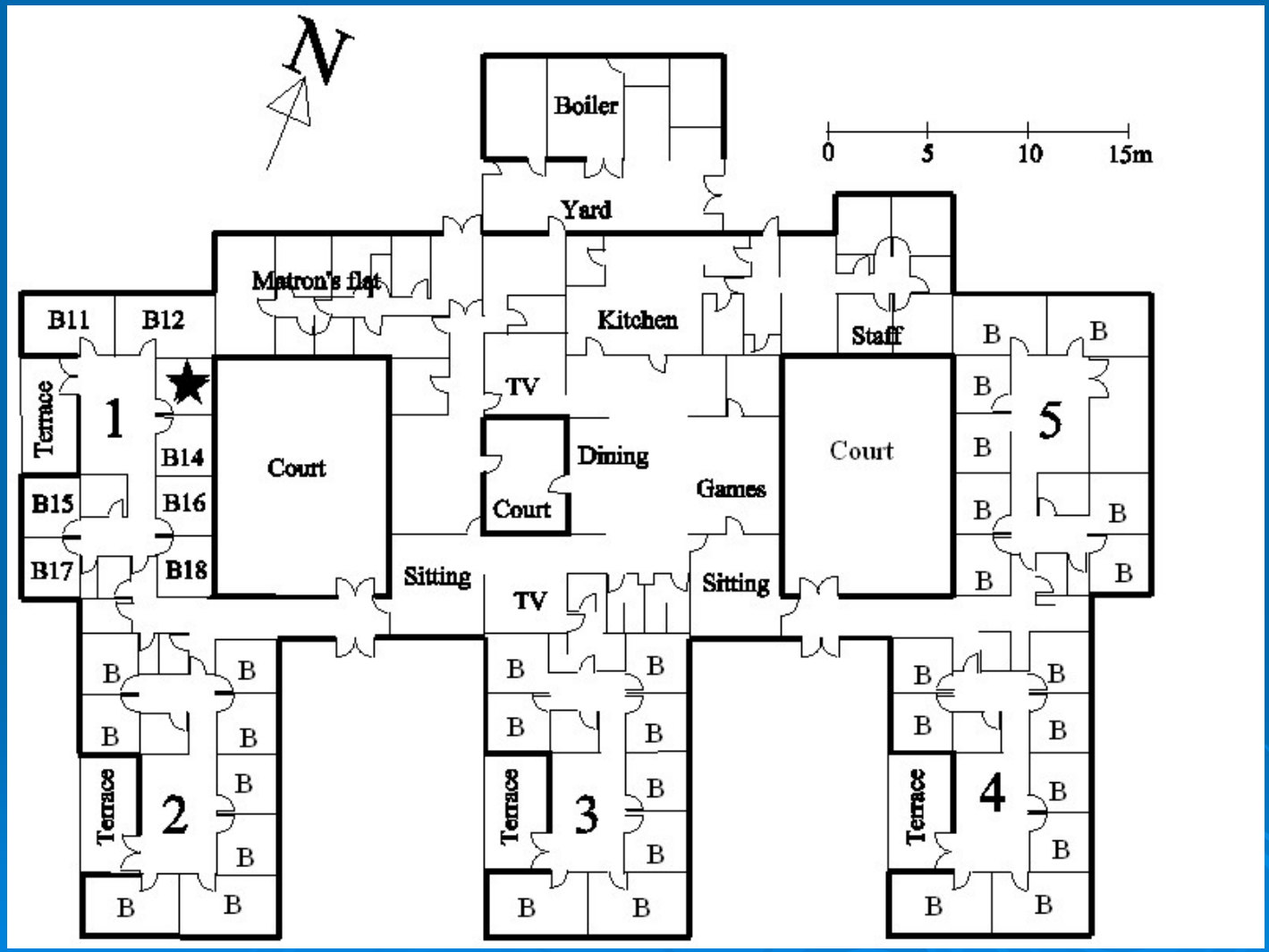
Fairfield nursing home, Edwalton, Nottinghamshire, December 1975

- In the early hours on 5 July 1972 fire started in the Winfrith ward of this hospital for mentally-impaired patients and spread while the supervising nurse was elsewhere.
- 30 patients died from smoke inhalation.
- An 8-day Public Inquiry was held.
- As a result recommendations were made to improve the fire behaviour of furnishing materials and improve staff training.

