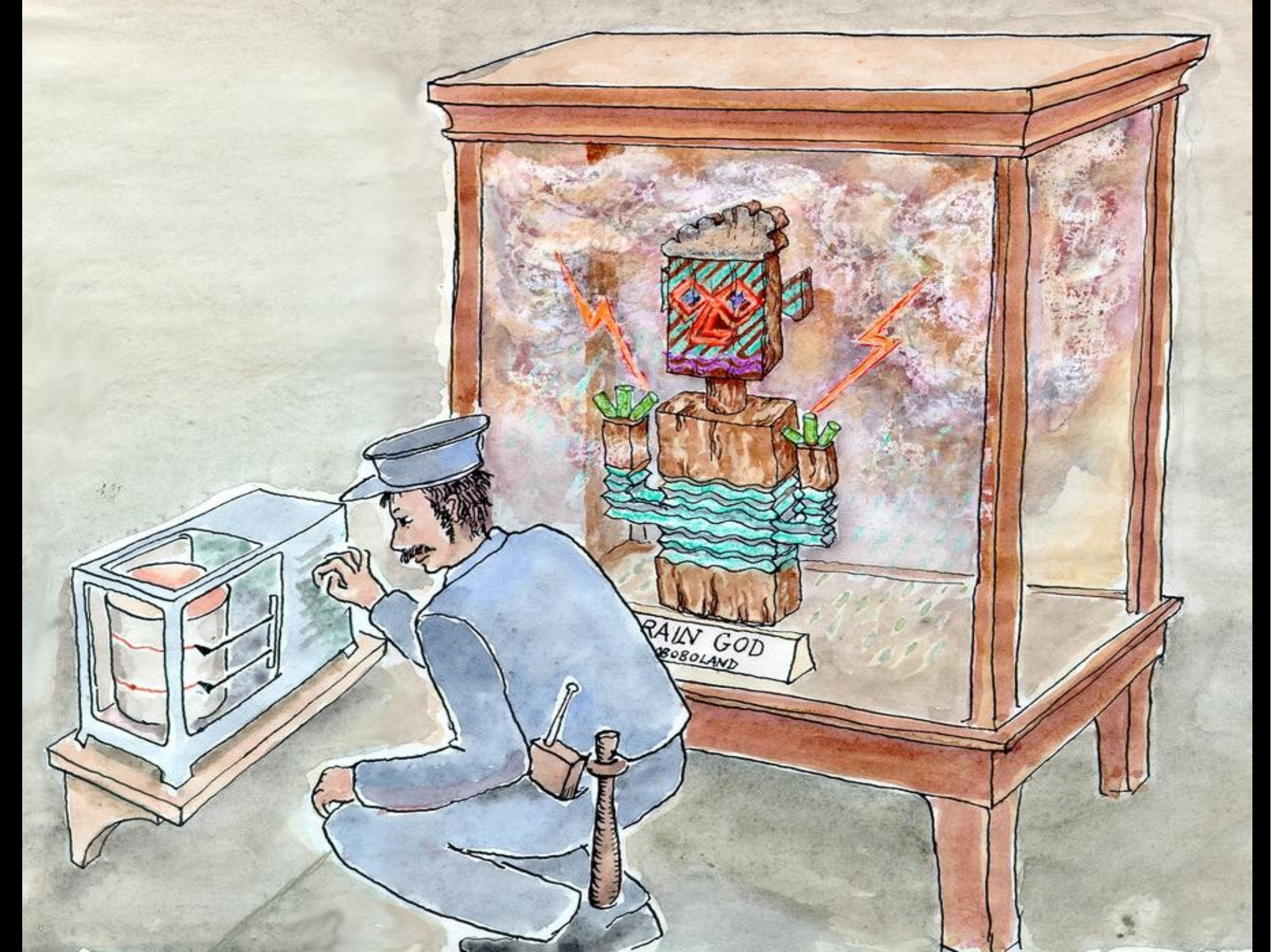
