Plans for Loft Conversion

- 201 Crich Common,
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  Belper,
  Derbyshire,
  DE56 2FL

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1. Current Roof Space Layout

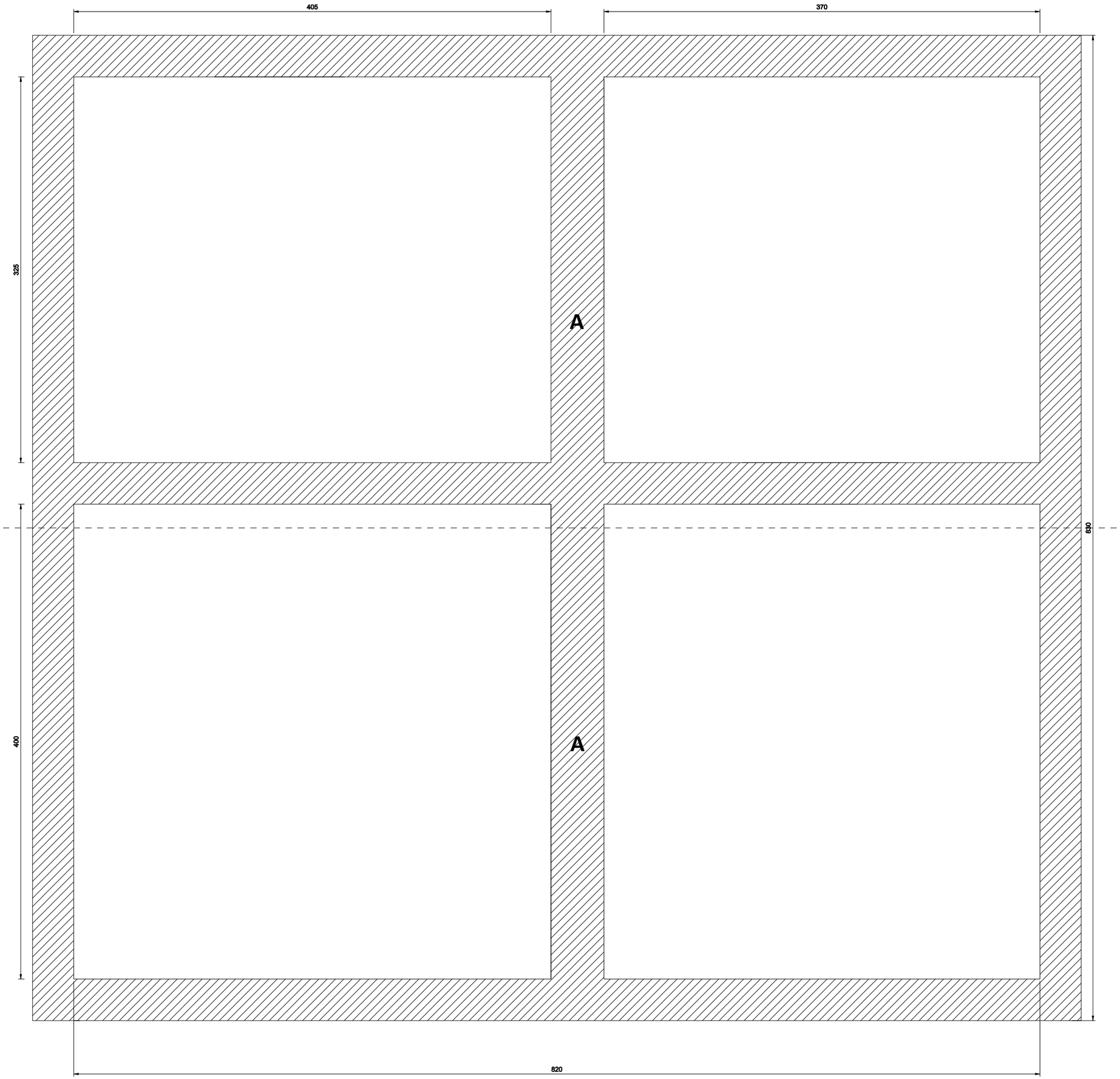
This drawing shows the current dimensions of the loft space.

The internal walls finish at ceiling height and support the ceiling joists for the 1st floor, except for wall 'A' which continues to 1000mm in height.

The dotted line shows the centre line of house and the apex of the roof.

Walls are constructed of solid stone.

Dimensions in CM.



