

LANCASHIRE COUNTY FIRE BRIGADE

FIRE PREVENTION DEPARTMENT



ACCIDENT INVESTIGATION REPORT

TALBOT SHOWROOMS  
440 TALBOT ROAD  
BLACKPOOL

5 MAY 1990



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FATAL FIRE 5 MAY 1990**

**TALBOT SHOWROOMS  
440 TALBOT ROAD  
BLACKPOOL**

<b>ATALITY FIREMAN</b>	<b>J F SINGLETON</b>
<b>NJURIES TO FIREMAN</b>	<b>1</b>

**ACO J LIVESEY**

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### S U M M A R Y

After careful examination of all the reported evidence it is considered that the circumstances which led to the tragic death of Fireman Singleton and caused Fireman 1 to sustain his injuries were outside the direct control of Brigade personnel and their activities. The swiftly changing events at this fire could not have reasonably been foreseen, neither could the effects of the building structure in concealing and contributing to the spread of the fire to the extent that it did, have been recognised given the circumstances on arrival. It is therefore considered that Fireman Singleton's death was accidental and followed from his actions to escape from the heat and smoke.

Assistant Chief Officer J Livesey

LANCASHIRE COUNTY FIRE BRIGADE

ACCIDENT INVESTIGATION REPORT  
TALBOT SHOWROOMS, TALBOT ROAD, BLACKPOOL  
5 MAY 1990

Fatality: Fireman John Singleton  
Casualty: Fireman 1

The purpose of this investigation is to examine the circumstances surrounding the death of Fireman John Singleton and the injuries sustained by Fireman 1, to determine the cause of the accident, the effectiveness of the existing operational safety procedures, to determine whether these safety procedures failed for any reason and as to whether additional safety measures are necessary for future incidents and if so, to make the necessary recommendations.

Introduction

Incident number 718, 15 repeat calls.  
Time 1758 hours. Date 5 May 1990, Saturday.

Original call logged 1758 hours 16 seconds, address given, Talbot Showrooms, Talbot Road, Blackpool. Initial response was two fire appliances designated A300 and A301.

Message Sequence

Time 1801: Make pumps 6.  
1812: Informative from ADO 1 - a building used as a furniture warehouse, 2 floors, ground floor well alight, whole of premises smoke logged.  
1816: From ADO 1 make pumps 10, for Breathing Apparatus.  
1820: North West Water informed.  
1836: From SDO 1 - building well alight, 3 persons not responding to evacuation call.  
1839: Request 3 ambulances to attend incident, SDO 1  
1840: From SDO 1 - make pumps 15.  
1845: From SDO 1 - request North West Water informed to increase pressure to area.  
1852: From DCO - make pumps 20 for water relay.  
1855: From DCO - 1 Fireman unaccounted for.  
1952: From DCO - stop 8 jets, 1 turntable ladder monitor.

Circumstances Prior to Fire

On Saturday 5 May 1990, the premises were open all day for business, closing sometime between 1730 and 1750 after the last customer had left. At this juncture, the four sales staff left the premises by the front entrance door, having isolated the main electrical intake and activated the intruder alarm. One of the staff traversed around the building to check the security of the external double doors at the rear, before driving home. None of the staff reported seeing anything unusual prior to leaving the premises.

### Reason for Calling the Fire Brigade

The initial call was received at 1758 hours 16 seconds on Saturday 5 May 1990 from a Mem P 1, who alerted by the intruder alarm looked through the lounge window of her property, opposite the front of the premises and noted smoke issuing over the top of the building.

The second call was received from Mem P 2, the occupier of the first floor flat above Layton Cleaners, Address Removed. This flat overlooked the rear of Talbot Showrooms, being a premises on the adjacent terraced block on the west side. Her daughter and herself noted flames inside a rear ground floor window nearest the front of the building, adjacent to Mather Street and initiated a call.

An additional 14 calls were received from a variety of sources from this time onwards.

### Description of the Building

History - the building, constructed in 1890 was purpose designed for use as a laundry. Following its cessation as an operational laundry, it was purchased in the early 1960's for conversion into individual retail units.

