



VI. Faépítészeti Konferencia

2008. 09. 12.

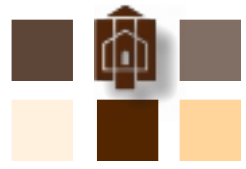


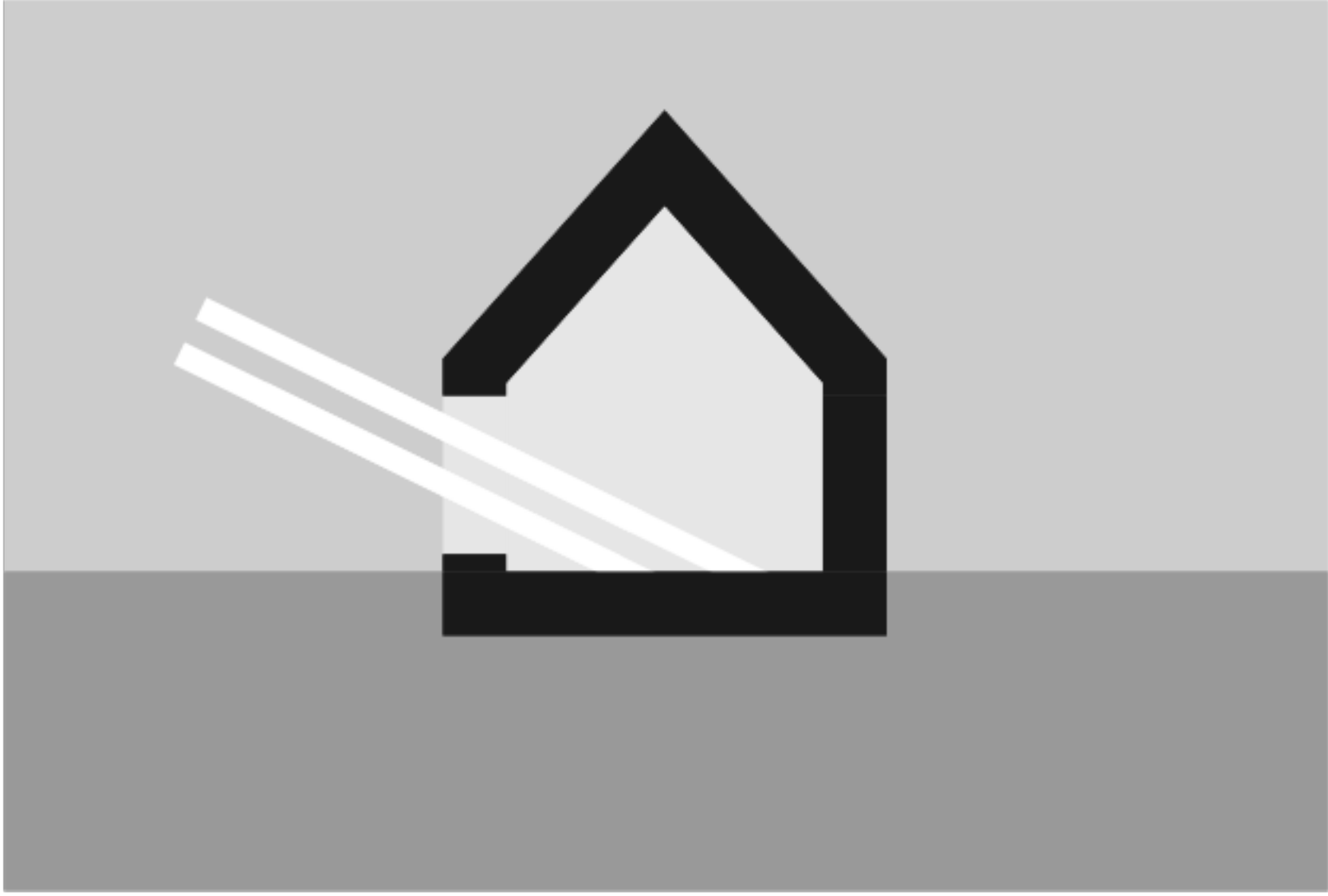


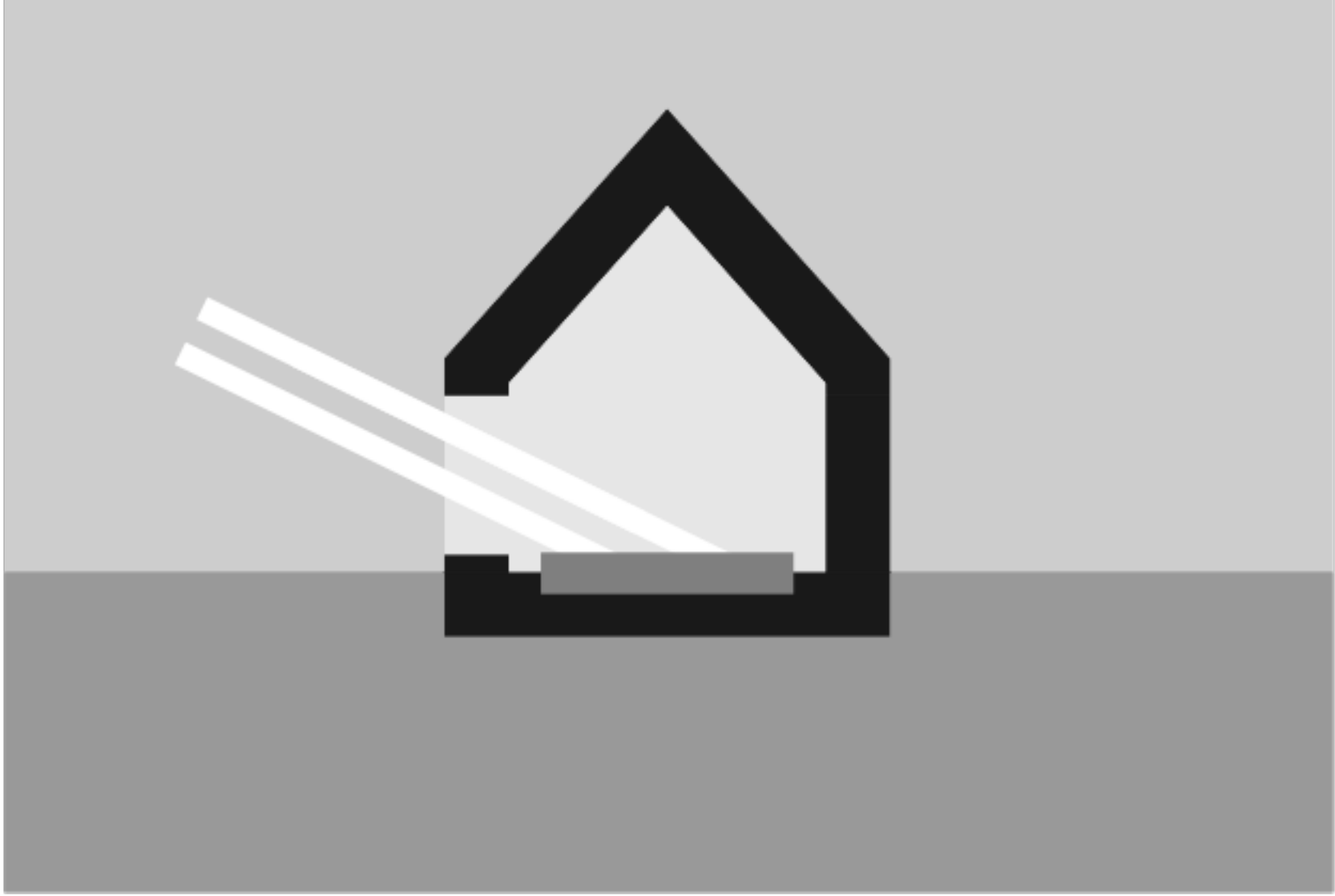
NYME - FMK - EPITESTANI INTEZET



