

South Australian Metropolitan Fire Service

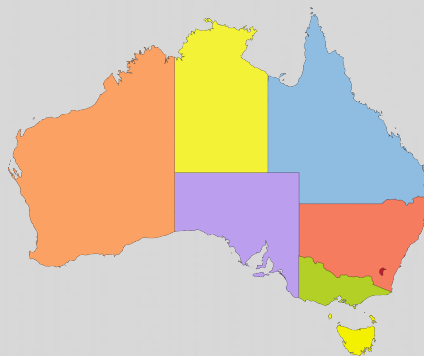
Structural Firefighting Training Learning from Beverley



South Australian Metropolitan Fire Service

Australia

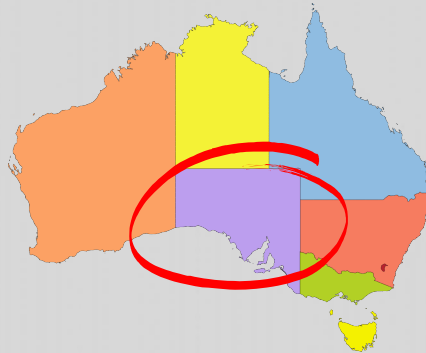
- Area 7,500,000 km²
- Population 25 million



South Australian Metropolitan Fire Service

South Australia

- Area 1,000,000 km²
- Population 1.7 million



South Australian Metropolitan Fire Service

Adelaide

- Area 3,000 km²
- Population 1.3 million



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service

MFS

- Established 1862
- 20 Metropolitan stations
- 16 Regional stations
- 1042 operational firefighters
- 95% South Australian population



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service

South Australian Country Fire Service

SACFS

- 425 volunteer brigades
- 13,500 volunteers
- 95% South Australia's land area

South Australian Metropolitan Fire Service

Structural Firefighting Training (CFBT) MFS

- 1999 Roadshow
- 2000 Recruit CFBT
- 2005/6 CFBT In-service course
– all full time firefighters
- 2012 Updated recruit presentation - SFT
- 2013 Beverley incident



South Australian Metropolitan Fire Service

Structural Firefighting Training (CFBT) MFS

- 2014 SFT In-service course
- 2015 Regional SFT theory
- 2016 SFT In-service course
- 2017 Regional SFT practical
- On going recruit training



South Australian Metropolitan Fire Service

Structural Firefighting Training (CFBT) MFS

- 3 Full time Station Officers
- 26 Instructors
- State Training Centre - Brunkunga
- Mobile facility



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



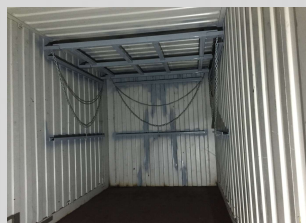
South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service

Beverley

- 13th April 2013
- Residential structure fire
- 12 Appliances
- 52 personnel on scene
- \$100,000 (AU) damage
- 2 firefighters injured



South Australian Metropolitan Fire Service



50 East Avenue, Beverley



South Australian Metropolitan Fire Service

Situation

- Structure
- Off duty firefighter first on scene
- Initial information from occupant
- 360 and initial primary search
- Opened door to room of origin
- FBI



South Australian Metropolitan Fire Service

Response - First Alarm

- A class risk
- 3 GP pumps
- 1 Aerial
- BA tender
- On shift Commander
- On call Safety Officer



South Australian Metropolitan Fire Service

Conditions on arrival of 1st appliance

- Thick black smoke issuing
- Informed of 'persons reported'
- Front doors locked
- Rear door open