2. Current 1st Floor Layout

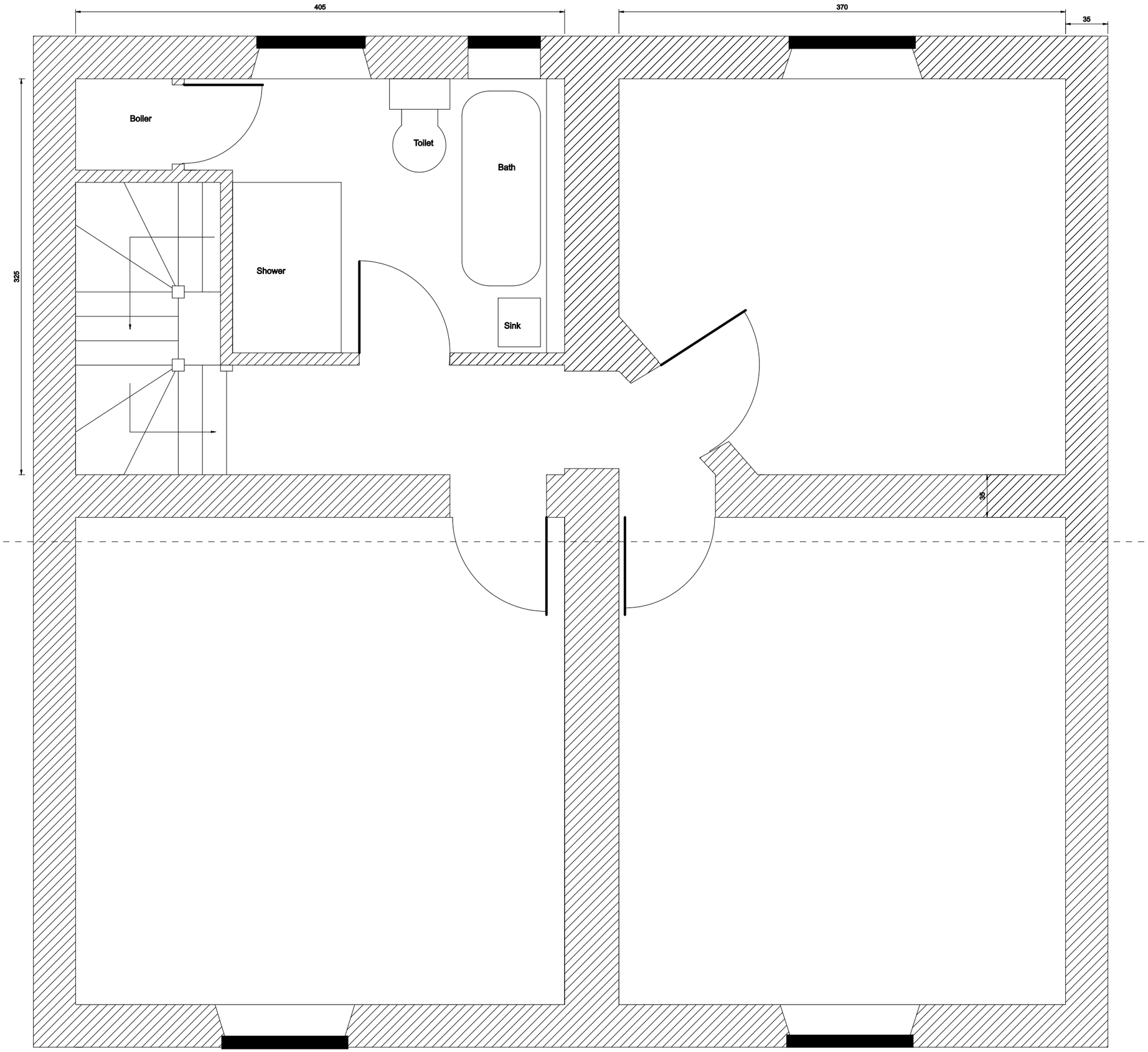
This drawing shows the current 1st floor.

The dotted line shows centre of house and apex.

Currently the bathroom has a shower, bath, toilet and basin. The airing cupboard houses the boiler.

The walls for the bathroom are 3x2 studwork walls.

Dimensions in CM.



3. Proposed 1st Floor Layout

This drawing shows the proposed first floor layout.

The Bathroom wall will be moved to make a new landing area with sash window.