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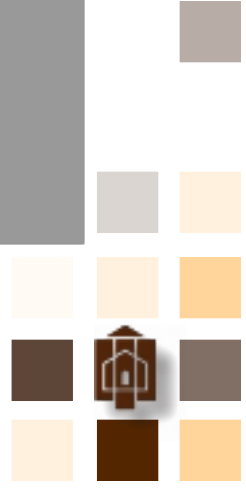


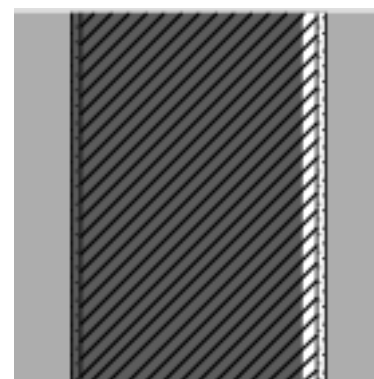




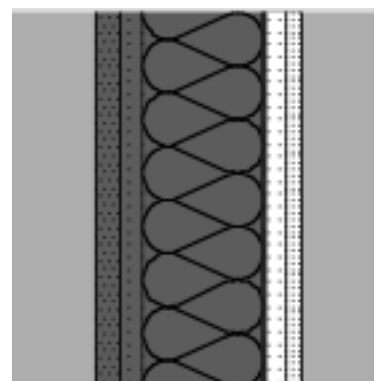
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$$m = 47.62 \quad \text{kg/m}^2$$



