

Overheating

Architecture

Why well insulated buildings overheat, and the order to fix it in.

Work down this list. Each step is cheaper than the one after it.

1

Cut the glazing area

Especially on east and west. Glass area is the largest single lever.

2

Shade it outside

External shading sized to the sun angles on that facade.

3

Let heat out at night

Secure openable ventilation, with exposed mass to purge.

4

Reduce internal gains

Lighting, equipment, and above all uninsulated hot water pipes.

5

Only then cool it

Mechanical cooling is the last resort, not the first fix.

Educational reference. Overheating is assessed against published criteria such as CIBSE TM52 and TM59, using modelling.