The new bathroom will be 1400mm wide to fit 1400 x 700mm bath or walk-in shower enclosure. There will also be a toilet and basin unit. Current waste pipes will be used as they run parallel to the joists..

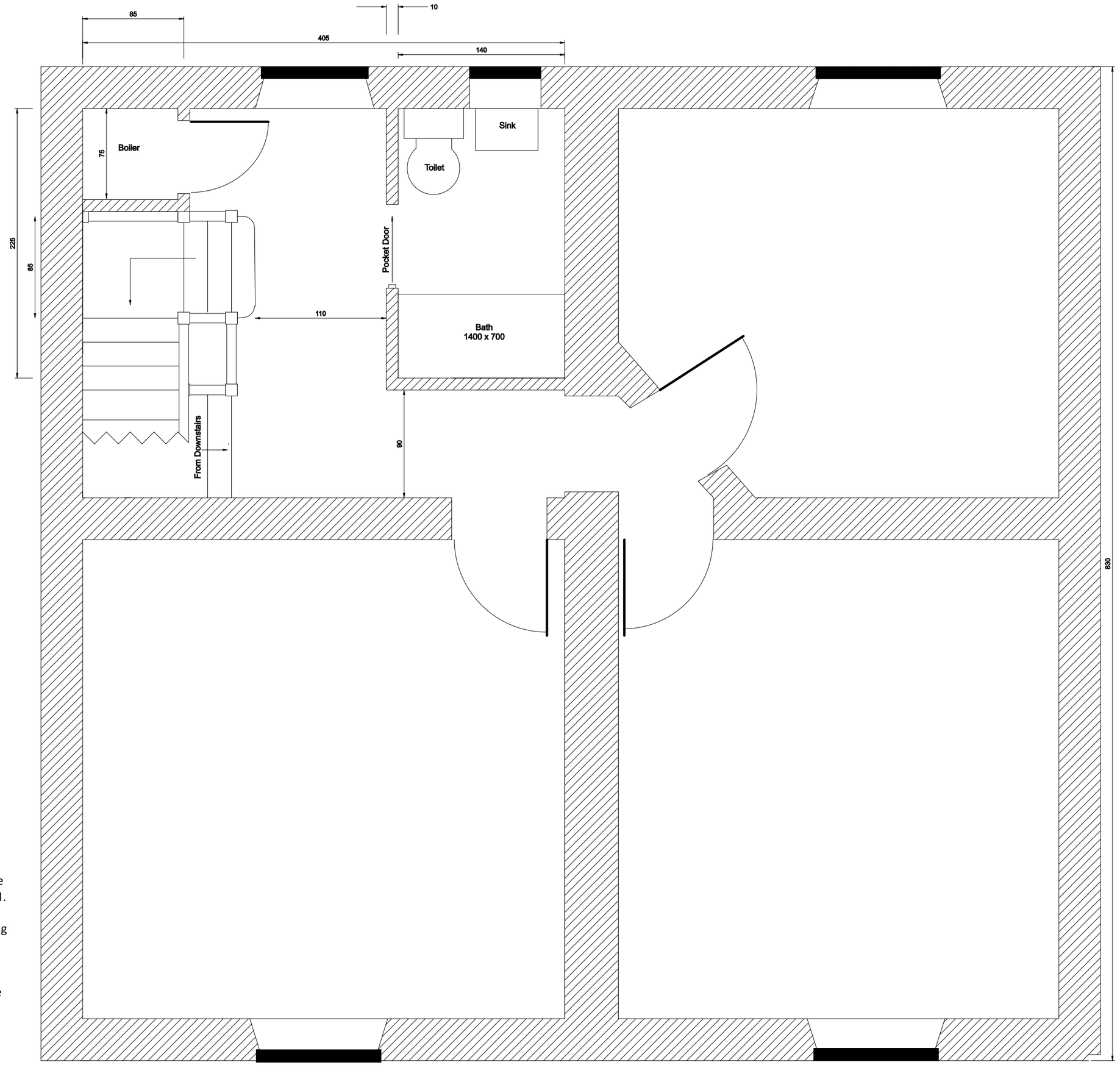
The new bathroom walls will be constructed using 3x2" CLS timber with 100mm Rockwool insulation and 15mm plasterboard.

A Pocket door will be installed in the new bathroom wall to increase space.