Fairfield – plan of houses

(Asterisk shows origin of fire)



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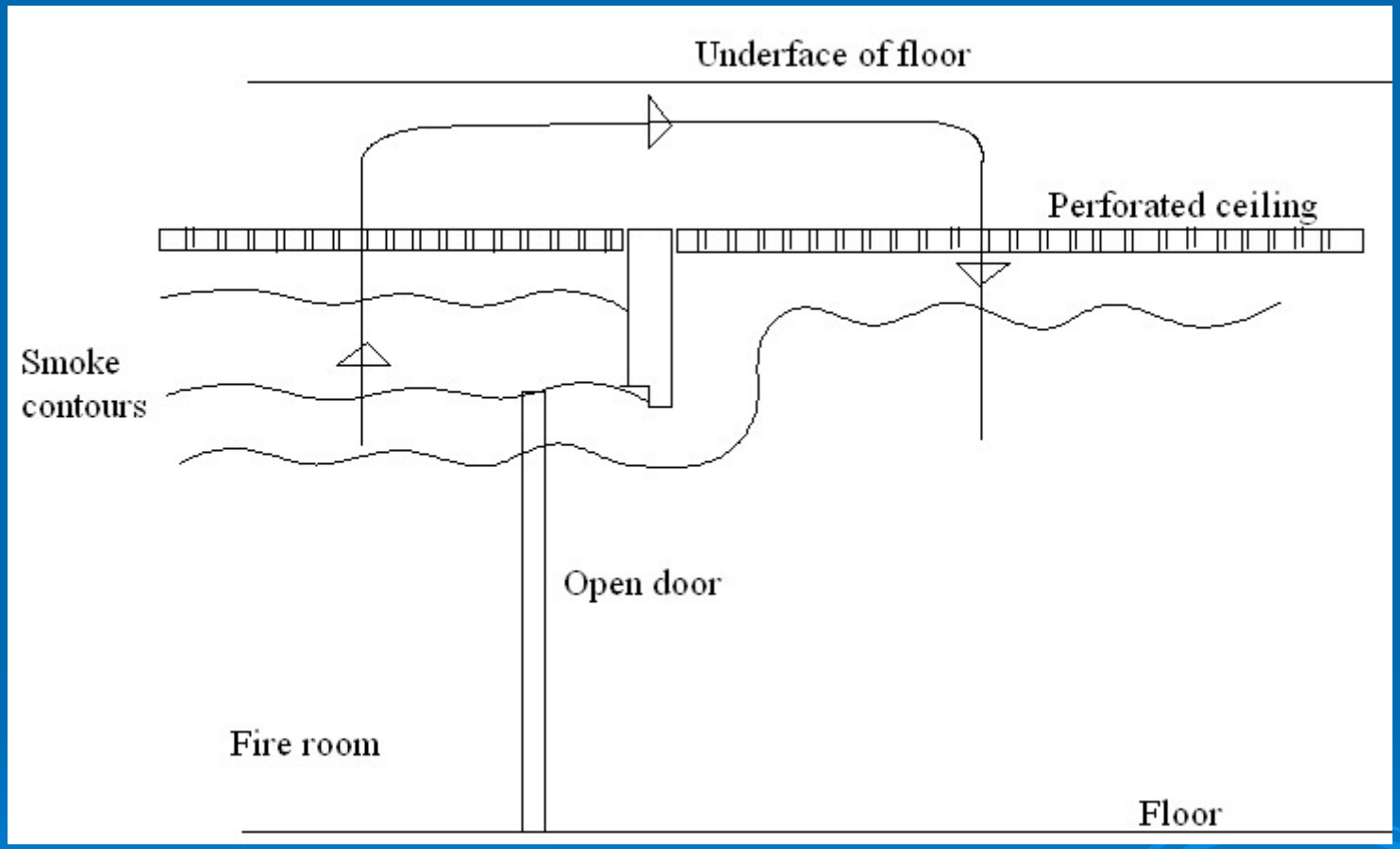
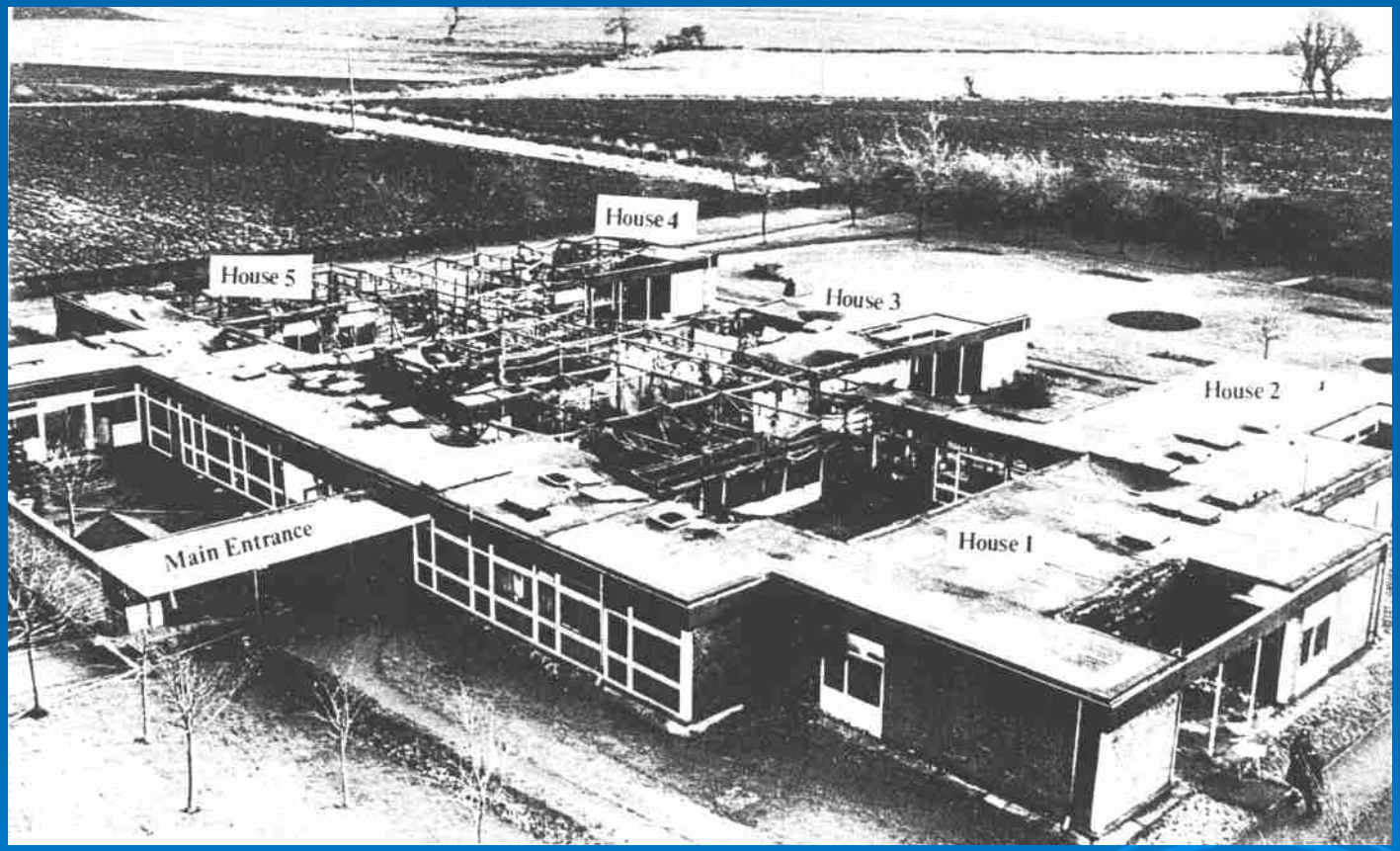
Fairfield – smoke paths



- CLASP building had no cavity barriers above the ceiling
- Two competing smoke paths – one through perforated ceiling , other through open doors along corridors and into open bedroom doors

Fairfield – fire spread damage



- Fire started in House 1 and eventually spread to House 4 where most structural damage was done.