$$m = 41.84 \quad \text{kg/m}^2$$





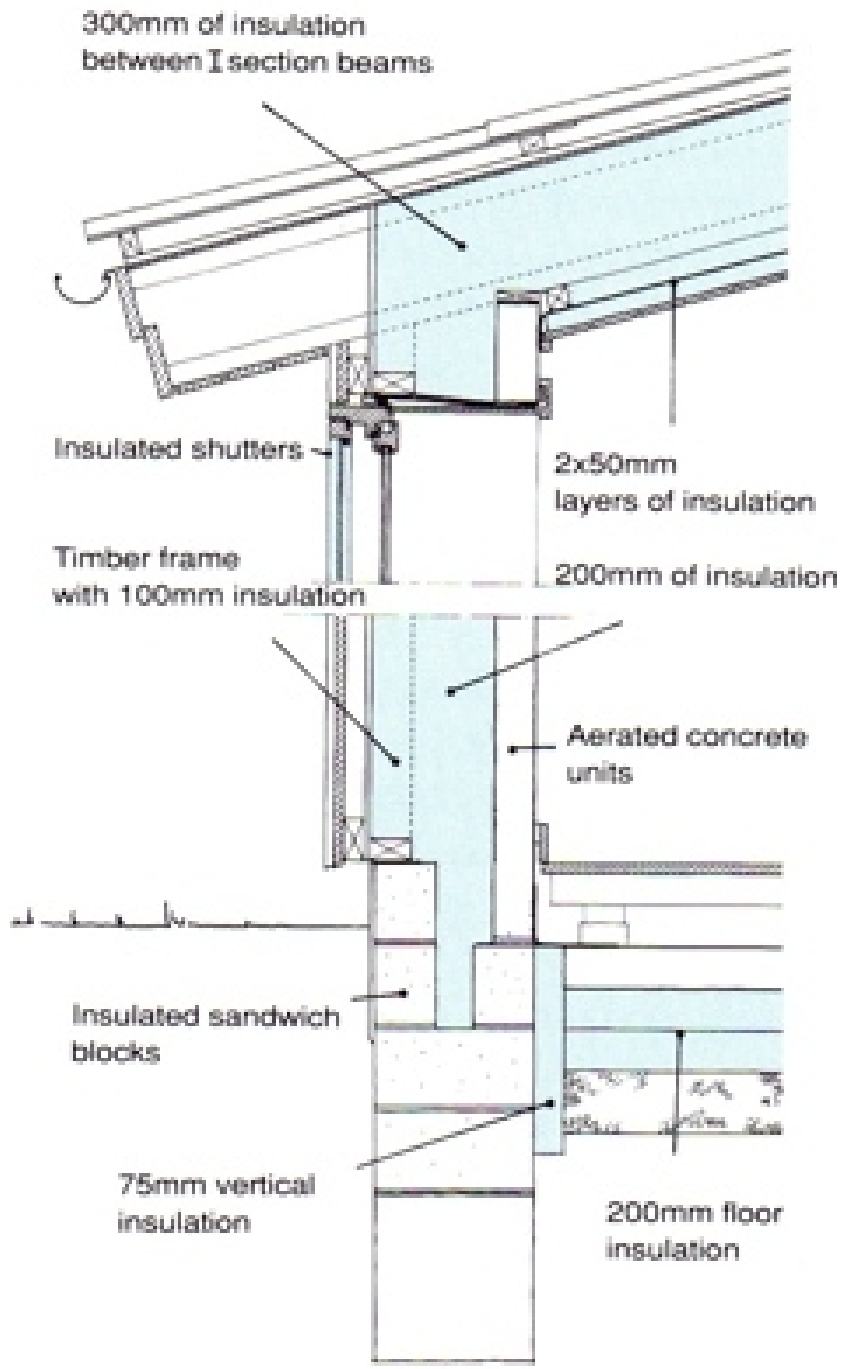
HJORTEKAER DENMARK



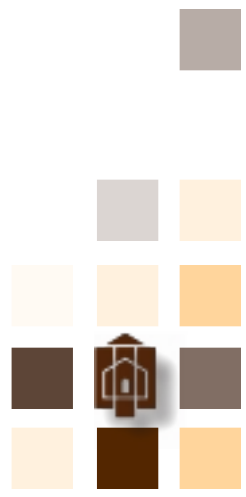


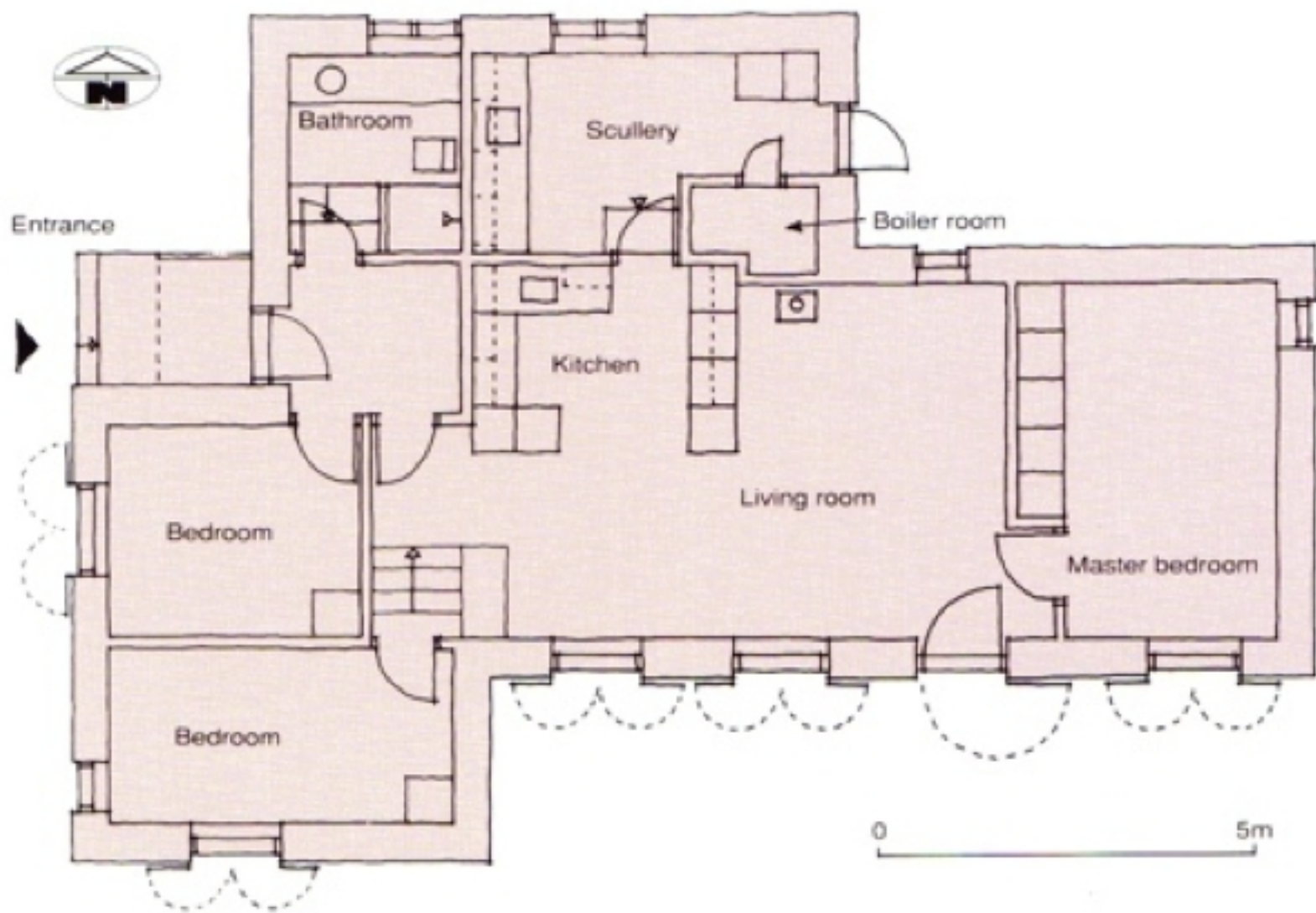
Most of the windows are located on the south side of the house, to maximise the collection of solar gains.