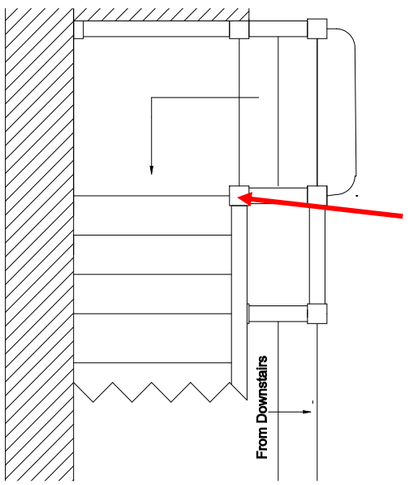
The stairs to the 2nd floor will be directly above the current staircase and of similar design. The distance between balustrade and bathroom will be 1250mm. The distance from the bottom bullnose step will be 110mm.

The boiler/airing cupboard will remain in place.

Dimensions in CM.



Stair detail



This newel post will start on the ground floor and support the turn for both staircases.

The other sides of the stair case will be attached to the wall.

The Top step landing will be situated above the internal stone wall for extra support. This can be seen in drawing 4.

4. Proposed 2nd Floor Layout

This drawing shows the proposed layout for the second floor and position of windows, walls and doors.

The height from the floor to highest point will be 2700mm.

The master bedroom will be 6000mm x 3700mm plus 800mm storage on each sloping side.

Fire door to be installed between landing and master bedroom.

2x VELUX GGU MK06 0070 White PU Laminated Centre Pivot Roof Window 78x118cm shown with dashed lines on front and rear elevation.

Bathroom

Bathroom to be 2900 x 4050mm plus 800mm storage.

Waste pipes from bathroom to run under floor, parallel to joists, into airing cupboard and join the main waste pipe at the rear of the property.

Toilet to be plumbed in using a macerator with 22mm waste pipe fitted parallel to floor joists and connecting to main soil pipe at the rear of the house.

1x VELUX GGU MK06 0070 White PU Laminated Centre Pivot Roof Window 78x118cm shown with dashed lines.

Fire door to be installed.

Landing

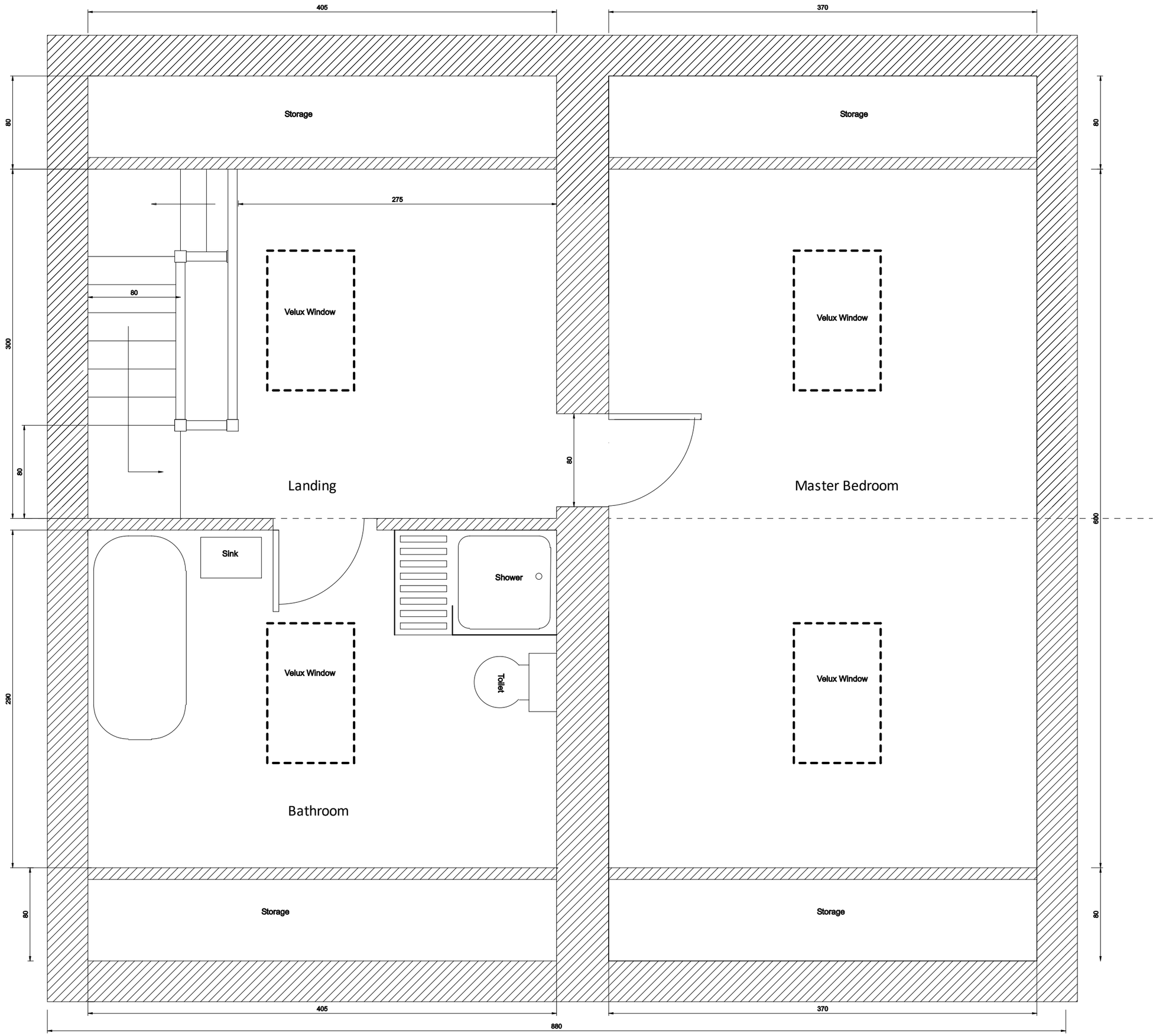
Landing to be 2750 x 3000mm plus 800mm storage.

