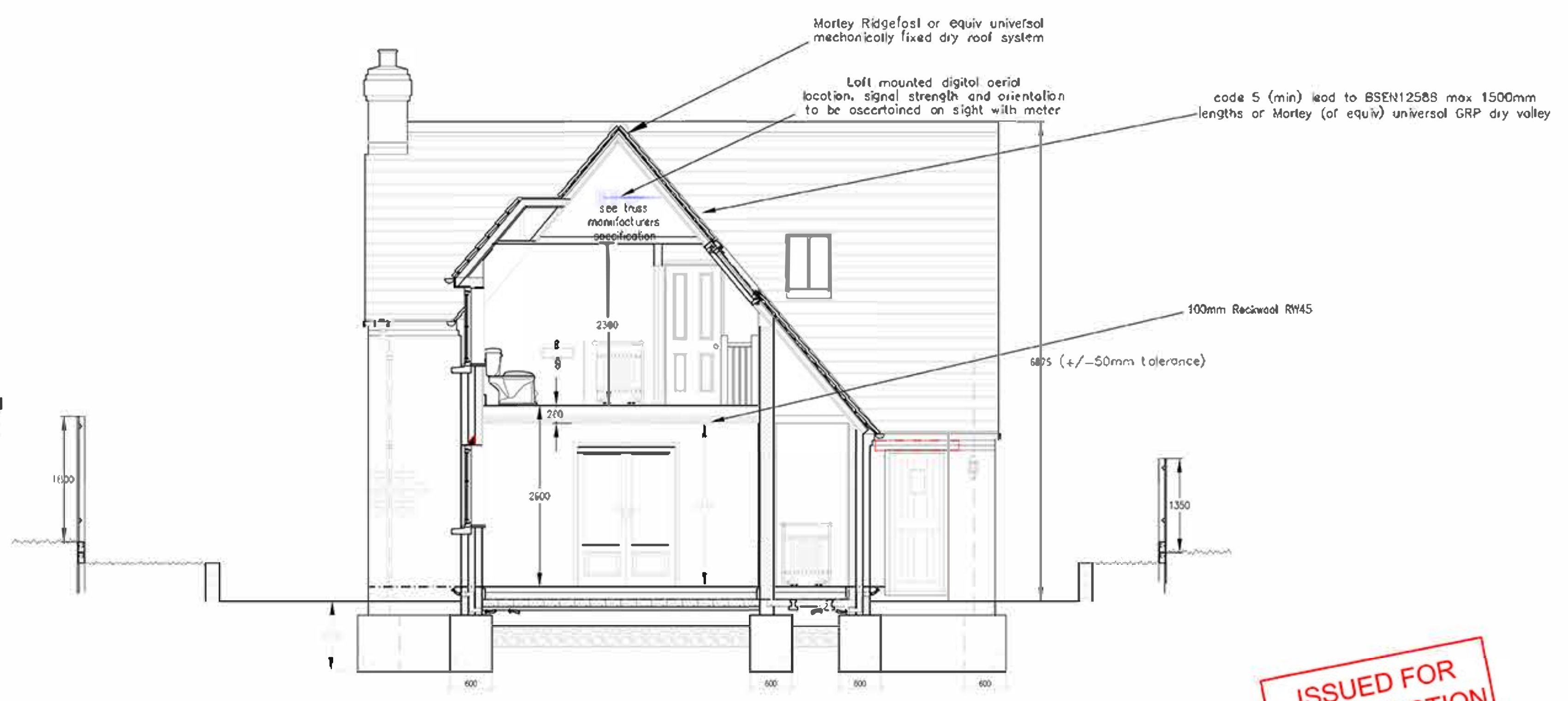
U = 2.4 W/m<sup>2</sup>K

**Ground Floor**  
Beam and block floor infilled with standard concrete blocks. Lay continuous D.P.C under beams. Void depth under floor minimum of 225mm cross ventilated on two opposing sides. Grout upper surface of beam and block with 4:1 sharp sand/cement mixture and install 1200 gauge (300mm) polythene dpm over tied down into dpc and lapped with existing dpm. Insulate with 100mm Kingspan Kooltherm K103 over dpm and perimeter insulation. Install underfloor heating (except under kitchen units) and finish with 75mm concrete screed.

P = 36m  
A = 61m<sup>2</sup>/sq

P/A = 0.60

U = 0.15 (Kingspan figures)



ISSUED FOR CONSTRUCTION 02/01/20

**Roof**  
Insulate pitched ceilings between rafters with 100mm Kingspan Kooltherm K7 (full fill) and under rafters with 62.5mm Kooltherm 18 insulated dry-lining board with 3mm skim plaster finish.

U = 0.15 W/m<sup>2</sup>K\* (Kingspan Figures based on 600 crs)

\* based on 100mm rafter depth. 125 rafters full fill with 52.5mm Kooltherm 18 insulated dry-lining board with 3mm skim plaster finish.

U = 0.14 W/m<sup>2</sup>K (Kingspan Figures based on 600 crs) (both must be full fill otherwise condensation becomes a consideration)

**Alternative**  
100mm Celotex GA400 between rafter with 50mm cavity above and 70mm GA400 beneath rafters

U = 0.14 W/m<sup>2</sup>K\* (Celotex Figures based on 600 crs)

**Windows**  
U = 1.2 W/m<sup>2</sup>K (whole unit not center pane) double-glazed high performance glass. Supplier to provide certificate of compliance.