Window and wall construction

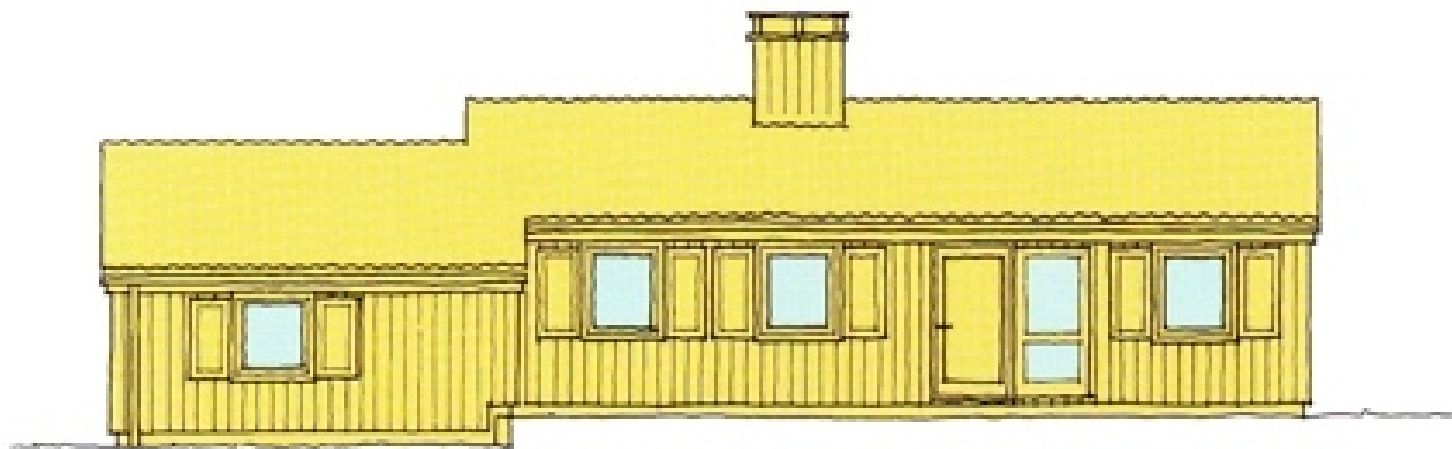




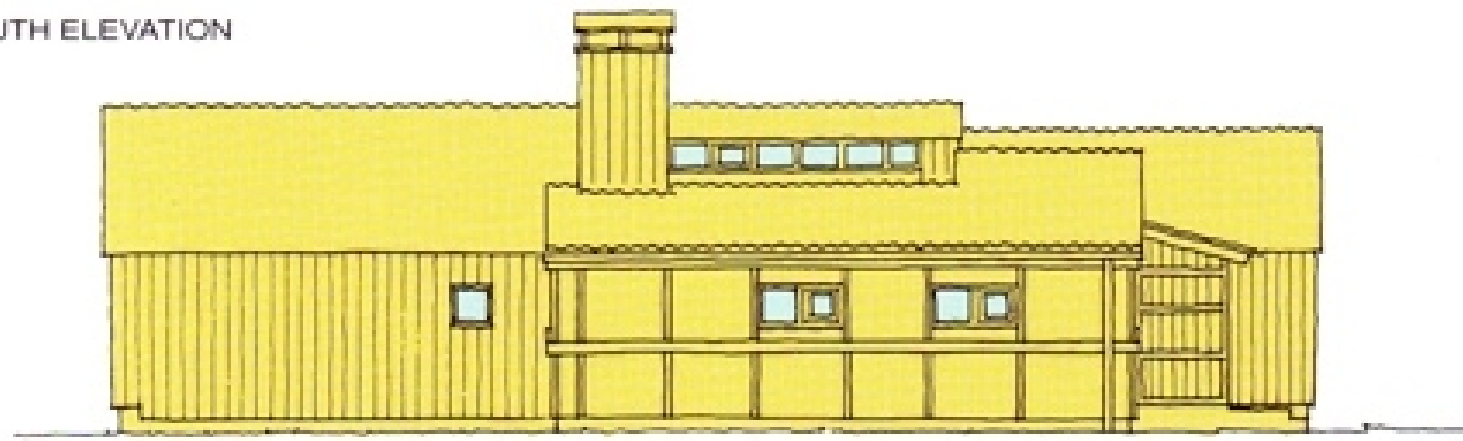
FLOOR PLAN

The house faces directly south and the internal planning ensures all principal rooms are located on the south side