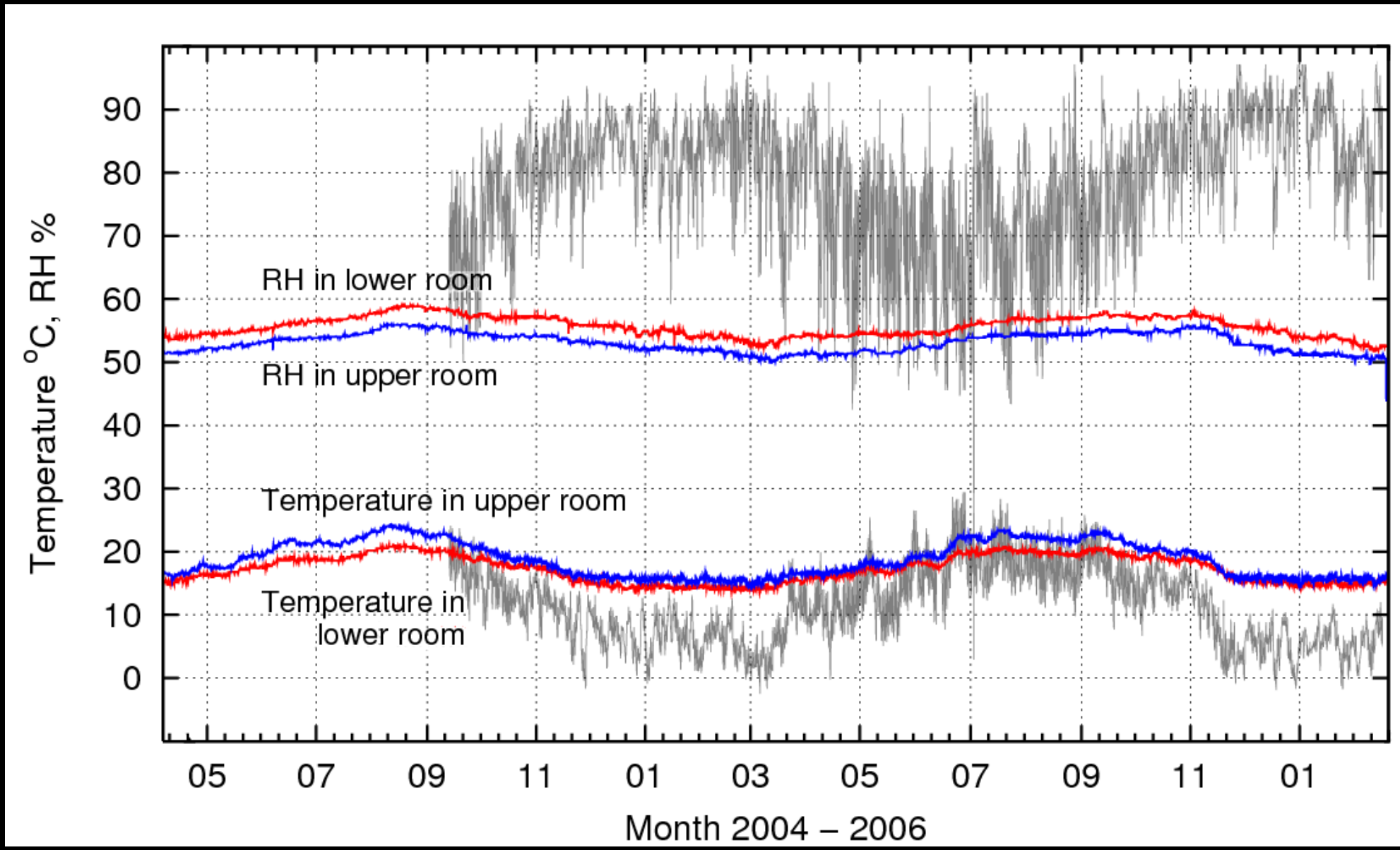