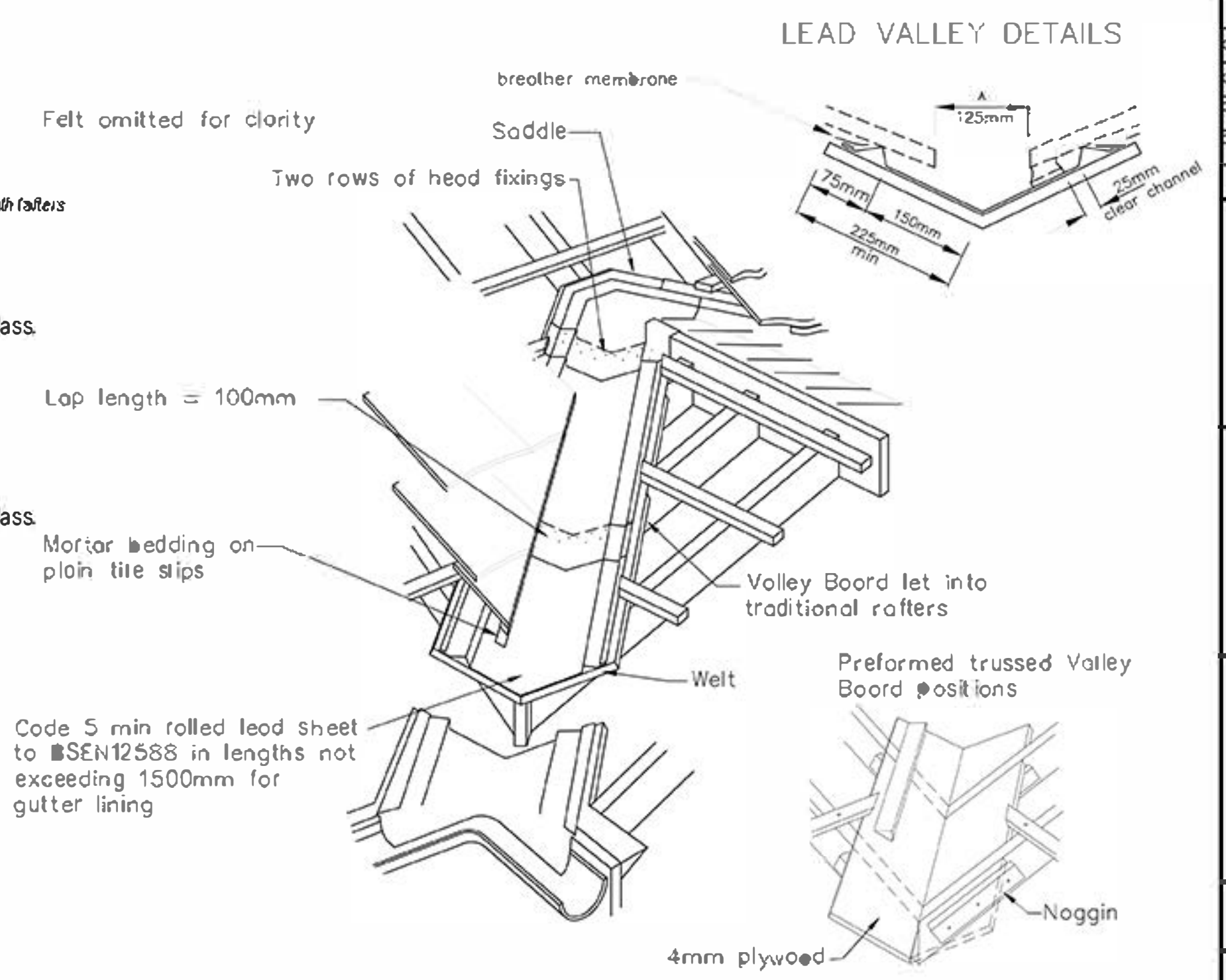
**Doors**  
U = 1 W/m<sup>2</sup>K Supplier to provide certificate of compliance.

**Roof Window**  
U = 1.3 W/m<sup>2</sup>K (whole unit not center pane) double-glazed high performance glass. Supplier to provide certificate of compliance.

**Part G**  
Regulation 37 less than 125 liters/person/day using fittings approach  
WC = Maximum 6/4 Liters dual flush or 4.5 Liters single flush  
Shower = Maximum 10 Liters /minute  
Bath = Maximum 185 Liters  
Basin Taps = Maximum 6 Liters /minute  
Sink Taps = Maximum 8 Liters /minute  
Dish washer = Maximum 1.25 Liters /place setting  
Washing Machine = Maximum 8.17 Liters /K logram

**Air Permeability**  
maximum = 5m<sup>3</sup>/hm<sup>2</sup> max.

**Lighting**  
100% LED



REV	DATE	DESCRIPTION
CD38 YEW 04d	15/10/2019	update floor insulation
CD38 YEW 05d	03/10/2019	amend rear door
CD38 YEW 05b	01/10/2019	amend bathroom section
CD38 YEW 05a	23/05/2018	amend bathroom and use of dining room window



DESCRIPTION

DATE: 22/09/2019  
SCALE: 1/50 @A1  
DRAWN: A. Davis  
CHECKED:   
DATE: 22/09/2019

CD38 YEW 05d