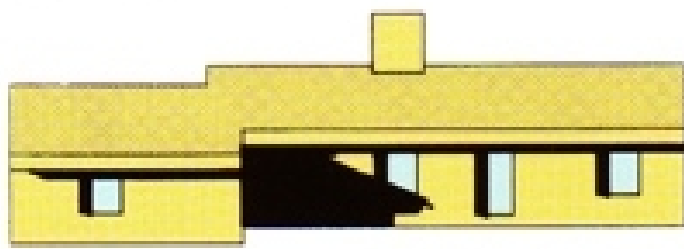




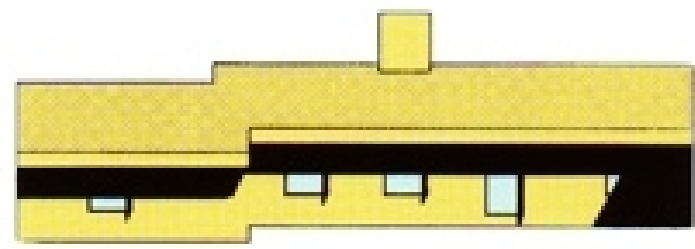
SOUTH ELEVATION



NORTH ELEVATION

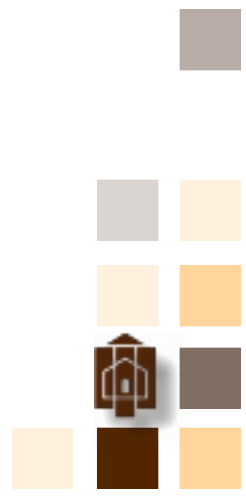


March 1st at 16:00



May 7th at 10:30

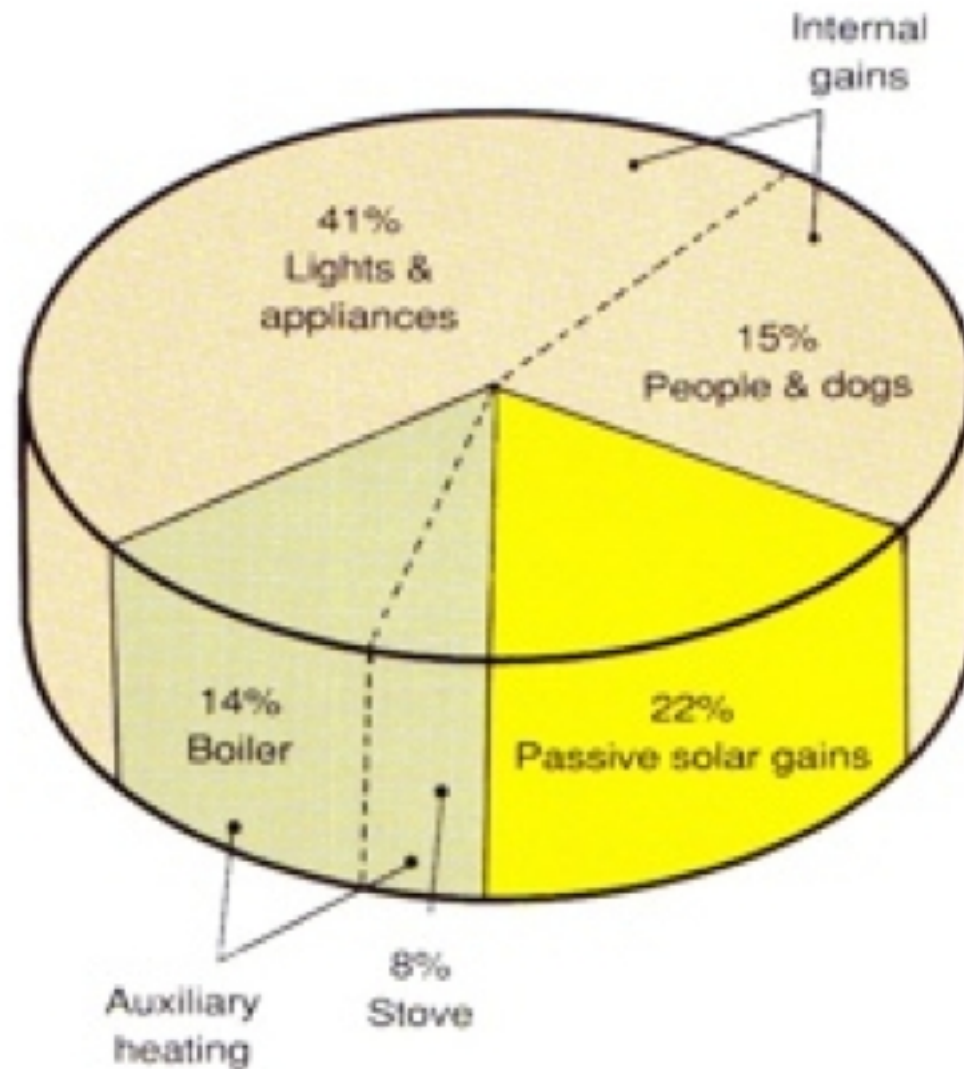
Shading of the south facing glazing at different times of the year.