but isn't 2700 pounds of old cotton fire hose in the ventilation duct a fire risk?
That's why it's connected to the water supply


RAIN GOD
BOBOLAND

Suffolk County Archive, Ipswich, UK



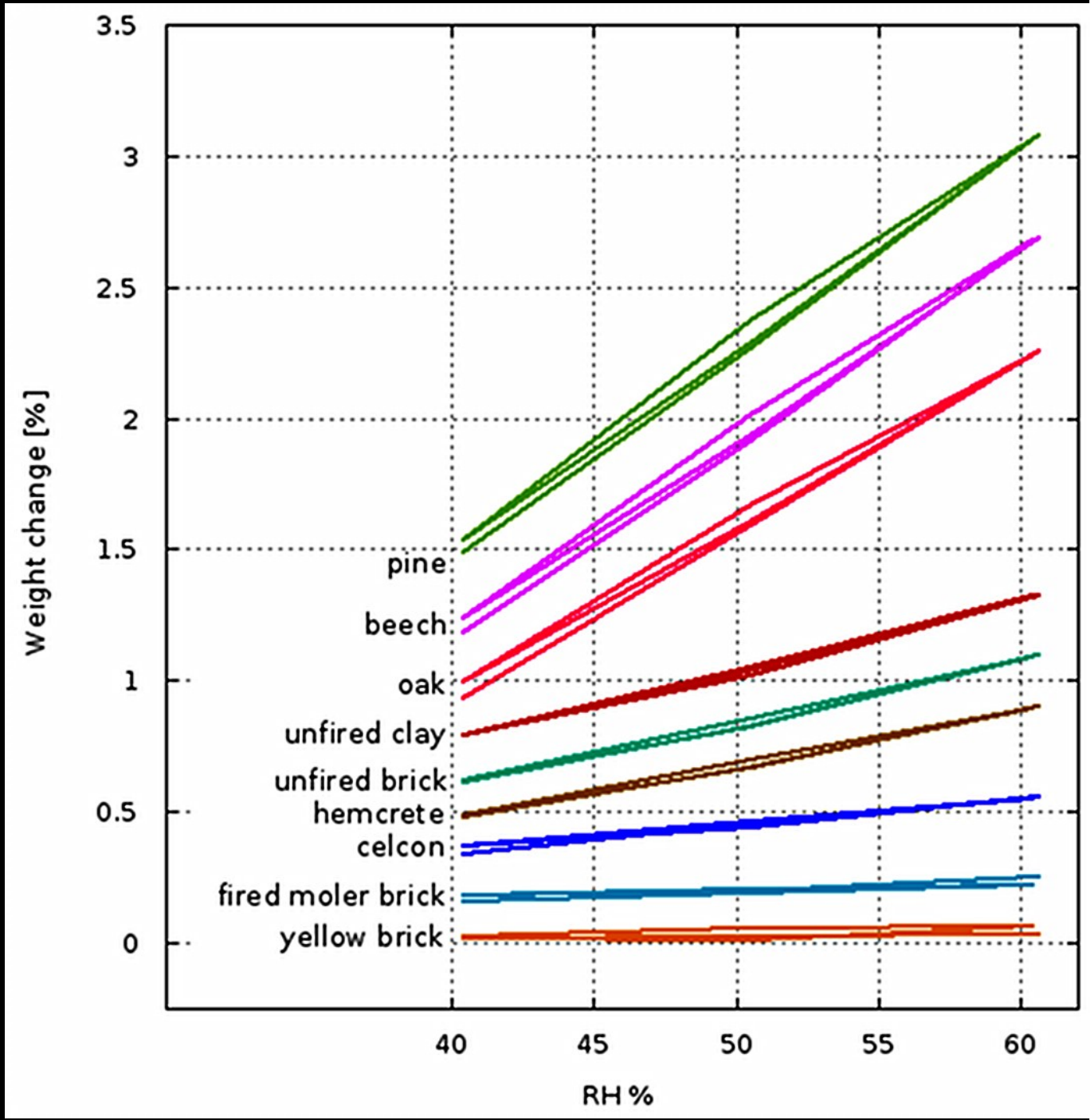
The climate in the Suffolk archive. The building is heated in winter. There is no mechanical humidity control

Cologne Archive. A heavy construction which collapsed into the underground railway excavation. The microclimate was excellent up to that point.

A lighter building might be more gravitationally stable. (Royal Library, Copenhagen)

