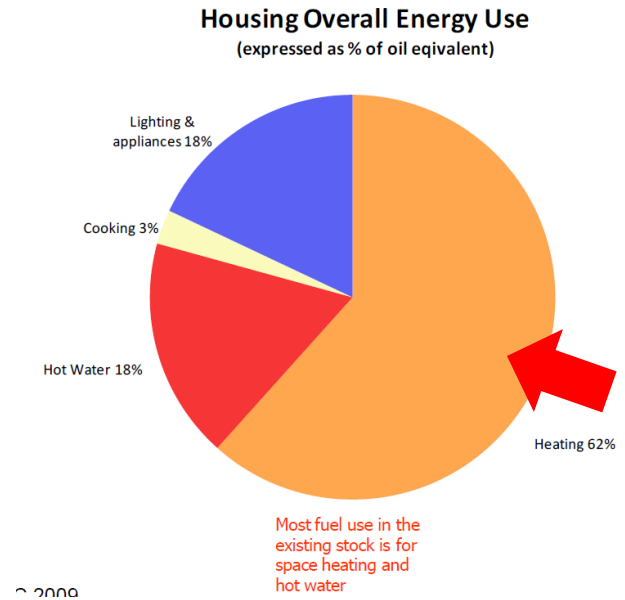
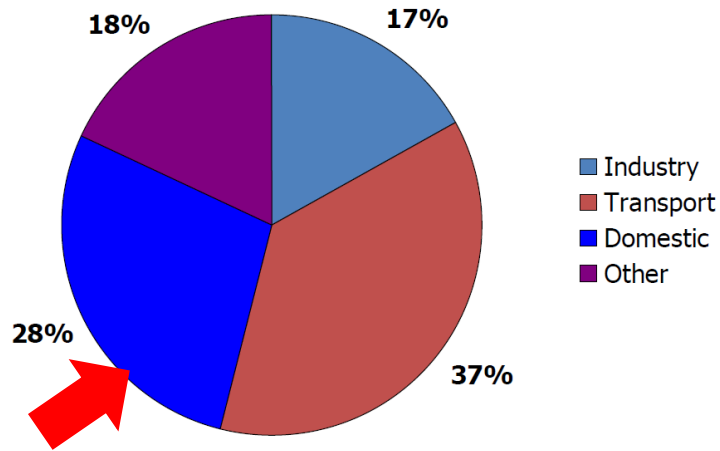


prewett
bizley
architects



Insulation — walls, floors, roofs and windows



Insulate – why?



Roofs

Insulation is about quality of design and installation



Roofs

Things to consider:

- Material (fitting, moisture open/closed)
- Condition of existing
- Eaves, ventilation, moisture control
- Maintaining access deck
- Loft hatch (air tight, insulated)
- Recessed downlight lights

Floors

Insulation is about quality of design and installation



Floors - suspended

Things to consider:

- Condition of existing (make good damage and cause)
- Ventilation points
- Material (fitting, moisture open/closed)
- Pipes and conduits
- Gas!
- Air tightness approach
- Edges - awkward gaps, air tightness
- Inspection points?
- Drainage points?

Floors - solid

Things to consider:

- Condition of existing (moisture, DPM/DPC, level)
- Impact on headroom? New slab?
- Impact on door heights
- Remove screed to win space?
- New screed or deck?
- Insulation type: thickness versus other criteria
- Edges – lots of them to deal with
- Drainage points?