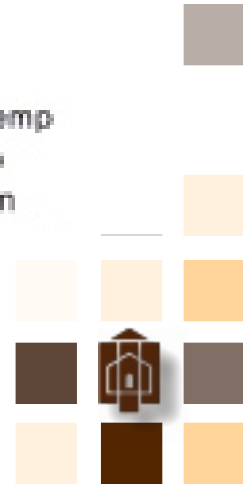
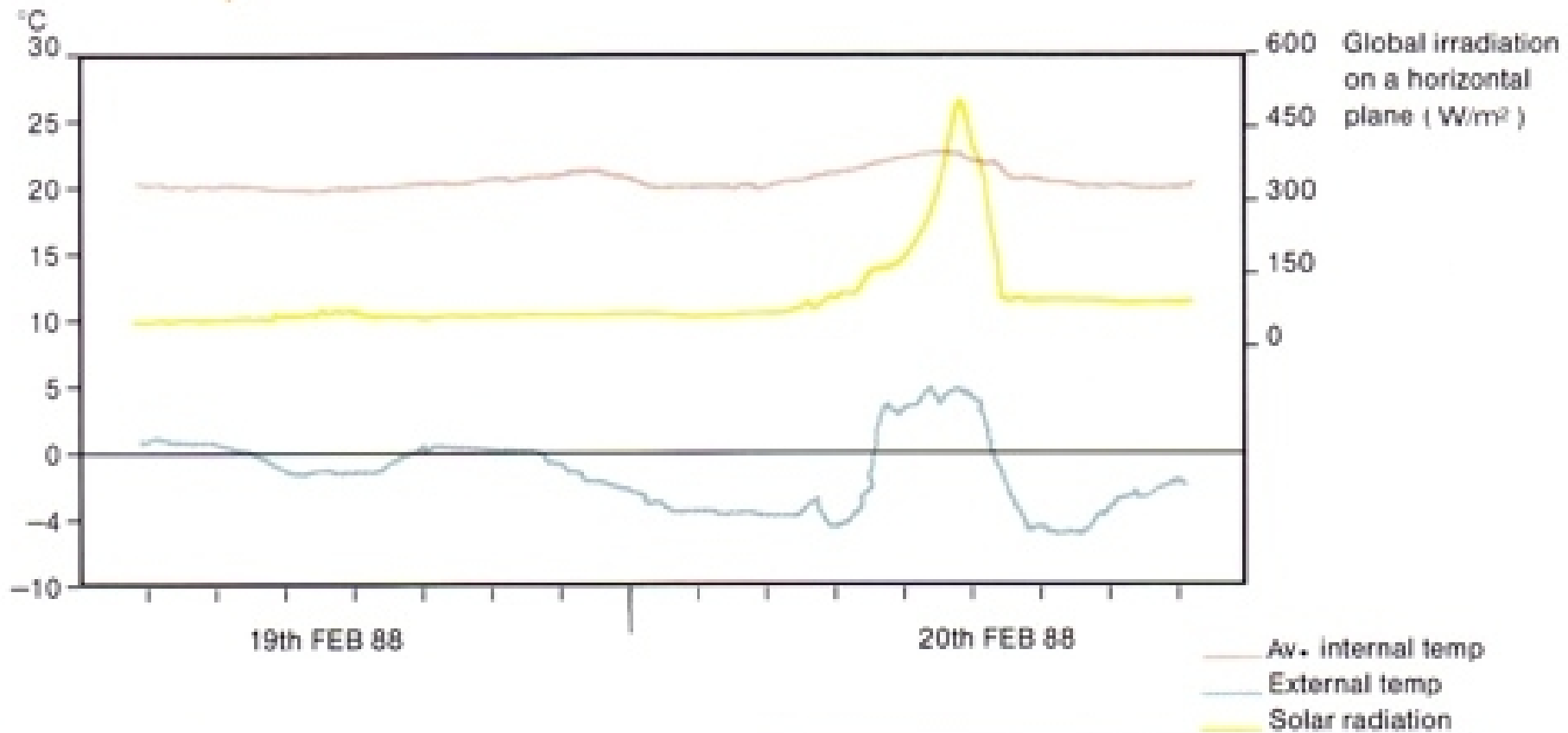
CONTRIBUTIONS TO ANNUAL SPACE HEATING DEMAND

Of the total space heating demand of 10 100kWh, only 22% was met by auxiliary heating.





ONE OVERCAST DAY AND ONE SUNNY DAY IN WINTER

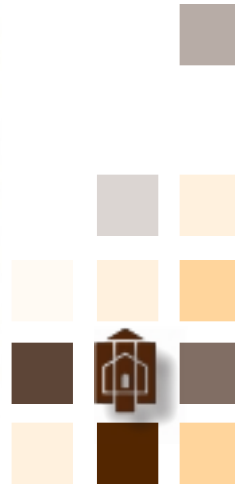




SMAKKEBO

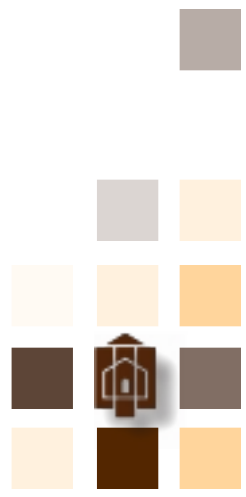
SNEKKERSTEN

DENMARK





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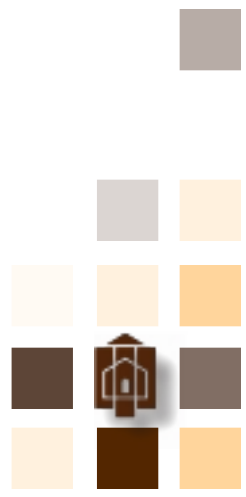
On the south facade are the sunspace, the sloping window to the living room and the solar panels of the hot water system.