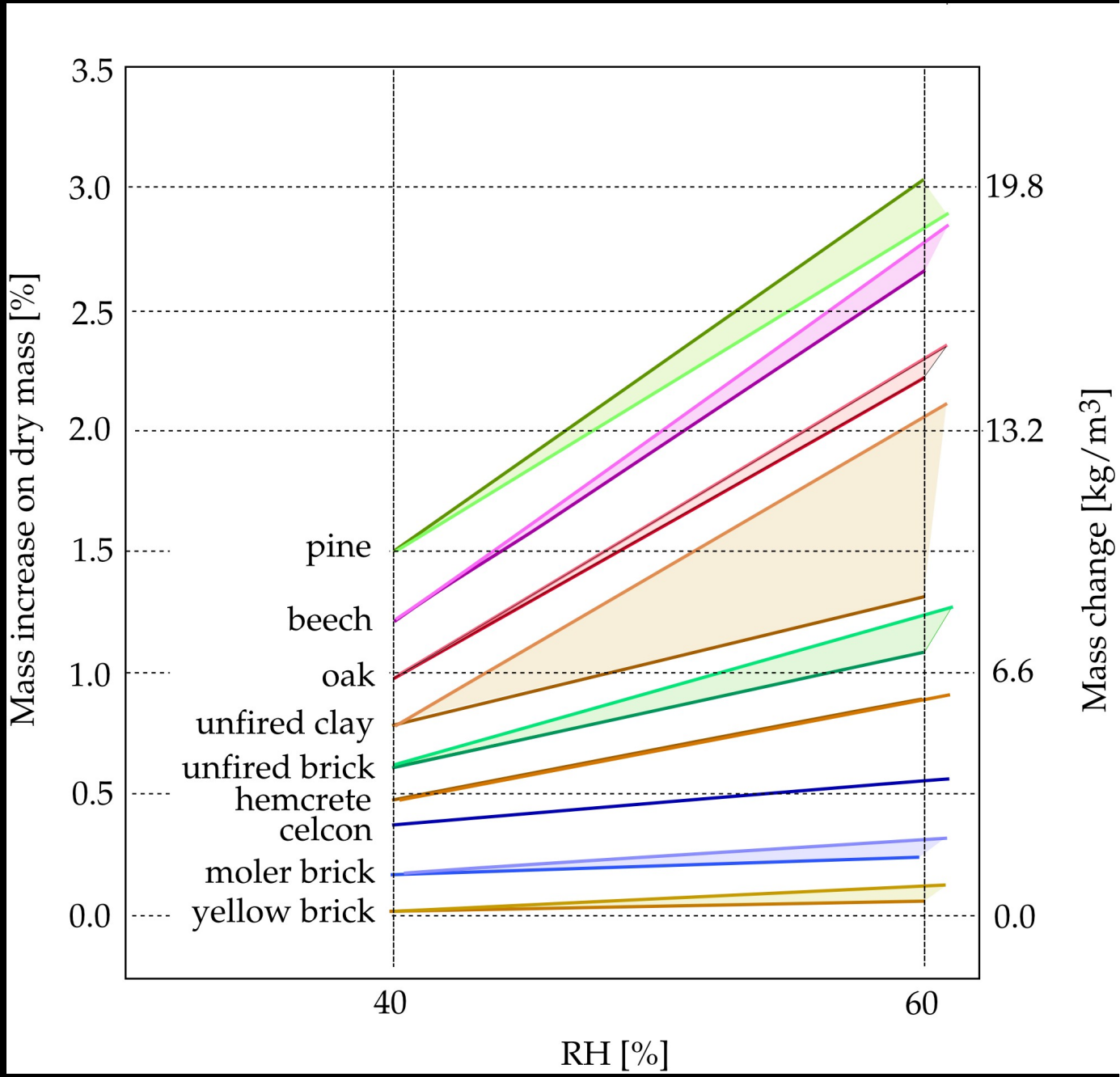
But can it maintain a stable climate without air conditioning?