Staircase to exit after turn near the centre of the property to maximise headroom.

Fire doors lead to bedroom and bathroom.

1x VELUX GGU MK06 0070 White PU Laminated Centre Pivot Roof Window 78x118cm shown with dashed lines.

The dividing wall between the mater bedroom and landing/bathroom is of solid stone construction and 1000mm in height at present. Studwork wall will be built on top of this wall up to the ceiling and insulated to maintain the character of the property.



5. Proposed 2nd Floor Layout Joists

This drawing shows the position of new floor joists.

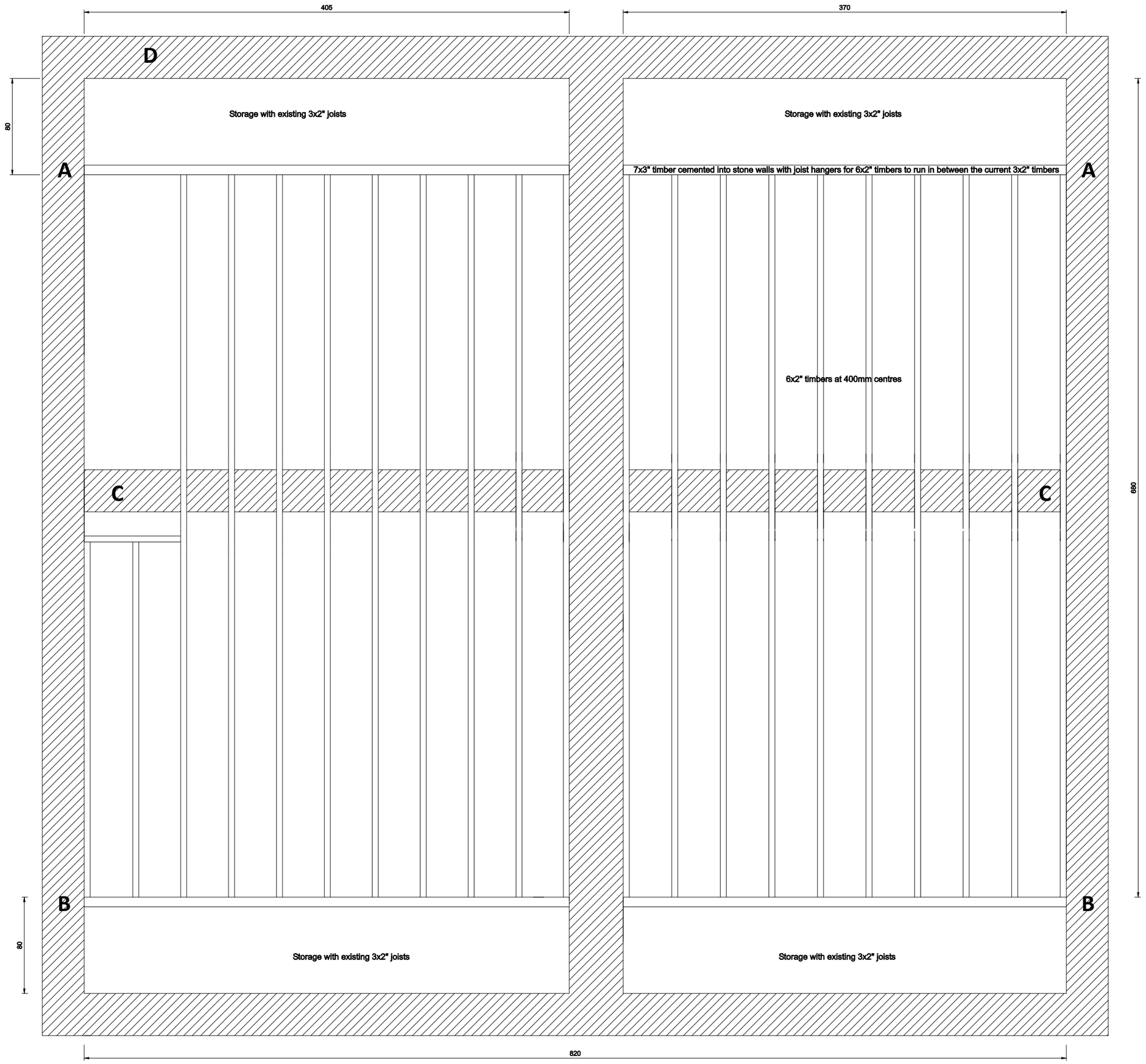
7x3" timbers will be installed into the walls at points A and B on drawing.