Talbot Road Showrooms established its trade in approximately 1969, initially occupying the north east corner of the ground floor. At this time, several other occupiers were trading from the ground floor and the first floor operated as a bingo hall.

Talbot Road Showrooms expanded over the next few years until, in 1975, they purchased the building in its entirety.

In 1979 a fire in the single storey section at the rear of the building resulted in extensive damage. The area was rebuilt over the following two years which improved access from the two storey section into an extended ground floor showroom at the rear.

In 1989 the building was further expanded by the incorporation of an adjacent unit on the west side of Talbot Road, providing for an increased ground floor sales area.

Construction - the building comprised one and two storey sections. The two storey section fronting on to Talbot Road measured approximately 25 m x 30 m. To the rear, the L-shaped single storey section measured 25 m x 22 m. The showroom ran through both single and two storey sections of the building. The separate ground floor unit, purchased in 1989, was incorporated into the existing showroom area by a large opening formed in the separating wall extending southwards from the shop frontage. Both ground and first floor showrooms incorporated offices, rest rooms and toilet facilities, accessed through the rest rooms.

Since its original construction in 1890, the building structure has been constantly changed following conversion into trading units, reconversion into a single trading unit and subsequent expansion into an adjacent trading unit. Further changes occurred following the fire in 1979 and as a result of a refurbishment programme to render the building as attractive as possible.

All walls in the original one and two storey sections were constructed of brick, a 15 inch cavity wall enclosed the ground floor section and a single 4½ inch wall with brick buttresses rose from the first floor to roof level.



The frontage and part of the east side of the building was constructed in accrington facing brick with sandstone copings, the remainder constructed of common bricks. Internal support was provided by a row of cast iron columns running north to south through the centre line of the building. These columns supported mild steel flitched beams running from the external walls through the central columns in an east west direction, onto which the first floor rested. (See Plan Appendix A)

The first floor was tongue and grooved timber boarding on timber bearers which in turn were supported on flitched beams, these had at one time been stained and varnished. The floor was not underdrawn but made pleasing to the eye by means of a false ceiling constructed of a light fibre board. The beams were therefore exposed within a large void. It is known some of the fibre board tiles were missing and some were not properly secured in position. The floor itself was levelled with bitumastic screed laid on hessian matting. Information from a staff member indicated there were several gaps in this bitumastic screed caused by restructuring. The gaps had been infilled with chipboard to create a level surface. It is known there were holes and gaps in the floor and at the edges where it met the wall. One hole of approximately 75 mm was caused by the removal of the original piped water heating system. Additionally the first floor sales area was known to be 'springy' from a point just inside the open sales area to the head of stairs through the rear wall. The south east corner had sunk leaving a gap of some 75 mm through which the ground floor could be seen. Both ground and first floor showroom areas were overlaid with foam backed carpet. (See Plan Appendix B)

The first floor ceiling was originally constructed of lath and plaster which had over the years deteriorated. Several cock lofts had been provided for access to the roof void and several areas of glazing, originally provided illumination via roof lights. On the outside these were in later years covered with slates but the side panels to the roof lights remained in situ and provided a funnelling effect for the heat and smoke. It is believed these were the cause of hot spots on the roof pitch noted from outside.

The suspended ceilings were installed only in the two storey section of the ground and first floor showroom areas. Constructed of flame retardent panels, they were supported by means of a light metal lattice framework. The design was such that in some areas they extended below the full height of the window. The windows were recessed on the outer wall but the ceiling maintained its wall line, thus an open gap existed between the window and ceiling. This was the case with the windows facing Mather Street. (See Drawing Appendix C)

The overall height of the building was approximately 12 metres. The ground and first floor each approximately 3.8 m in height and the single storey section some 4 metres in height. The ceiling voids, within which it is believed there was no fire stopping, varied in depth from 500 mm to 800 mm. Following the fire in 1979, the single storey section was re-built of common brick with a concrete block interior. The rear wall of the two storey section was removed at ground floor level and support was provided by a rolled steel joist on steel columns. Several internal walls within the building were of studded timber construction and it is also understood existing solid walls had been boarded over serving to create hidden voids.