Potential buffer materials must have a steep sorption curve

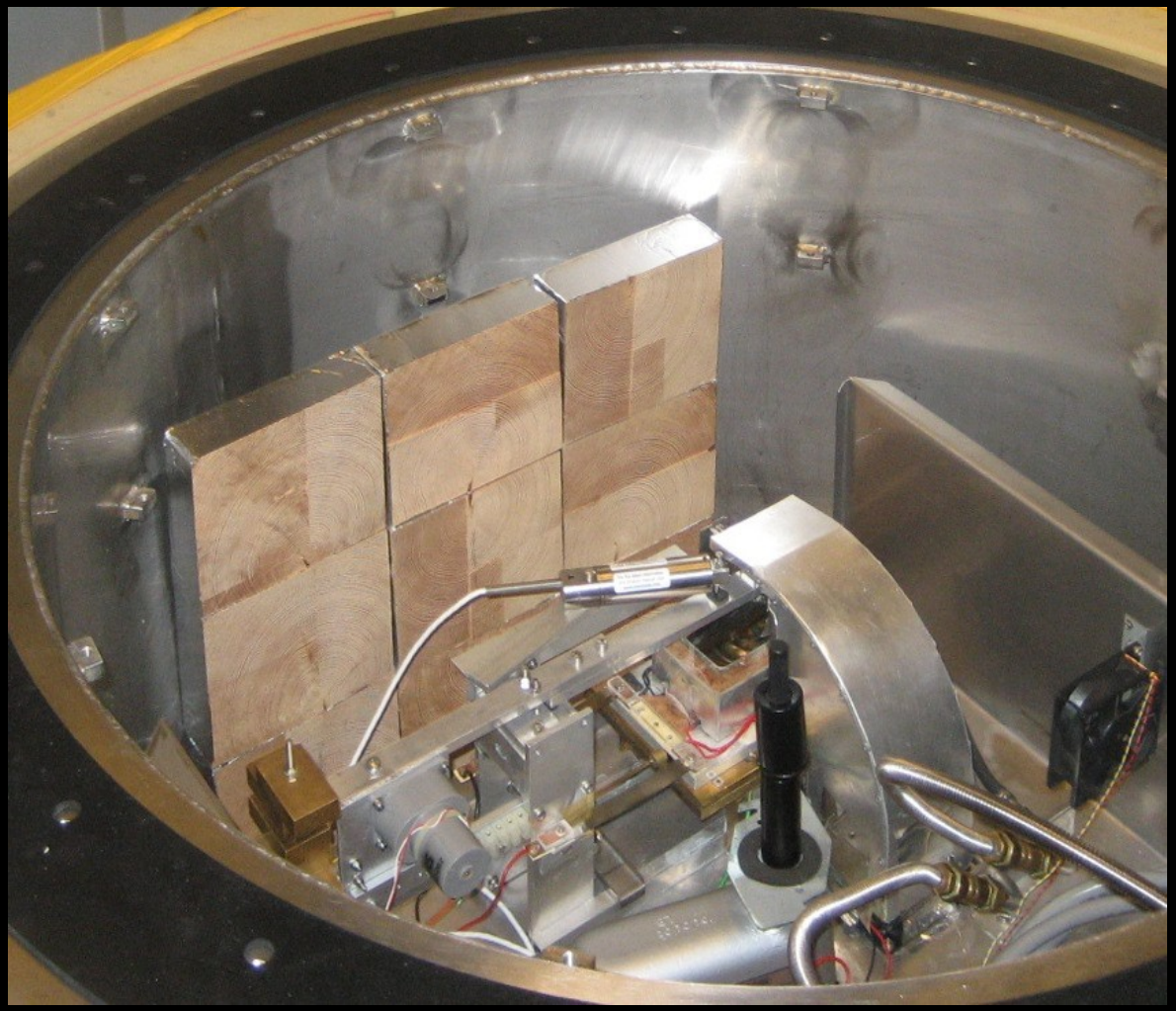


Potential buffer materials must have a steep sorption curve, when expressed as weight of water exchanged per unit of volume.

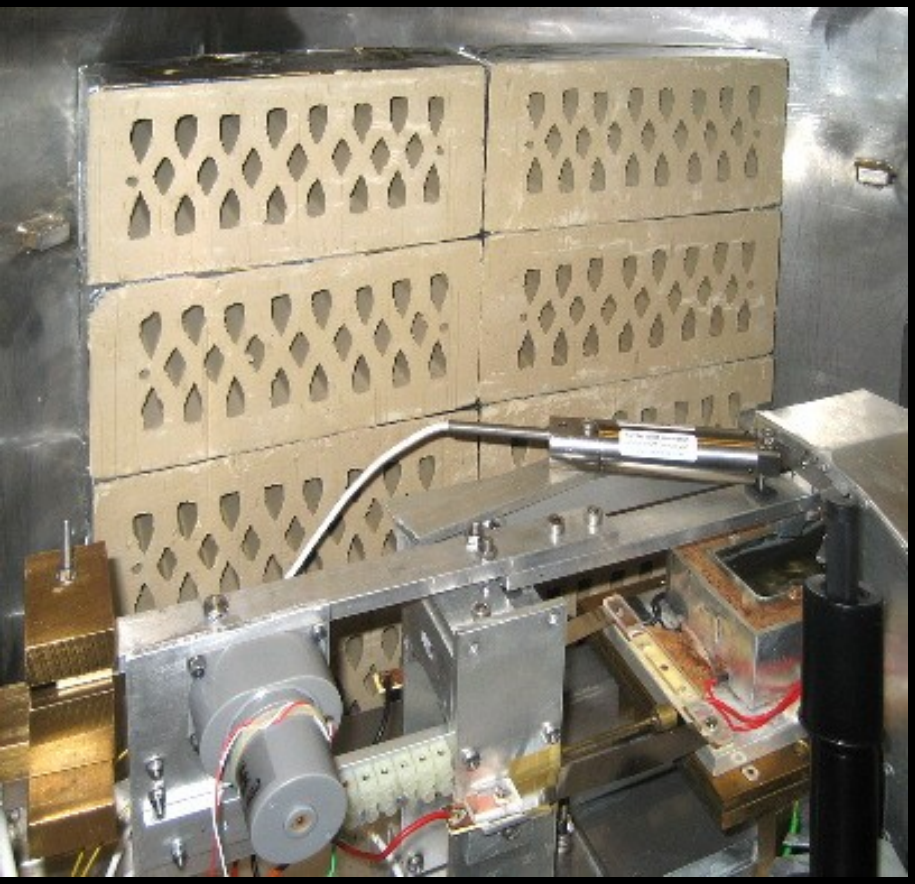
After this trans-formation unfired brick is comparable with wood.