From these timbers, 6x2" joists will be attached using joist hangers to form the new floor joists. (These will fit parallel to current ceiling joists which are 3x2").

These 6x2" joists will be fixed at 400mm centres.

These joists will be supported by the internal stone wall. (Point C on drawing)

Plumbing pipes for bathroom will be fitted parallel to these joists and exit the building at point D which is where the main soil pipe for the property is located.



6. Proposed Master Bedroom Section

This drawing shows a sectional view of the master bedroom. Roof height to be 2700mm at apex.

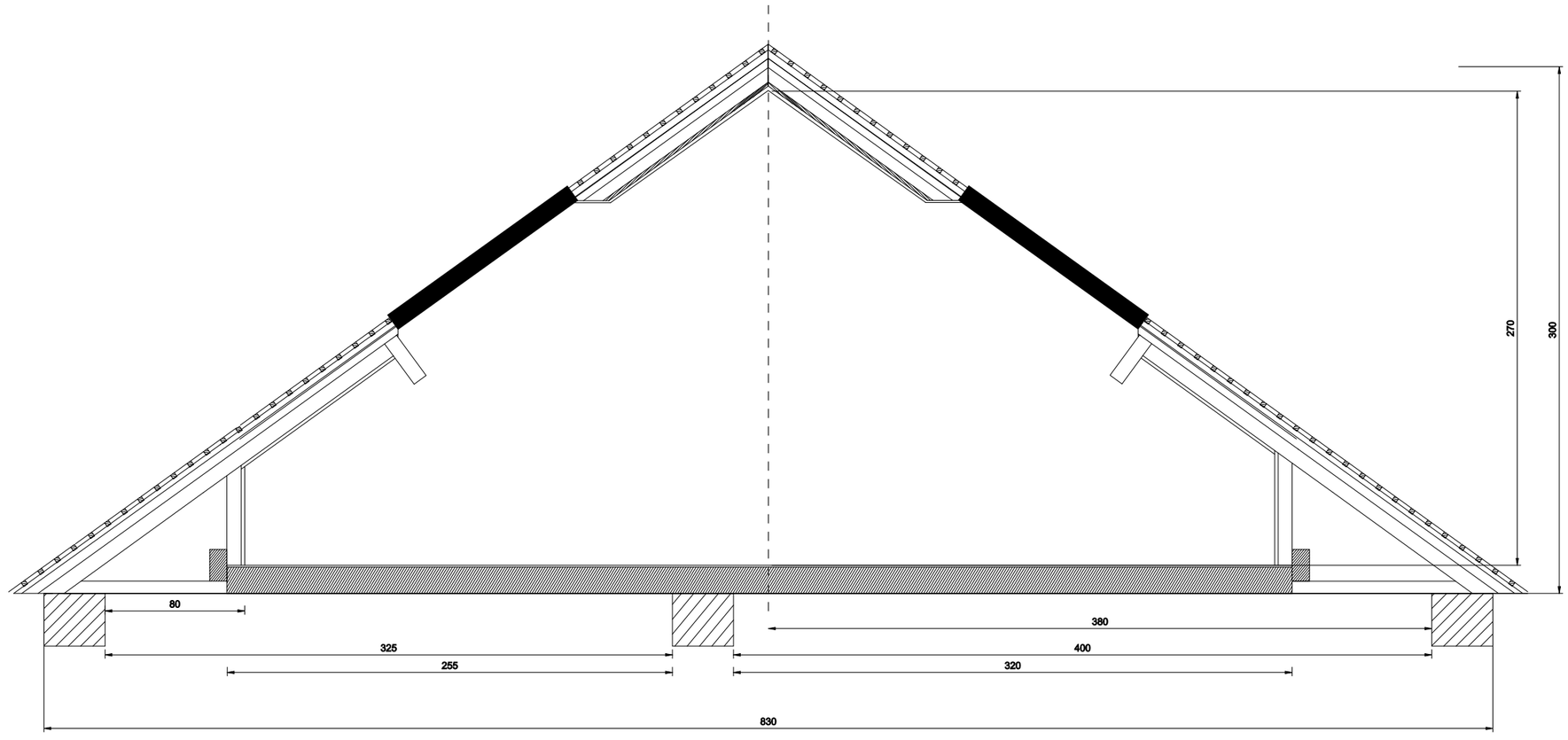
This section also shows how the 7x3” timbers will be fitted into the walls, above the existing 3x2” ceiling joists with the new 6x2” joists attached.