Walls

Insulation is about quality of design and installation

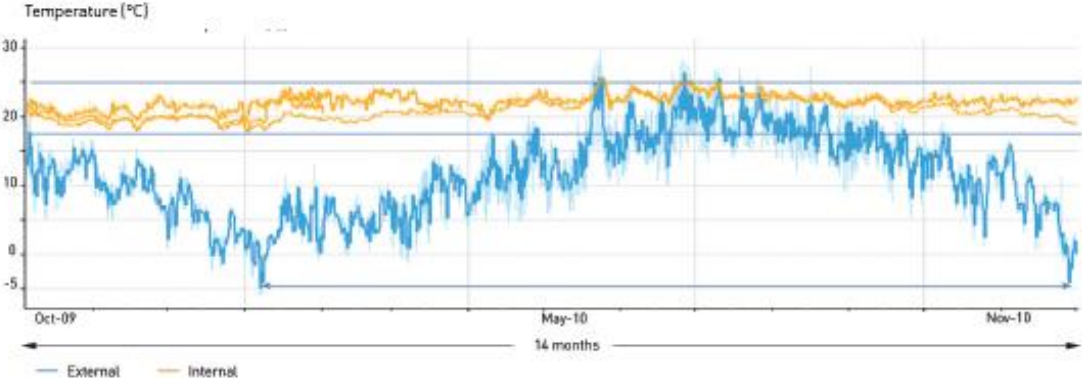
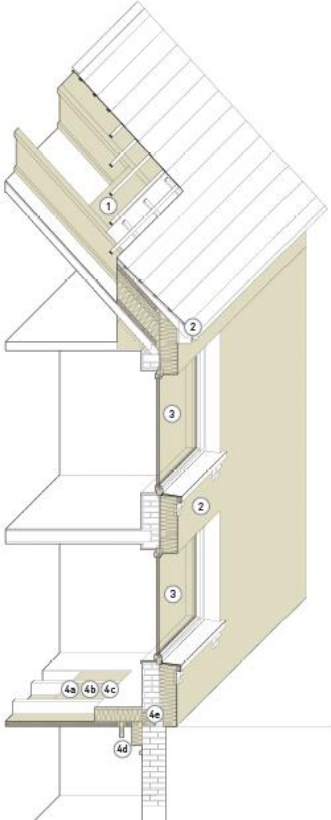
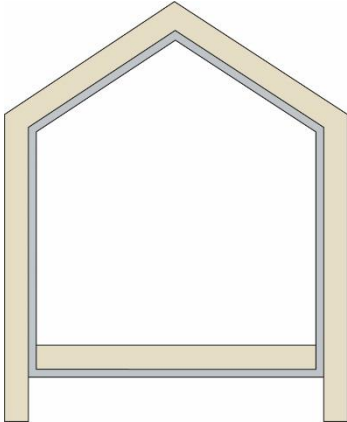


Walls - EWI

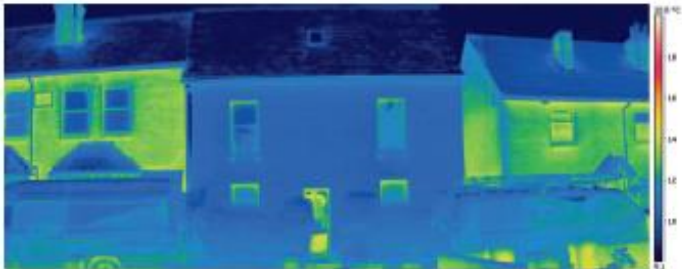
Things to consider:

- Condition of existing (make good damage and cause)
- Existing form and details
- Existing services, pipes, conduits
- Drains too
- Bottom and top of wall
- Window details
- Render, brick slips and boards