Building Contents - General - the buildings sales areas contained large quantities of bedding, carpets and soft furnishings. The owner reported that all furniture conformed to the current furniture regulations and contained only combustion modified foam.

Office areas at both levels contained desks, chairs and filing cabinets.

The toilets also stored combustibles, part used paints and rugs in plastic wrappings.

Ground Floor - apart from window display areas, this floor was used primarily for the display of carpets. The centre and eastern side displayed the more expensive hessian backed carpeting. The western side exhibited foam backed carpet on horizontal display stands and vinyl floor covering. Bathroom carpets were displayed to the east and rear. The rear walls exhibited carpet and vinyl remnants in a vertical position. (Appendix A)

First Floor - bedroom furniture and bedding occupied the area fronting Talbot Road. Wall units and tables were located around the walls and the remaining areas displayed a variety of 3-piece suites. (Appendix B)

#### Firefighting Operations

In accordance with normal operational procedures, the response to the initial fire call was by two fire appliances from the fire station, Forest Gate, Blackpool with a Station Officer in charge. The two appliances designated calls signs being A300 and A301.

In response to a request for assistance at 1801 hours, a further four appliances were mobilised to the incident from South Shore, Bispham and St Annes Stations, as follows:-

- 1 fire appliance from South Shore, St Annes Road, Blackpool designated A370
- 1 fire appliance from Redbank Road, Bispham designated A310.
- 2 fire appliances from St Andrew's Road North, St Annes designated A360 and A361.

At the height of the incident the number of fire appliances was increased to twenty, together with one turntable ladder fire appliance and a number of operational support vehicles.

The fire was brought under control at 1952 hours the same day by the use of eight firefighting jets and one turntable ladder monitor.

When the evacuation whistles were sounded and the firefighters withdrawn from the building, one fireman remained unaccounted for. His companion having been rescued and transferred via Victoria Hospital, Blackpool to the Burns Unit, Preston Royal Infirmary.

At 0618 hours on the 6 May 1990 the body of Fireman John Singleton was located amongst the debris.

The incident was finally closed at 0813 hours on 8 May 1990.

#### THE FIRE

Of relevance to the accident investigation are appliances A301 and A300 Blackpool, A310 Bispham, A370 South Shore, A360 and A361 St Annes, A320 Fleetwood and A350 Lytham and this report will confine itself to the actions of the personnel of those appliances as necessary. (Appendix D)



In response to the initial call, Station Officer 1 with appliances A301 and A300, attended the incident. On the approach route, crew members noted large plumes of black smoke emanating from the direction of this incident. Traffic congestion restricted access by both appliances to Talbot Road and they parked in Mather Street. A301 parked level with the alleyway, giving access via a 1.5 m high perimeter wall to the west side of the building. Black smoke and flames were noted issuing out of the two ground floor windows and rolling up the face of the building to re-enter a broken window directly above at first floor level. Initially the crews brought two firefighting jets on the fire. From their position they were able to see into the building. The immediate area was well alight involving rolls of light foamed carpet stored on racks. It was noted that the underside of the first was also starting to burn.

The officer-in-charge having implemented an immediate attack on the fire passed instructions for the transmission of an assistance message to mobilising control requesting four additional fire appliances. This initial action completed, he ran to the front of the building to assess the situation there. He noted that whilst the ground floor windows were smoke stained, there was no sign of heat crazing nor any visible sign of fire. Having satisfied himself on that point he completed a quick survey around the perimeter of the building returning to the Mather Street alleyway where he found flame and smoke clearly visible, issuing from the two ground floor windows. Access to the fire area was gained via a 1.5 m high boundary wall and firefighting jets were relocated to provide a more concentrated attack.

As the reinforcing appliances arrived they were directed along the front of the building on Talbot Road and positioned to provide access to the front and east sides in order to surround the fire and bring about its extinguishment.

Appliance A300 was also relocated on Talbot Road at the junction of the east side alleyway for the purposes of making entry. Some delay was experienced whilst the possibility of LPG cylinders being located within the building was investigated but this quickly proved unfounded.