This also shows where the joists will be supported by the existing wall and the span for each joist.

The floor will be constructed of 18mm chipboard.

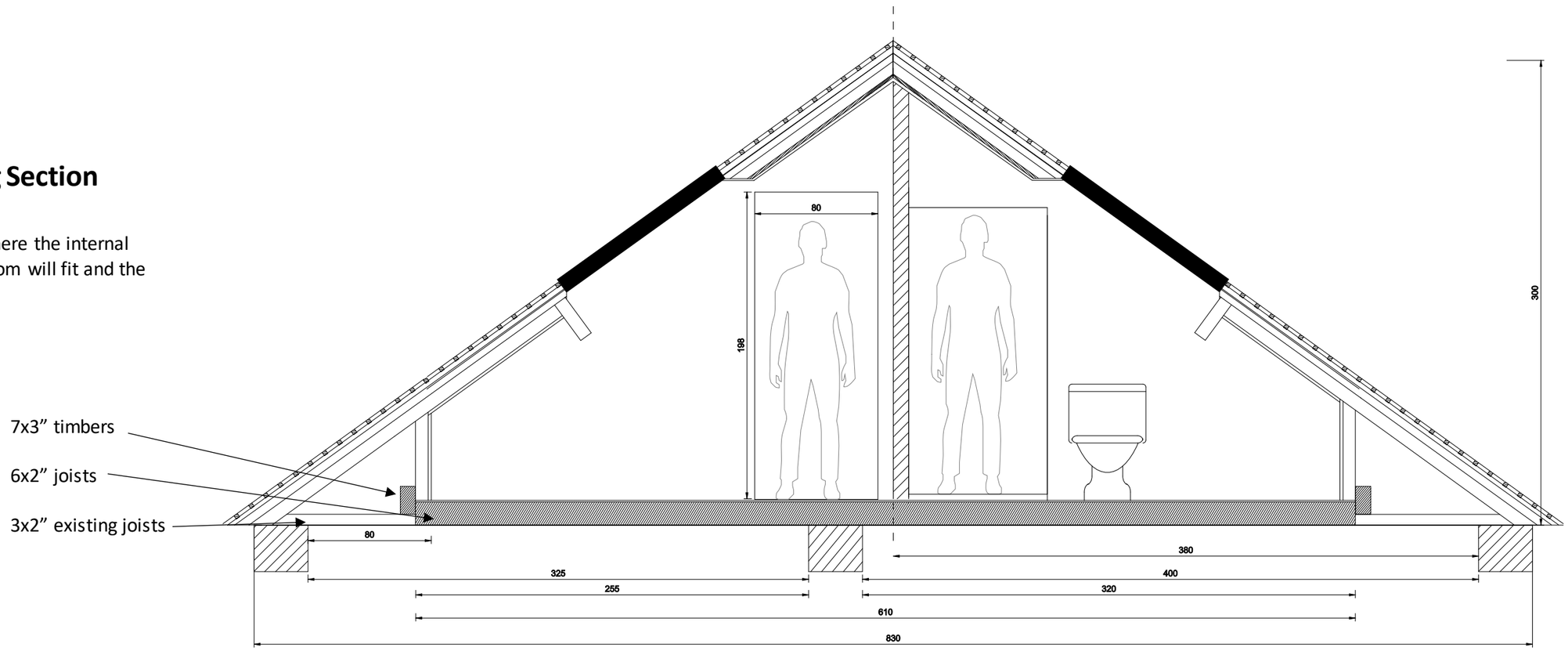
The vertical walls for storage will be constructed of 3x2” CLS timber with 100mm rockwool insulation and 15mm plasterboard.