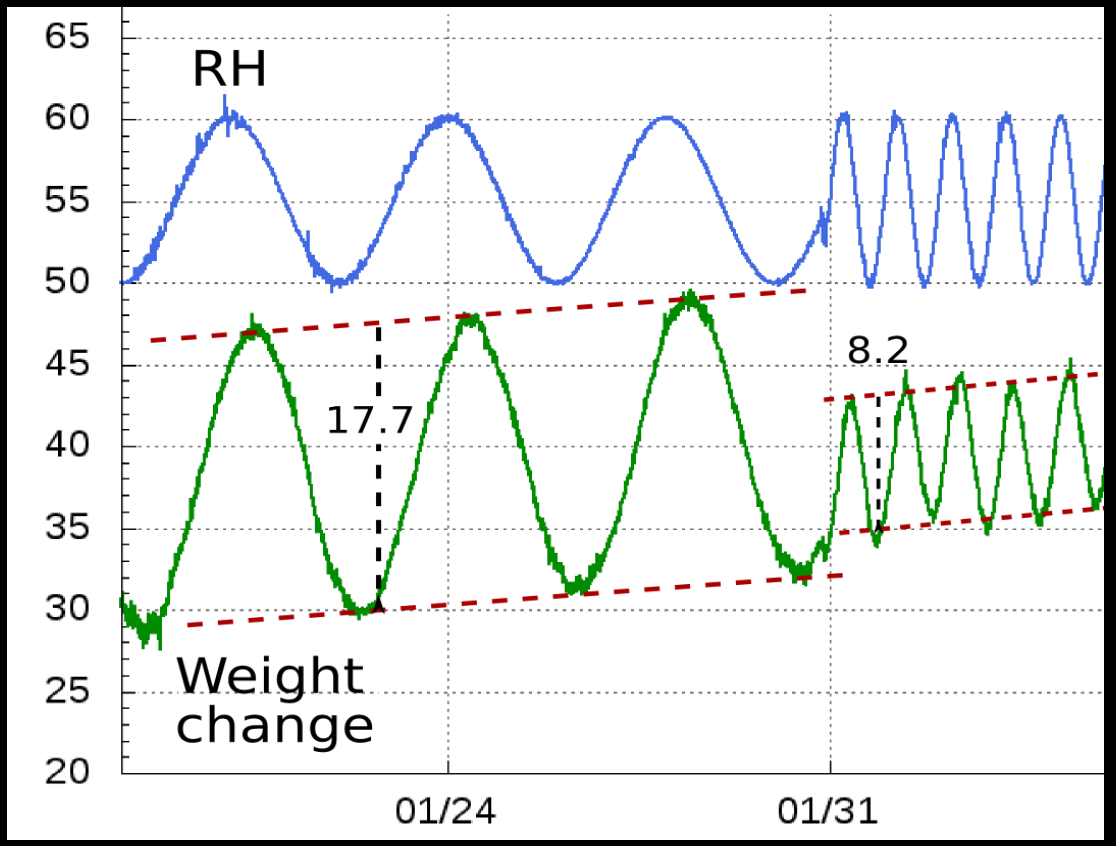


The rate of water exchange cannot be measured with a static process.