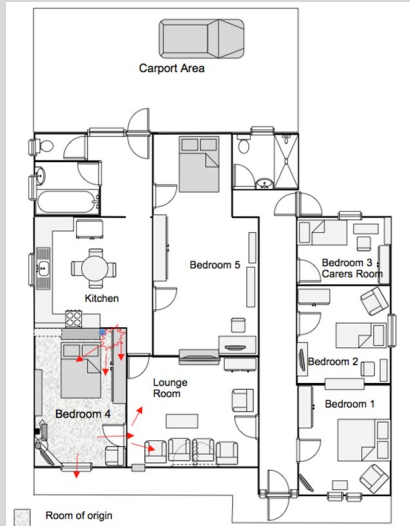
South Australian Metropolitan Fire Service

Incident action plan

- Upgrade alarm
- Objective - search and rescue
- Strategy - offensive
- Tactics
 - BA crew, HP line, rear door, RHS
 - BA crew, HP line, rear door, LHS
 - BA crew, force entry, front door



South Australian Metropolitan Fire Service

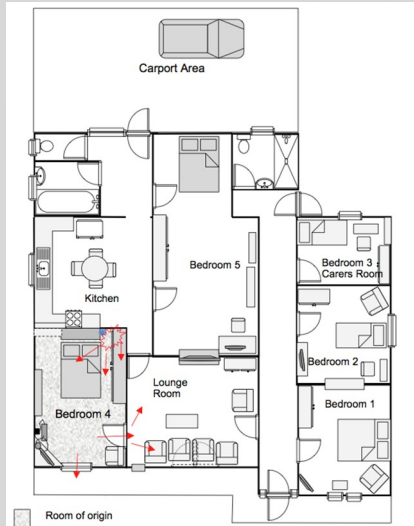


South Australian Metropolitan Fire Service

Timeline

- | | |
|------|------------------------------------|
| 1533 | Initial call |
| 1541 | First appliance arrival |
| 1542 | BA crew 1 deployed - RH search |
| 1543 | BA crew 2 deployed - LH search |
| 1549 | BA crew 3 deployed - front door SE |

South Australian Metropolitan Fire Service

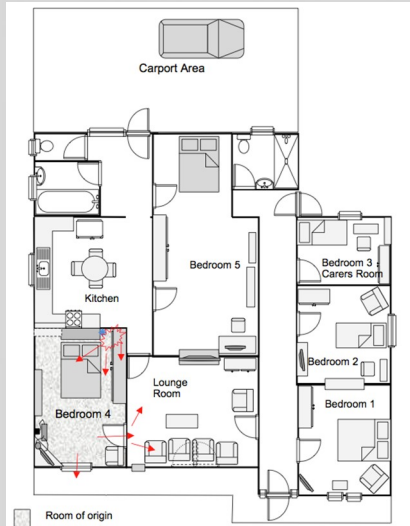


South Australian Metropolitan Fire Service

Timeline

- 1550 BA crew 2 request ventilation
Denied as seat of fire not confirmed
- Unknown PPV fan activated
- 1551 NE front door forced open
- 1552 BA crew 1 attempt cooling and
decide to evacuate

South Australian Metropolitan Fire Service



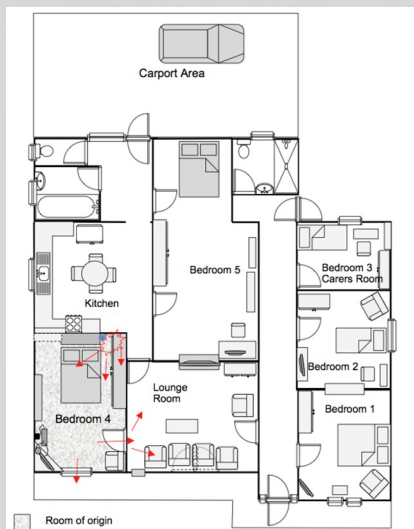
South Australian Metropolitan Fire Service