Once the main gas and electric services had been isolated, Leading Fireman 1 and Fireman 3 from appliance A300 entered the ground floor of the building from the east side with a firefighting jet through a fixed timber louvered window part way down the alley which they had broken to gain access. Once inside they found visibility surprisingly good and they made their way to two pockets of fire on the far side of the room towards the centre. Progress was difficult because of congestion from sizeable stocks of furniture, display cabinets, carpeting and carpet squares and it was necessary to thread the hose line through the various items of display in order to reach the required position from which to mount an attack on various fire areas. At this point in the operation the front access door was clearly visible to those inside as were the firefighters crouched within the doorway. This was the access point by which the Breathing Apparatus crews entered to reach first floor level. In the meantime appliance A310 in accordance with instructions, had been sited on the Talbot Road opposite the salesroom. The officer-in-charge of the appliance was Sub Officer 1 who, following a briefing, provided a firefighting jet and committed his two BA wearers, Firemen 1 and Singleton through the east side main entrance to first floor level by means of the internal staircase. Prior to their entry Sub Officer 1 had been made aware of what appeared to be two hot spots on the roof of the building midway up the roof pitch near the middle of the front elevation indicating the possible presence of fire at that level.

Both men started up their Breathing Apparatus (BA) Sets and went under air and were provided with a personal radio by Sub Officer 1. They entered the building at approximately 1813 hours leaving their BA tallies in the rear of the appliance. Fireman 4 set up the BA entry control board and unable to locate Singleton's BA tally entered both using the information from Fireman 1 tally, the time of entry being approximately 1813 hours.

Sub Officer 2 of appliance A370 had committed two BA men, with a firefighting jet to the ground floor of the building at the west side main entrance. As additional appliances arrived they were committed around the perimeter adjacent to various points of access through which entry to the building could be made, in anticipation of completely and effectively surrounding the fire area. At this point, approximately 1820 hours, the personnel were in general agreement that the smoke level was quite light, visibility generally good, the temperature reasonable and firefighting activities were seen to be effectively controlling the fire which had diminished to the extent the flames were 'knocked'. Particularly apparent to the crews was the changing colour of the smoke from black to light grey, an indication that the gaseous products of combustion and the combustion process was being effectively controlled.

The personnel at this time who had penetrated the building and were actively engaged in firefighting were Leading Fireman 1 and Fireman 3 A300 who, from the east side had penetrated the ground floor to the centre of the building. Firemen 1 and Singleton who had accessed the first floor and were circuiting internally the perimeter wall initially in a westerly and then a southerly direction. Leading Fireman 2 and Fireman 5 of appliance A370 who initially penetrated the ground floor and had completed their allotted task and were committed up the internal staircase to assist Singleton and FM 1 to manouvre the hose line round the various obstacles on a congested first floor. Fireman 6 and Fireman 7 arriving on appliance A360 got to work at ground floor level feeding hose up the stairs to the crews above. A Police video shows Leading Fireman 2 and Fireman 5 being committed to the building at approximately 1818 hours.

Initially conditions on the first floor were described as reasonable, the temperature whilst hotter than that found on the ground floor, was not excessively so and the smoke whilst thicker provided a partially crouched fireman with a satisfactory level of visibility. Leading Fireman 2 and Fireman 5 joined Fireman Singleton and 1 on the first floor and were asked by them to feed the hose to facilitate continued penetration of the building. They returned to the head of the staircase and manouvred hose into the building and formed coils of hose for extension.

Congestion coupled to a decreasing visibility made manoeuvring of the hose difficult and it was necessary for the personnel at intervals to move along the hose line freeing kinks and releasing it from a variety of obstructions. Fireman Singleton and 1 progressed parallel to the southerly running wall, past the window from which FM 1 was eventually rescued and located a fire in the ceiling void some 12 metres away towards the centre of the building at approximately a 90° angle from their position adjacent to the southerly wall. They communicated this information over the radio and moved into a position to attack it with a firefighting jet. Leading Fireman 2 and Fireman 5 backtracked the hose line towards the staircase feeding the hose to the men fighting the fire whom Leading Fireman 2 could hear ahead of him. Both note that whilst visibility was considerably reduced, the temperature was not excessively high. Without warning they report this situation altered swiftly and dramatically, the heat immediately became unbearable and conditions untenable.