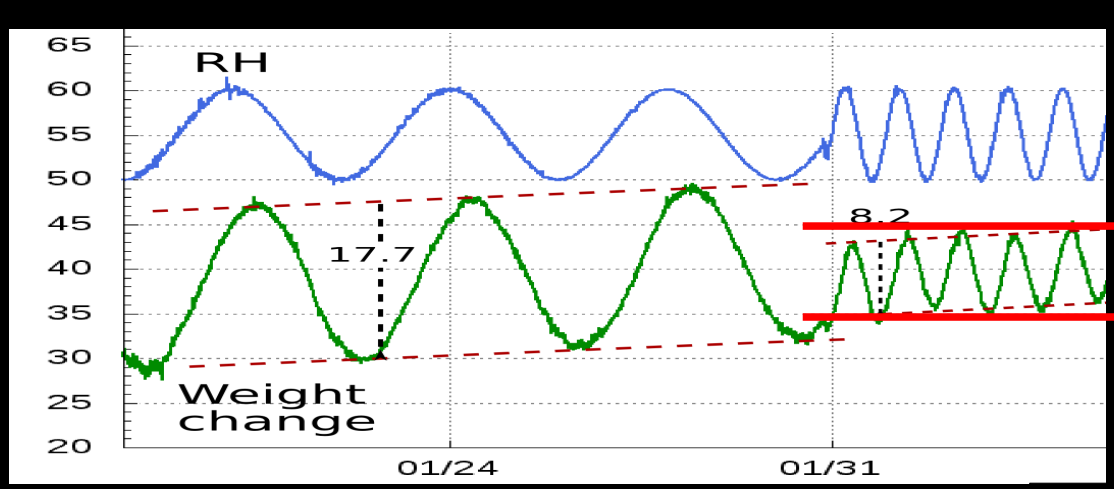


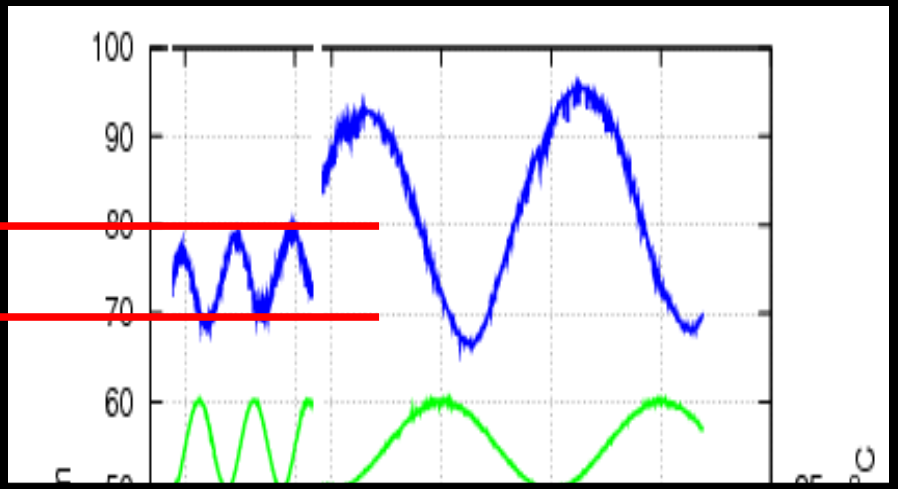
This reaction chamber cycles the RH and measures the water vapour moving in and out of the specimen.