The Full Wrap



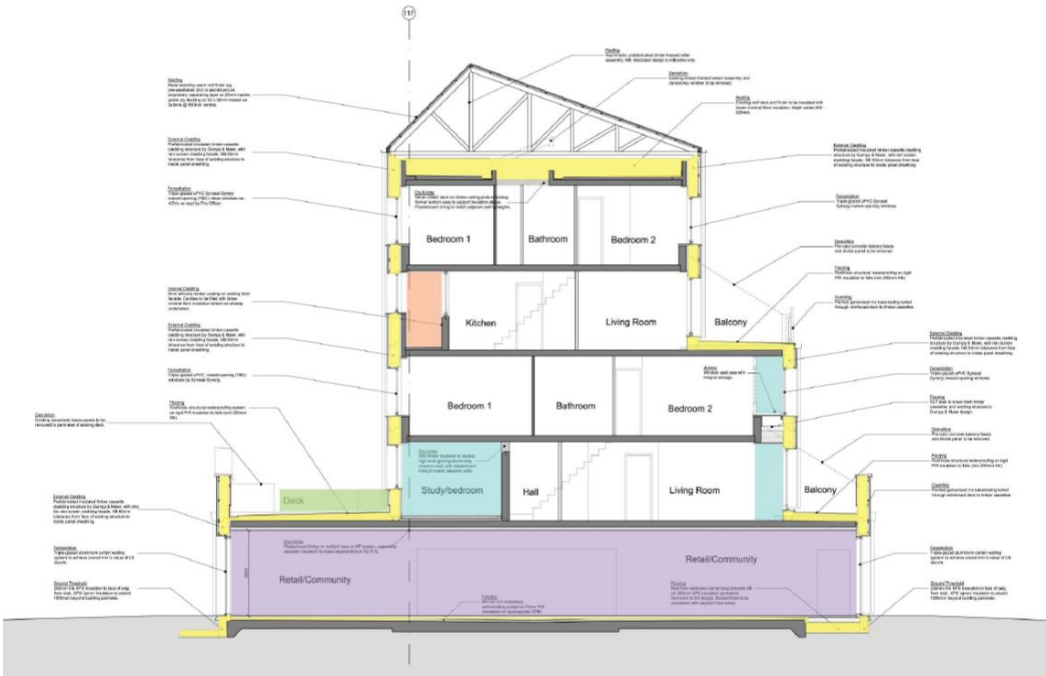
Thermal image of the front elevation



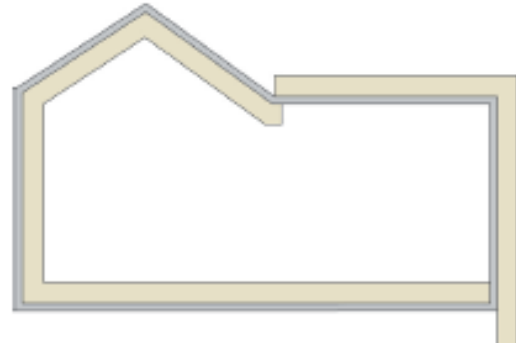
Front elevation post-retrofit



The Full Wrap



Hybrid



Mouldings

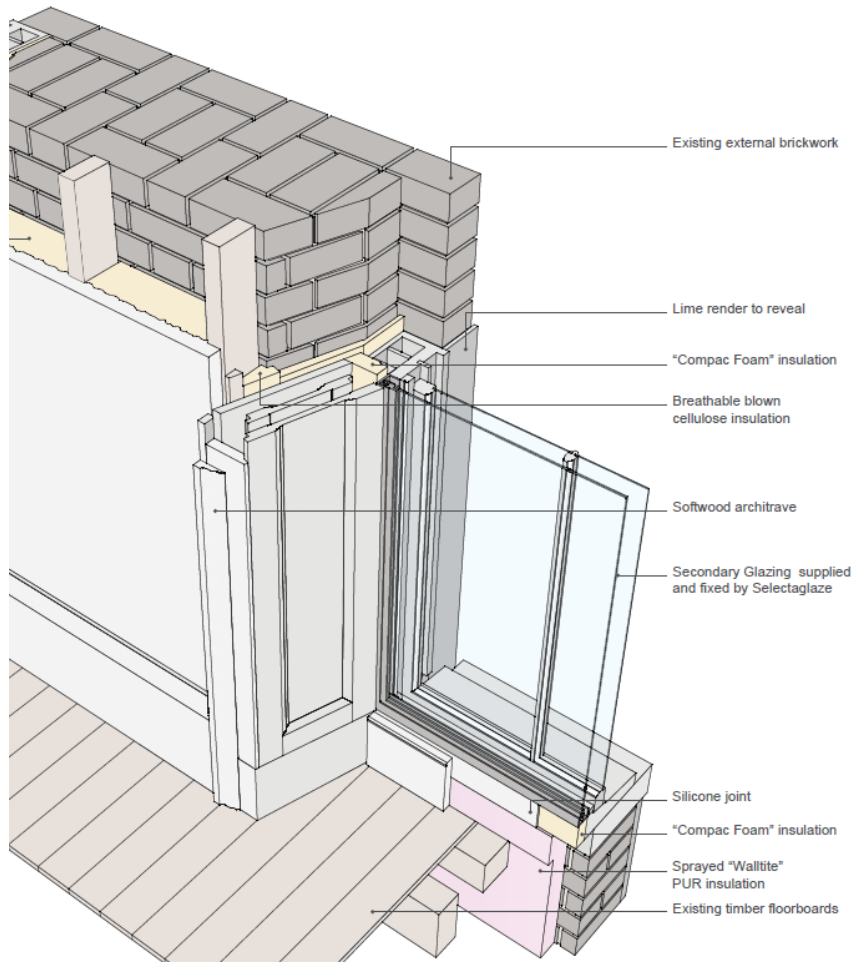


Walls - IWI

Things to consider:

- Condition of existing (make good damage and cause)
- Moisture risks (rain, condensation)
- Sockets, pipes and conduits
- Cornices, skirtings and other details
- Between floor