Leading Fireman 2 ordered Fireman 5 out of the building and turned towards Fireman 1 and Singleton on the firefighting jet. Unable to penetrate far because of the intense heat and smoke he shouted warnings for them to get out and began tugging on the hose line, which was still charged, but it remained taut and would not yield. Leading Fireman 2 reported his ears began to blister and wax was beginning to run from them. Unable to reach Fireman Singleton and 1 he began to crawl along the hoseline towards the stairway. The situation was critical with no respite from the heat which continued to increase to the extent he believed he might be heading towards the fire. It was only by locating a married hose coupling that he was able to confirm his direction. He emerged from the building with Fireman 5 who had waited below, his hands and ears blistered and his fire tunic smouldering. Eye witness reports are to the effect that he gave the impression of being ready to burst into flame and he was immediately doused with water by his colleagues.

For Leading Fireman 1 and Fireman 3 on the ground floor, the situation proved similar. From a fairly stable firefighting operation over the space of a few seconds, conditions deteriorated into a life threatening situation. They report at ceiling level they observed a rapidly advancing wall of flame some one third metre in depth. By the time they had repositioned their jet to meet it, it had deepened to a metre and passed over their heads to the front of the building. Dense black smoke swiftly descended to floor level, coupled with a rapid rise in temperature and the water supply to their jet was lost. It is believed fire burnt through the hose line as the pump operator outside reports the continued delivery of water but a sudden pressure drop indicative of open ended hose line. Their escape by their access point was cut off, debris and objects were falling all around them. Both realised the situation was desperate and they made a dash for the point where they believed the front access door of the building to be, with considerable difficulty they emerged from the front east side entrance.

They report that evacuation whistles, carried by firefighters, were being sounded. Seconds later the whole frontage blew out and became engulfed in flame and jets of flame burst across, the east side alleyway to involve the adjacent terraced property.

Events had moved rapidly during these crucial seconds and from outside a rescue operation had been mounted. It was known that Firemen Singleton and 1 had not responded to the evacuation signal. A ladder was pitched to the building resulting in the rescue of Fireman 1 from a first floor window adjacent to the Mather Street alleyway. He pointed and provided information that Fireman Singleton was to the right of this window. Despite a number of valiant efforts flame, heat and smoke prevented entry. Fireman Singleton's body was recovered the following morning.



## STATEMENTS OF FIREMAN 1

Fireman 1 recalls he responded to the incident on appliance A310 which booked in attendance at the incident at approximately 1808 hours, parking on Talbot Road outside the building but on the opposite side of the road. Sub Officer 1 was the Officer in Charge of the fire appliance, Fireman 4 the driver and Fireman Singleton the other nominated breathing apparatus wearer.

On instructions from Sub Officer 1 he and Fireman Singleton secured their breathing apparatus facemask and prepared to make entry via the east side front door. On entering the front door Fireman 1 recalls there was smoke within the premises but visibility was quite good. The smoke layer was about head height but underneath this layer visibility was almost normal, the temperature just slightly above the external temperature. They progressed to first floor level by means of two flights of stairs accessed from just inside the front door. Fireman Singleton was at this time carrying the hand held radio whilst he carried the hose and branch. The first floor temperature was noticeably hotter than that found at ground level but still quite bearable. Whilst the smoke layer was somewhat thicker reasonably good visibility remained below it.

From the head of the staircase, they turned right and proceeded along the northerly wall (as close to the wall as furnishing displays would allow). Progress was impeded by the furniture on display, resulting in the hose line becoming snagged making further progress difficult. At this point, Fireman Singleton radioed to Sub Officer 1 outside the building, informing him of the situation and was informed another crew would be sent in to assist.

He and Fireman Singleton left the branch end of the hoseline and re-traced their steps back along the hose line straightening the hose as they went, until they arrived back at the head of the staircase. They were met by Leading Fireman 2 and Fireman 5 the supporting crew, and the problems of advancing the hose were explained.

Fireman 1 recollections are that Leading Fireman 2 and Fireman 5 remained at the head of the stairs to assist in feeding the hose line whilst he and Fireman Singleton returned to the branch along the hose, again straightening out kinks during which process the radio was transferred to him from Fireman Singleton.