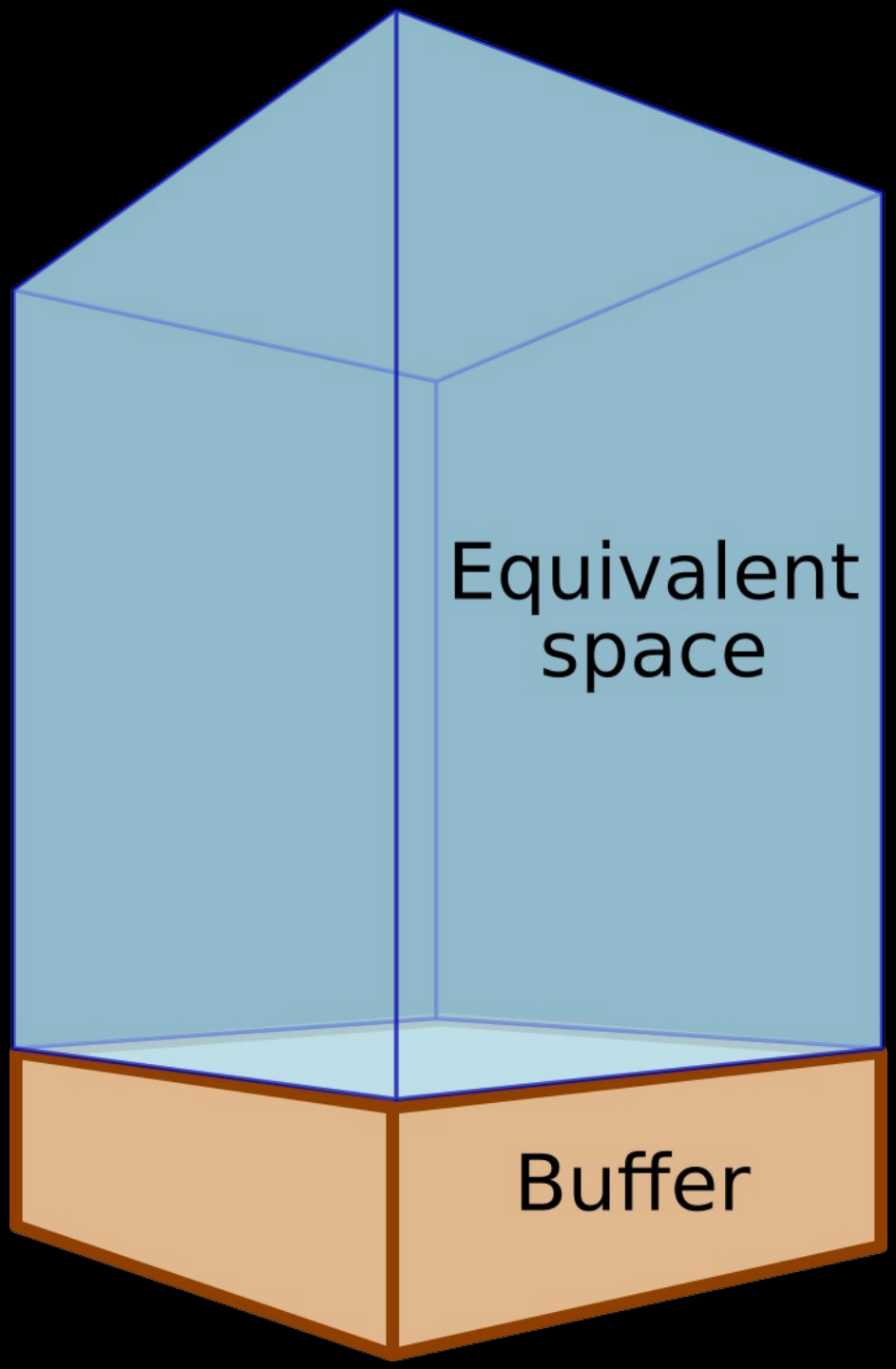


Perforated unfired bricks exposed to 4 day RH cycles, then to a daily cycle.





A double thickness of brick (right) gives little imrovement to the daily cycle but considerably increases the amplitude of the 4 day cycle. The space between the red lines indicates 10 g water absorption.



A way of expressing the buffer capacity of a material or structure is to calculate the volume of space that absorbs and releases the same amount of water as the specimen surface under the same cycle time. This number is approximately independent of RH cycle amplitude.

Specimen description	Thickness	B-24	B-96	B-long	B-sorp
unfired perforated brick	53	27	58	108	136
unfired massive brick	53	10	21	–	165
unfired perf. brick ventilated	110	61	108	243	271
End-grain wood	40	15	34	–	122
Cellular concrete	50	7	9	–	17
fired perforated brick	52	–	–	3	12

Table 1: Buffer values (B) of building materials at 18°C for 24 hour, 96 hour and 'long' cycle time (a square wave with minimum 7 days settling time). B-sorp is the value calculated for complete moisture equilibrium throughout the thickness of the specimen, based on the measured sorption curve shown in figure 10. The wall thickness is in mm. Buffer values are in equivalent metres of air column

Our environmental expert told us the books would buffer the climate better if the spine faced the wall.