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Fairfield – the building

- Fairfield Home was an old-persons home capable of accommodating 50 residents and its construction was completed in 1961. It comprised 5 single-storey ‘houses’, each comprising 8 bedrooms, clustered around 2 open courts.
- The building was constructed using the lightweight steel framed prefabricated CLASP system partly because it was capable of accepting mining subsidence. The external walls had cavities which communicated with the roof space and, significantly, the 21” deep roof space was entirely open over all five houses.
- The ceilings were of plasterboard supported by aluminium sections but the roof above was timber joisted with bitumen felt on top and so contained much combustible material.
- Parts of the corridor ceilings were formed with perforated plasterboard and this was capable of allowing smoke to pass upwards and downwards through it.

Fairfield – the building

- There were no fire division walls (and none were required in a building of this size according to the building regulations), though there were fire screens supposedly forming smoke stop doors in the corridors, but these did not go above ceiling level. Inner surfaces of walls and ceilings were non-combustible but contributed minimal fire resistance.
- Means of escape were good assuming fire doors were kept closed in communicating areas and passages. However the fire doors were heavy and often wedged open: the fire authority had agreed that fire doors could be kept open during the day but not at night i.e. not between 21.00 and 08.00.
- No automatic fire detection was provided but the alarm could be given at the bed head using a push button which sent a signal to the matron's room.
- The building was approximately 12 years old when the fire occurred.

Fairfield – the residents

- There were 50 residents (16 men and 34 women): 9 required wheelchairs; 19 were ambulant; 26 were over 80 years old and 11 were over 90. Several were given sedatives at night.
- The evacuation time during the day was about 6 minutes but evacuation time at night when fewer staff were available was uncertain.
- On the night of the fire there was only one staff member (a night care assistant) available.

Fairfield - observations

- None of the fires in CLASP buildings which had the characteristic roof void had previously led to loss of life
- The model Bye-laws required that in every cavity wall built wholly or partly of combustible materials, the cavity between the leaves should be fire stopped with non-combustible material at the junction of the wall and ceiling or roof. In Fairfield the external wall cavity utilised a 1.5 in thick (combustible) timber fire stop at roof level but not above window head.
- Remedial work on fire stopping CLASP buildings was in progress before the Fairfield fire but the authorities believed that priority should be given to multi-storey buildings and schools. Fairfield was neither.

Fairfield - observations

- Fire spread principally via the roof space and not through the open doors (Cooke questions this)
- Beds had interior sprung mattresses with very little synthetic material
- There was good fire alarm and fire fighting equipment installed but no fire detection
- Smoke detectors could have been provided in the roof void as an interim measure once the risk of fire spread through the roof became known from earlier fires in CLASP buildings
- Sprinklers would not have prevented smoke logging from a smouldering fire

Fairfield – observations

- Two ways of preventing fire doors being wedged open were suggested a) use electromagnetic door hold-open devices triggered by smoke detection or b) use hush latches which allow a weaker door closing spring to be used
- Window apertures (open or closed) were too small for fire fighters to enter or able-bodied residents to get out through.
- Vibrators for the deaf might help to wake people from sleep but they were not thought to be relevant to Fairfield because residents had to be prevented from going back to sleep after being woken by rescuers

Fairfield – observations

- Education of architects on fire matters was revealed as poor - building regulations were followed without understanding the underlying principles
- There was some controversy in the technical press over the supposed mode of fire spread – an FRS expert considered it more likely that smoke spread via open doors rather than via the roof space