- Window jambs
- Joist ends, wall plates, bonding timbers

Interfaces



$U = 0.3 - 0.4 \text{ W/m}^2\text{K}$

Wood fibre



Aerogel

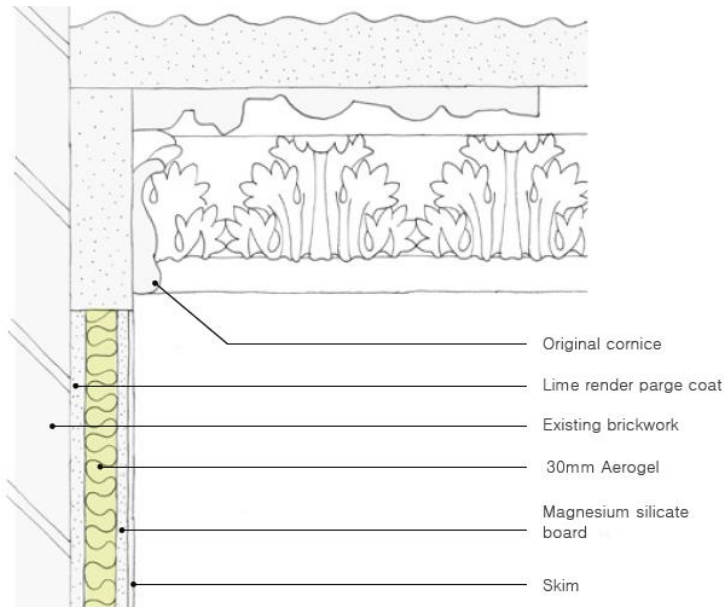
Section 4 : Energy Strategy

4.2 – Walls with Original Mouldings: Aerogel

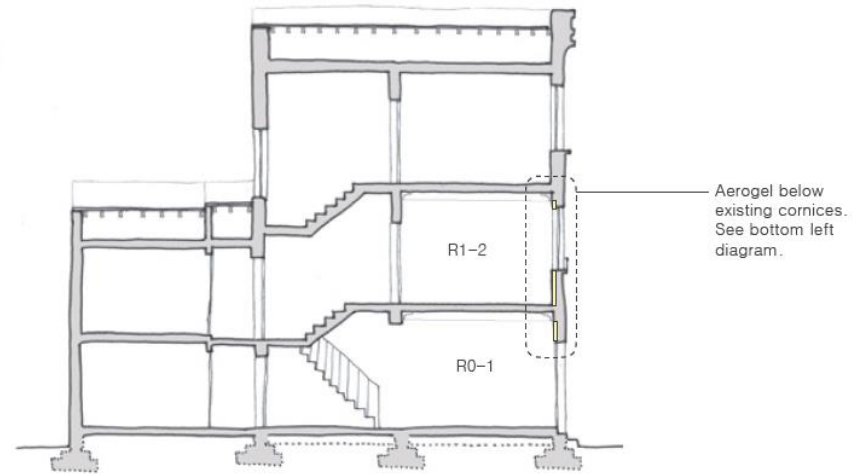
Walls with cornices:

Aerogel will be installed where very thin insulation is required. It is supplied in rolls of felt-like material or prelaminated to boards.