On returning to the branch Fireman Singleton took over as branchman and assisted by Fireman 1 the hose line was advanced to a point where the northerly wall met the westerly wall where they then turned left to parallel the westerly wall.

NB - Keeping a wall to either left or right is standard procedure to avoid disorientation and to ensure individuals gain familiarity with the size and perimeter configuration and can quickly re-trace their steps to leave a building safely.

The two men then followed the westerly wall until they reached a broken window with little glass remaining in its frame. Fireman 1 reports they talked together and agreed to note the position of this window as it could provide them with an escape route should the situation deteriorate within the building. However, at this stage Fireman 1 indicates that conditions were much as they were on entering the first floor, reasonable visibility and moderate temperatures.

Whilst within the vicinity of this window they noticed flame in the ceiling about 12m away, towards the centre of the building and he used the radio to inform Sub Officer 1 that they had found a fire in the false ceiling. The two men then moved away from the westerly wall eastwards towards the centre of the building and the fire in order to bring the hose jet into play. Water was applied to the fire with apparent success, although Fireman 1 indicates that he could see through the smoke at ceiling level that the fire in the false ceiling was quite extensive.

Fireman 1 states that at this point in the fire, he and Fireman Singleton lost water and had to back away from the fire towards the window whereupon he used the radio to advise Sub Officer 1 of the problem.

Water was quickly restored and they advanced back towards the fire again to apply water on the flames emanating from the false ceiling.

After a short period in this position he reports that there was a sudden and rapid build up of heat and they again lost water but he is unable to say which happened first.

On looking around he observed that several articles of furniture on the floor had burst into flames and that he and Fireman Singleton simultaneously decided to evacuate the building without exchanging any words. They initially backtracked the hose line, but found it to be so entangled with furniture and items on display as to be impossible to follow.

In Fireman 1's words "we decided very quickly, without discussing it, I think, to run towards the position of the broken window on the westerly wall". He recalls that he and Fireman Singleton held hands and ran in the direction of the window, falling over obstacles and helping each other up until they eventually reached the window itself.

At this point, Fireman 1 sounded his distress signal unit (DSU) and on looking out of the window he observed that there was obvious activity below in response to his DSU. He stated that operating the DSU was difficult because of his burnt hands and gloves.

He describes the situation at the window as being too hot to stay upright and he and Fireman Singleton both lay on the floor but it was still too hot and he was in pain from burns. Various other positions were tried by both men to get cooler, but to no avail, the temperatures being unbearable.

Fireman 1 states that there had been no coherent conversation between him and Fireman Singleton, both men were screaming and shouting in pain and panic. All of a sudden and without any explanation or conversation Fireman Singleton got up and left him, walking south along the westerly wall, even though Fireman 1 is of the opinion that Fireman Singleton was also aware of the activity outside to assist them. He never saw Fireman Singleton again.

Fireman 1 then states that almost immediately after he became aware of a jet of water being played through the window at which point he stood up and hung half in and half out of the window, to take advantage of the cooling effect of the jet on his body. He then became aware of a ladder pitched below him; the head of the ladder was some distance down so he swung over the sill, hung by his hands and dropped to the top of the ladder from where he was assisted to the ground by other firefighters.

On reaching the ground Fireman 1 although badly burned and obviously suffering from shock was able to advise his colleagues that Fireman Singleton had left him and was last seen to the right of the window walking towards the rear of the building.

A number of attempts were made by firefighters to re-enter the building in an effort to locate Fireman Singleton at his last known position. All of these attempts failed, owing to the large volumes of smoke and intense heat emanating from this window.

Fireman 1 was the last person to see Fireman Singleton alive. The body of Fireman Singleton was located amongst the debris the following morning. The position of the body was approximately on the centre line of the building, opposite and in line with the window Fireman 1 had been assisted from and appeared to be vertically below the estimated point of the fire in the false ceiling, at first floor level.

Fireman 1 received 25% first and second degree burns to his back, arms, hands, ears, scalp and neck.