The floor of the storage will use the existing floor joists and 18mm chipboard decking.



7. Proposed Bathroom/Landing Section

This sectional view shows where the internal studwork wall for the bathroom will fit and the doorway into the bedroom.



8. Roof/Insulation detail

- During the construction of the loft conversions, the property will be re-roofed.
- The existing tiles and timbers will be used but we will be installing a 'warm roof' which is recommended for New Build or Re–roofing as its much more efficient..
- We propose 60mm Kingspan K7 Kooltherm pitched roof board between the existing rafters and a second layer on top.
- With a rafter depth of 100mm, this gives a U-Value of 0.16W/m2K which exceeds building regulations and gives greater headroom in the loft.
- The top diagram shows details for the construction of a warm roof system, the table below details the W/m2k.

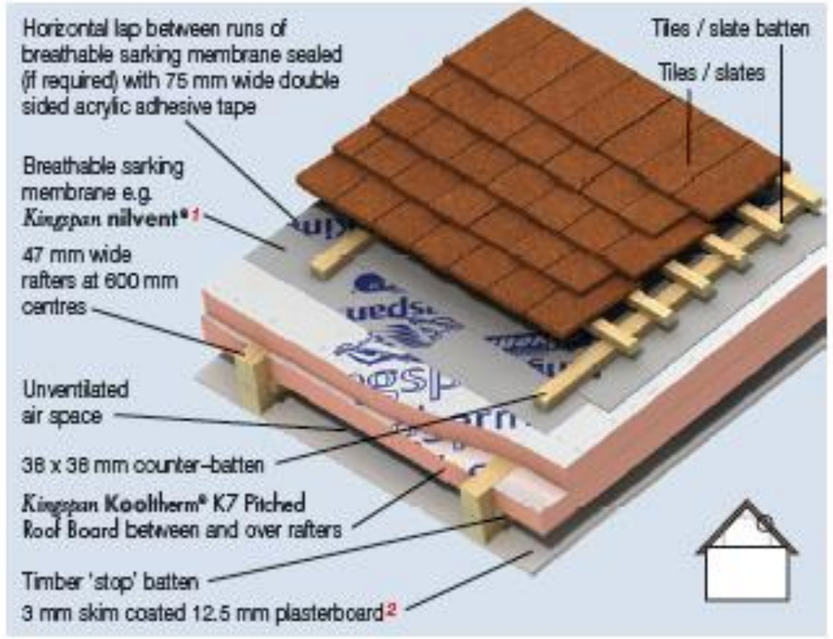


Figure 3a

U–values (W/m²·K) for Various Thicknesses of *Kingspan* **Kool**therm® K7 Pitched Roof Board and Different Rafter Depths

Thickness of *Kingspan* **Kool**therm® K7 Pitched Roof Board (mm)	Rafter Depth (mm)		
	100	125	150
35 + 35	✗	✗	✗
35 + 40*	0.25	0.25	0.25
40 + 40	0.24	0.24	0.24
50 + 50	0.19	0.19	0.19
60 + 60	0.16	0.16	0.16
70 + 70	0.14	0.14	0.14
75 + 75	0.14	0.13	0.13
80 + 80	0.13	0.13	0.13
90 + 90	0.12	0.11	0.11
100 + 100	0.11	0.10	0.10
100 + 110*	0.11	0.10	0.10

* *First thickness refers to thickness between rafters, second thickness over rafters. The thermal resistance of the over rafter layer of insulation must be ≥ that of the between rafter layer so as to avoid condensation.*

NB Refer to local distributor or Kingspan Insulation price list for current stock and non–stock sizes.