Cornices to be retained in the front rooms at ground and first floor (R0-2 and R1-2) and in main entrance hall (R0-1). 30 to 40mm lime to be removed from walls and replaced with 30mm Aerogel.



Diagrammatic section showing Aerogel insulation within walls with original cornices.



Section of 67 Falkland Road showing Aerogel location.



Aerogel prelaminated board



Aerogel rolls of felt-like material.

Windows

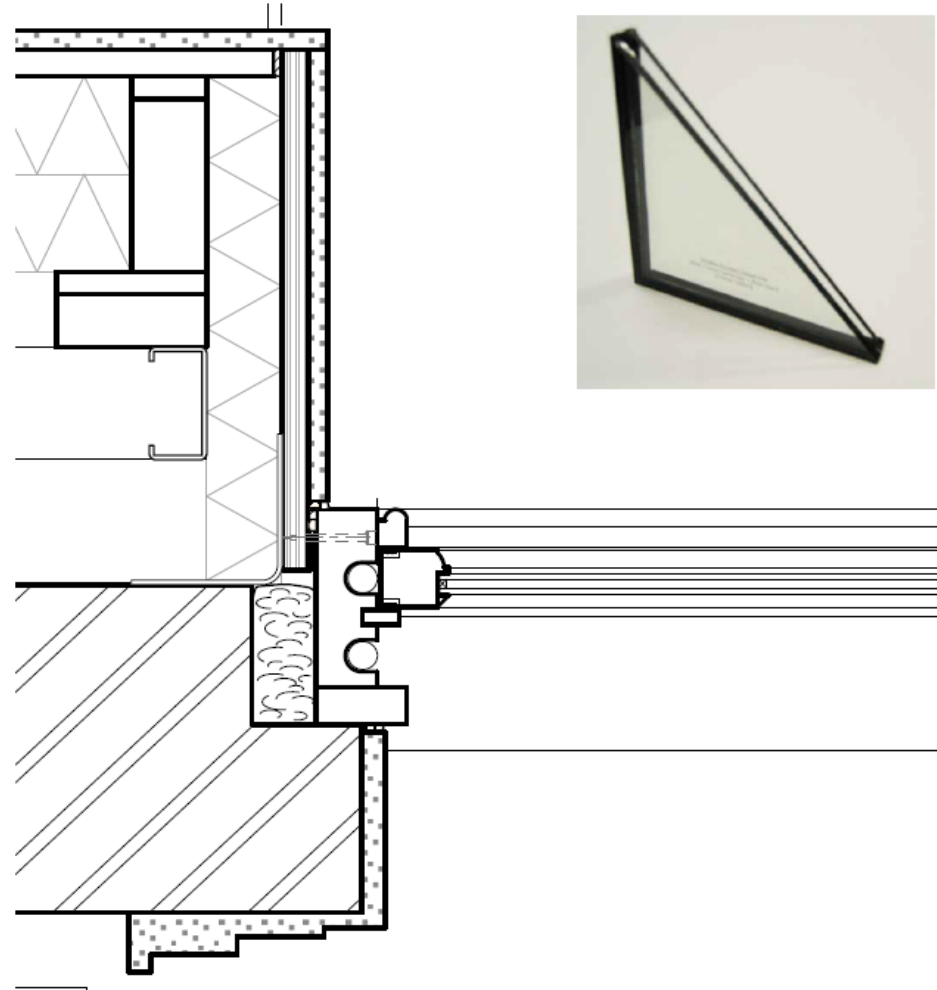
Insulation is about quality of design and installation



Windows Things to consider:

- How they open
- How are they cleaned
- How much frame
- Material – timber, plastic, aluminium
- Proportion and pattern of frames
- Interfaces (air tightness and thermal bridge)

Double glazed sash?

