

# 2up2down: Eco-retrofit.....

We need to make the buildings cheap to heat - and more comfortable to be in than they are now!

We also need to reduce our impact on the environment by reducing our energy use and carbon dioxide emissions and by using other resources carefully and efficiently.

To reduce our energy use we need to insulate the buildings, make them air-tight and then use renewable energy to 'top up' the heat and power we will need.

We will also think about whether it is possible to re-use some of the 'waste' heat from the ovens in the bakery.



We could put rooflights in the north side of the roof to let more light into the first floor/attic and to help ventilate the building. It might also help give people somewhere to dry clothes.



We should put lots of insulation in the roof (very thick)

The chimneys cause draughts and shade the solar panels so we need to take them out or insulate them.



We need to insulate the front walls, but need to decide whether we do this inside or outside. If we put it outside it will change the appearance, and you won't be able to see the bricks anymore. But putting the insulation inside is not as good for the building. Liam suggested we could just render the top half. What do you think?



We need to make the building air-tight and block all the draughts

All windows should be double or triple glazed with insulated frames.



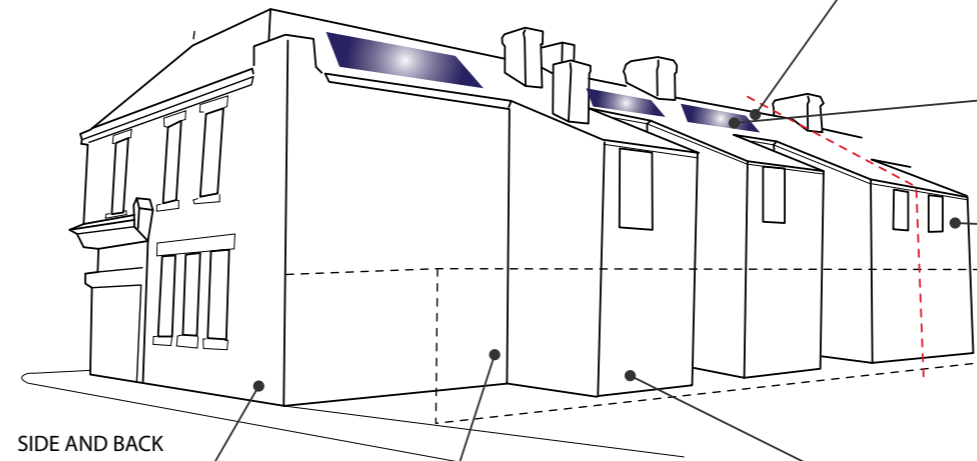
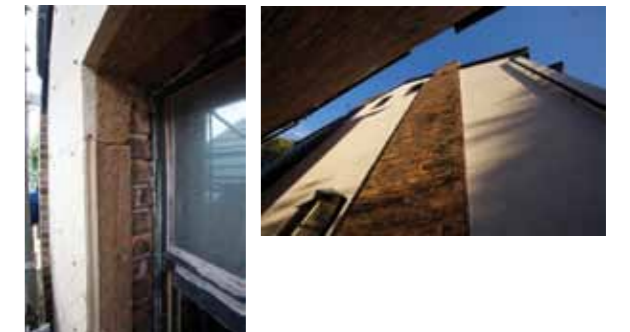
The shop needs double glazed windows and a new door to stop the draughts.



We can collect rainwater from the roof

We should have solar panels on the south facing roof.

We should put external wall insulation on the back. We could make this different colours (Carla) or use different materials.



We should put a 'thermal store' in the building that takes the heat from the solar panels on the roof (Lewis)

We can lift the ground floor and insulate it (Kayleigh)

We could put a conservatory/ greenhouse on the back to collect heat from the sun and grow food (Lewis).