Timeline

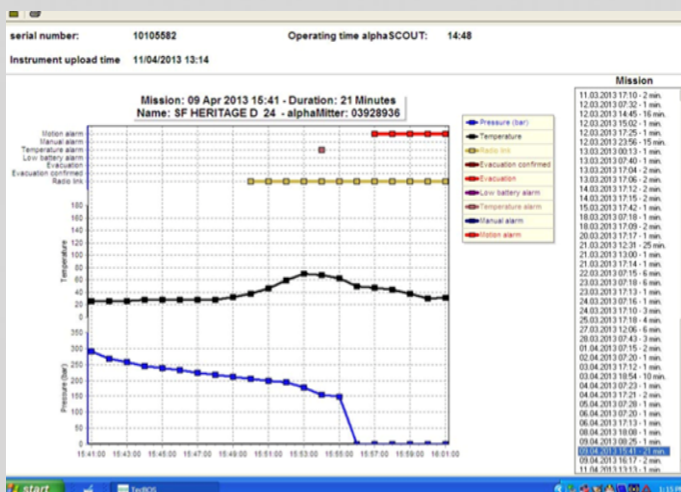
- | | |
|------|--|
| 1553 | 1 member of BA crew 1 exits alone then re-enters |
| 1554 | BA crew 1 and 2 exit rear door
2 firefighters injured |
| 1604 | Fire extinguished, primary all clear |
| 1610 | 2 injured firefighters transported to hospital |



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service

Injuries

D.H.

- Full thickness burns to large portions of both arms
- Burns to lower abdomen
- 8 months rehab
- Not able to return to full duties



South Australian Metropolitan Fire Service

Injuries

B.G.

- Burns to upper torso, shoulders and upper arms
- 1 month rehab
- Returned to full operational duties



South Australian Metropolitan Fire Service

Contributing factors

- Door to room of origin opened prior to fire crews arriving
- Fire behaviour
- Low neutral plane
- Poor visibility
- High temperature



South Australian Metropolitan Fire Service

Contributing factors

- TIC not utilised
- Crews standing while advancing
- Duration of interior activities
- Heat soaking of PPE
- Disorientation on evacuation
- Frequency of training



South Australian Metropolitan Fire Service

Supporting information

"Burn injuries can occur at relatively low skin temperatures. Discomfort or pain will be experienced at temperatures of about 7° C above core body temperature (about 44° C), second degree burns will occur with skin temperature about 18° C above core body temperature (about 55° C), and instantaneous skin destruction will occur at 35° C above core body temperature (about 72° C)."

Lawson R. J., Thermal Performance and Limitations of Bunker Gear. Fire Engineering, August 1998



South Australian Metropolitan Fire Service



Figure 4

PPE Worn by S/F Heritage at the Beverley House Fire Incident



South Australian Metropolitan Fire Service

Lessons learnt.....



South Australian Metropolitan Fire Service

Recommendations

- Limit operational duration
- Larger diameter hose lines
- Communications
- Effective rehab



South Australian Metropolitan Fire Service

Recommendations

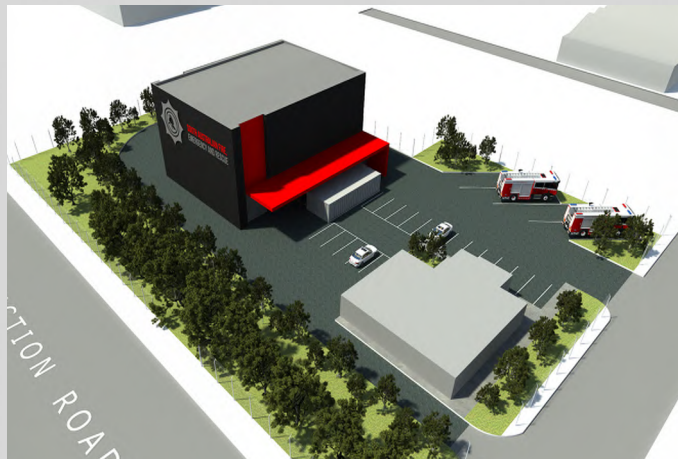
- Training
 - TIC
 - Tactical Ventilation
 - Structural Firefighting Training



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service



South Australian Metropolitan Fire Service