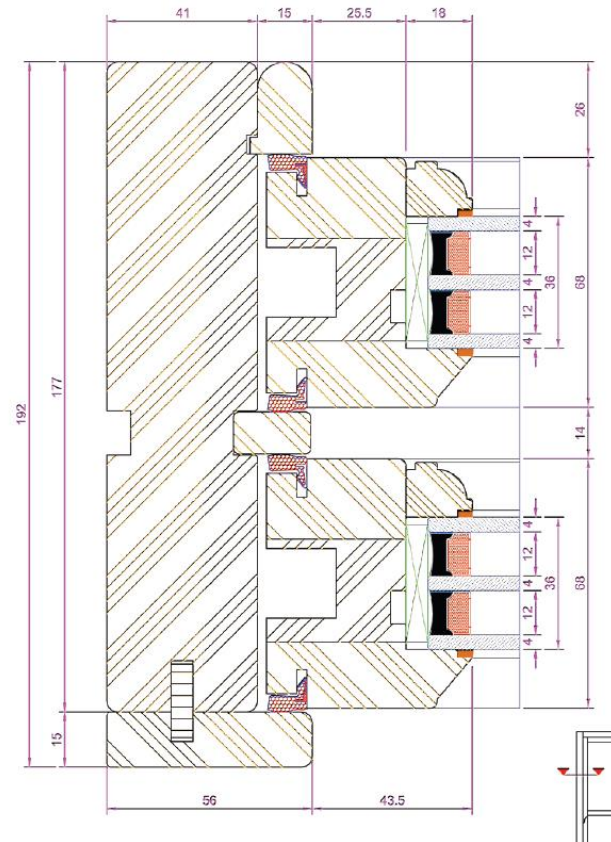


Double glazed sash



Triple glazed sash

triple glazed sash



Looky likely sash with triple



Comparison

spot the difference?



Comparison

spot the difference?