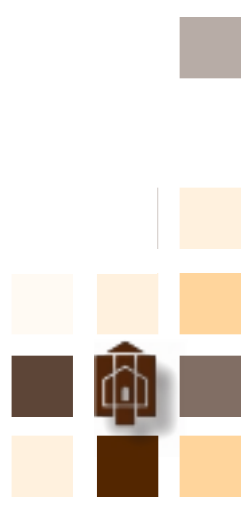
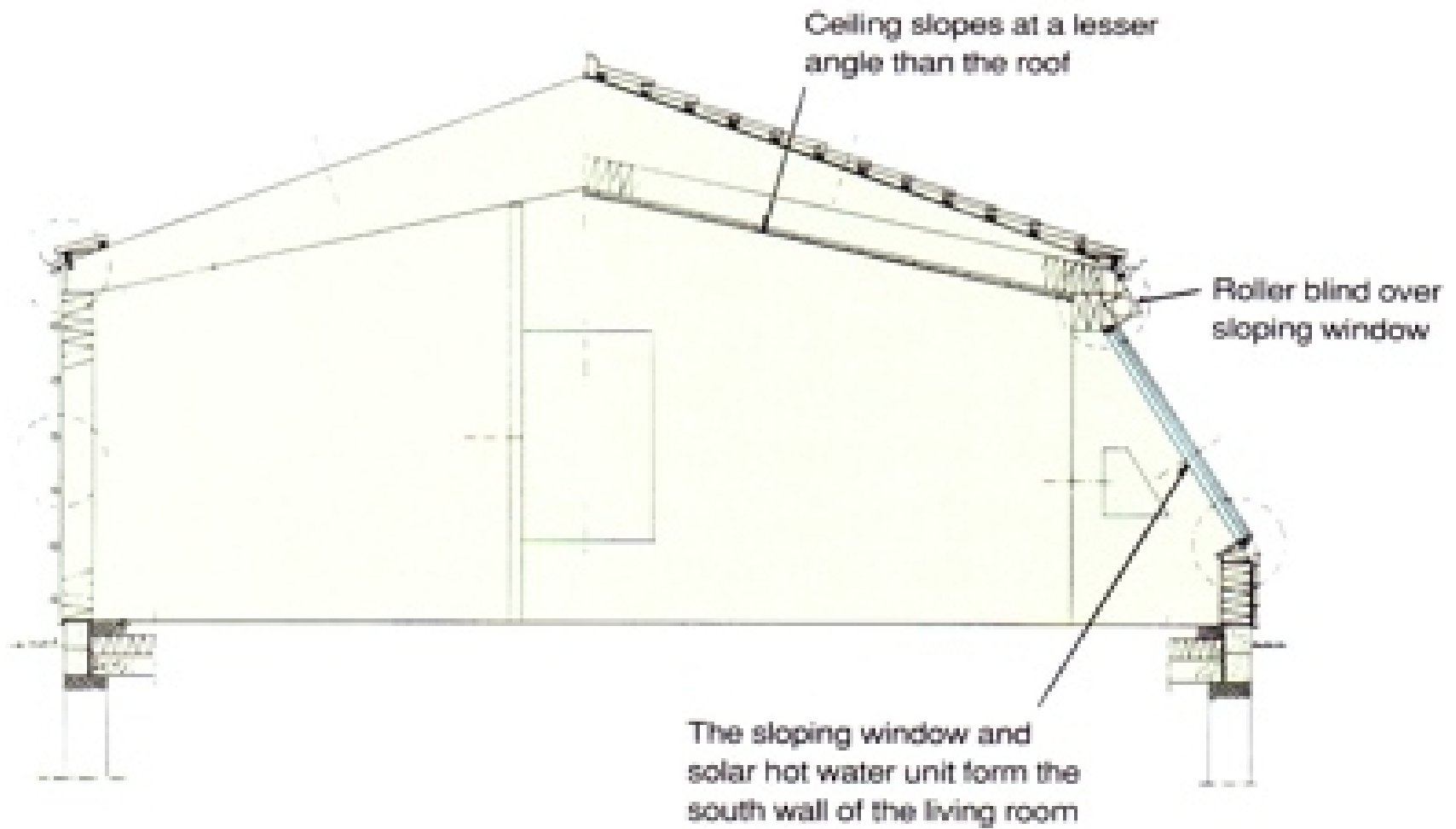




0 3m

This 2 bedroom, 97m² house was fully monitored.

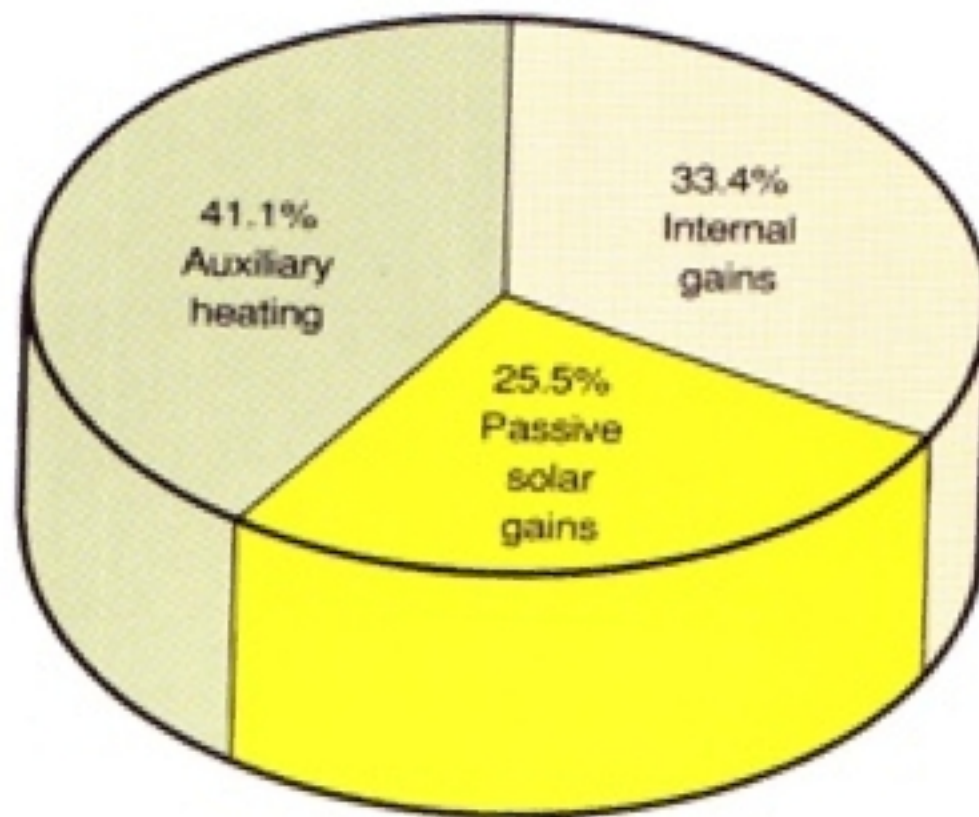






CONTRIBUTIONS TO ANNUAL SPACE HEATING DEMAND

The total annual space heating demand is 13 154kWh.