single glazed

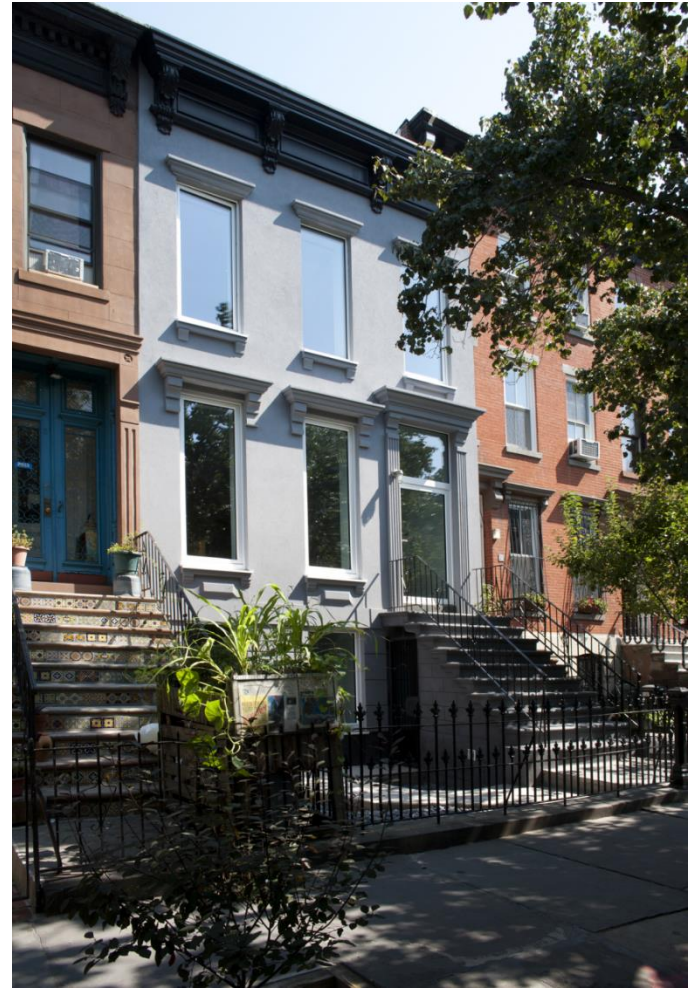


double glazed



triple glazed

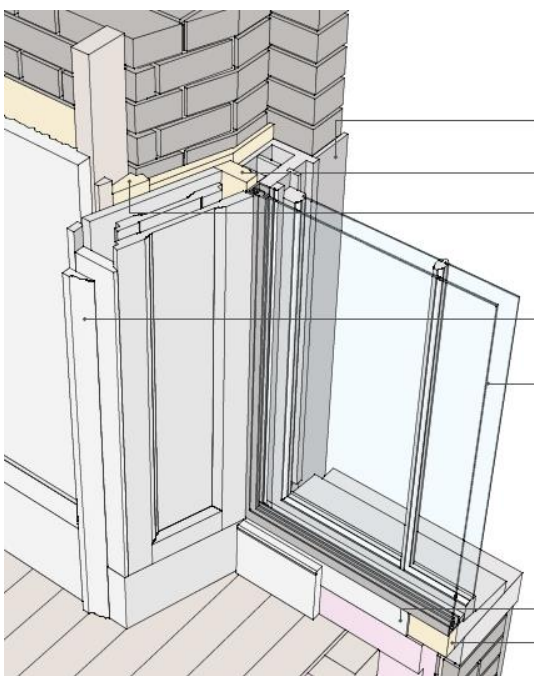
Classic triple



Secondary



Secondary



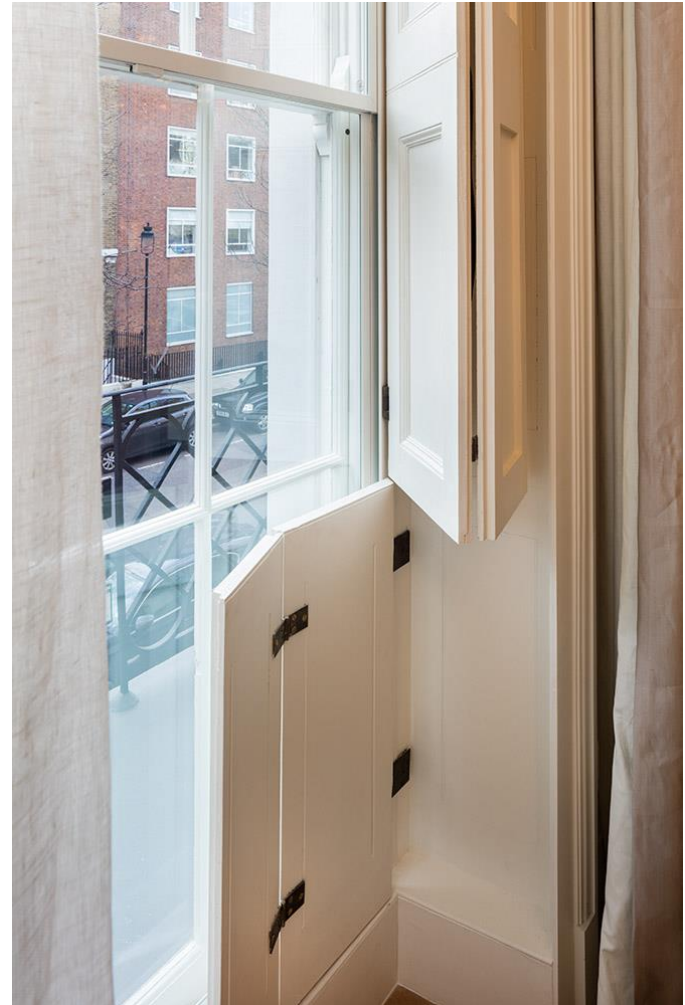
Secondary



Secondary



Secondary





THANK YOU