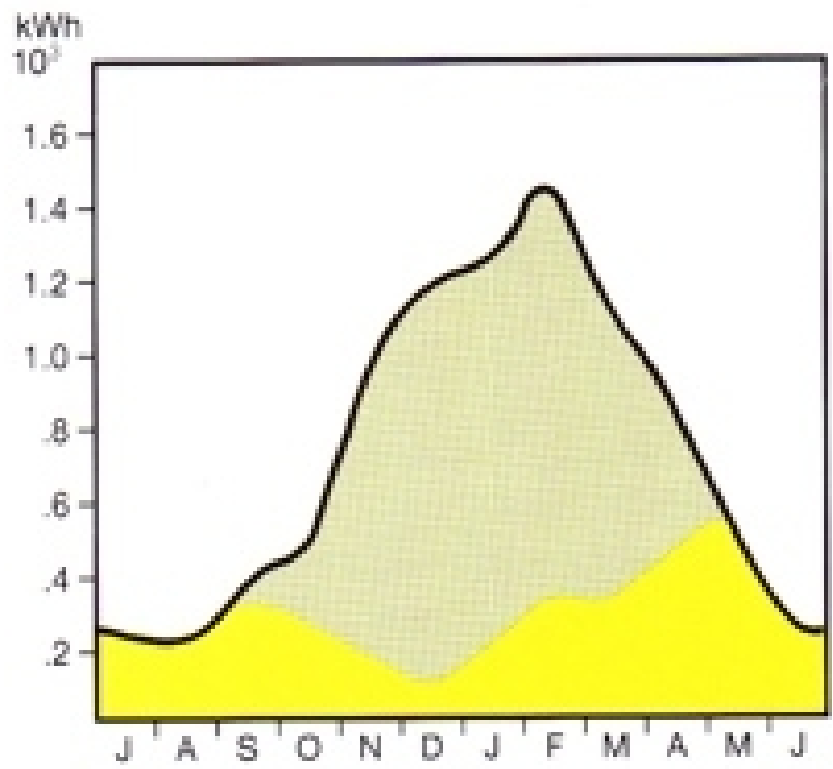


Solar gains provided 25.5% of the load during an unusually cold and overcast winter. In a typical winter, solar gains would provide 28% of the load.



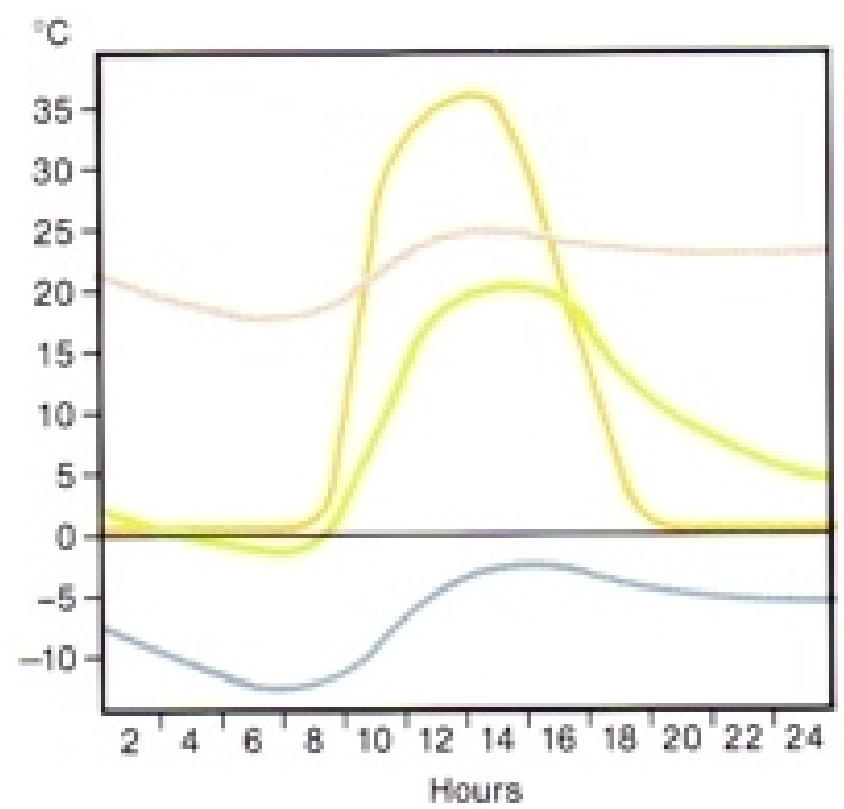
NET MONTHLY SPACE HEATING LOAD

For the fully monitored house.

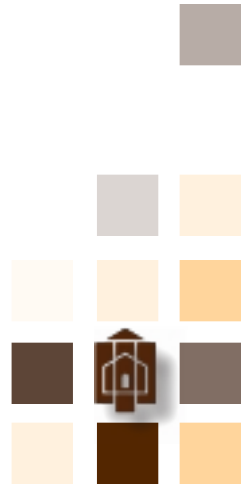


- Net sp. htg load
- Auxiliary energy
- Solar energy

SUNNY WINTER DAY

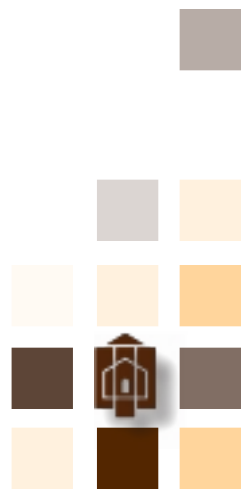


- Internal temp.
- Sunspace temp.
- External temp.
- Solar radiation/50W/m²





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