FIREMAN SINGLETON - SUMMARY OF PATHOLOGIST'S REPORT

Fireman Singleton's body was discovered amongst the burning debris at approximately 0618 hours on the 6th May 1990 identifiable by the breathing apparatus cylinder and the remains of his breathing apparatus set. Later that morning Home Office Pathologist, 11 in the company of Acting Detective Constable 1 attended the incident.

He reports the remains of the building were still smouldering. The firefighters in attendance directed his attention to the partially burned body of Fireman Singleton.

The debris removed, it was apparent he was lying on his left side with his head on a roll of carpet. A further burnt out roll was beneath his trunk. His skull was fragmented on the right and back sides and had suffered burns.

The body was fully uncovered to be transferred to Layton Police Mortuary and a post mortem commenced. He described the body as that of a severely burned adult male, 5'11" in height. Both sides of the face were destroyed, the mouth partially open but the teeth intact. The upper left arm deeply burned but the forearm only blackened. The left hand, however, showed deep burns. There were deep burns on the right arm involving the muscle and an oblique fracture at the lower end of the humerus but no evidence of bleeding at this point. The right hand was badly burned but the palm itself had been protected to some extent by the glove he had been wearing.

There were deep burns affecting the trunk extending down to the ribs on the right side. The only surviving skin on the trunk was on the upper left chest. Both legs showed deep burns involving the muscle and there were dislocations of both ankles.

There was no evidence of pre-burn injury to the brain. There was blackening of the inside of the mouth, the tongue showed blistering and early burning. The larynx shows carbon mucus within the airway but lower sections of the airway showed congestion only.

## CONCLUSION

In order to arrive at any conclusion in this investigation, it is necessary to review a number of matters previously reported. These are dealt with under the appropriate headings and listed below:-

### History and Construction of Building

The building was constructed in 1890 and was originally designed as a laundry but which over the years has been used to fulfill many uses finally ending up as a single retail unit selling furniture and carpets. To facilitate these changes, the building was materially altered in a number of ways.

These alterations caused a number of faults in the structure such as gaps between the floors and walls separating the ground and first floor. The false ceilings at ground and first floors, although constructed of fire resisting material, were installed in such a way that fire and smoke were able to enter the void between the ceiling and floor above and travel for considerable distances undetected. A similar situation existed between the false ceiling line and the windows which were recessed on the outer wall resulting in a gap between window and ceiling.

### Building Contents

The very nature of the materials stored in the building imposed a high fire loading upon the building. By their nature, when involved in fire, they produce not only intense heat but large quantities of dense black smoke. This smoke was probably heavily laden with flammable gases as a result of the incomplete combustion of the materials on fire. The materials were also of such a nature that if subjected to further heating, even remote from a source of fire they could spontaneously ignite. According to Fireman 1 this appears to have occurred on the first floor.

### Fire Services Act 1947

This Act outlines the duties of the Brigade in respect of its firefighting activities.

Section 1 (i) It shall be the duty of every Fire Authority in Great Britain to make provision for firefighting purposes .....

### Interpretation

Section 38 'Firefighting purposes' means the purposes of the extinction of fires and the protection of life and property in case of fire.

### Firefighting Operations

In order to fight any fire effectively, it is necessary to commit firefighters to the building, usually in breathing apparatus with the instruction to search out and extinguish any fire that may be found. This fire was no exception and to this end several teams of two men each in Breathing Apparatus Sets were committed to the building from a various entry points in an endeavour to surround the fire with water jets. If this practice were not followed and action concentrated only from the outside, fire may be 'pushed' from one part of the building to another, therefore, spreading rather than containing the fire and without entering a building it would be practically impossible to control or extinguish, with minimum damage, any fire.

Firefighting Operations ... continued

The Breathing Apparatus team to which this accident investigation relates were one such team, their instructions were to enter the building, proceed to the first floor and search out and extinguish any fire they may find.

This they did and from the information given by Fireman 1 in his statement they carried out their tasks in a manner appropriate to the circumstances encountered in accordance with Fire Brigade training and established procedures.

The only failure of these two men was that on entry they failed personally to hand to the Breathing Apparatus Control Officer, their set identification tallies as required by recognised procedure. In the circumstances, this action was understandable, and more importantly had no bearing whatsoever on subsequent events.

Once a Breathing Apparatus team is committed inside a building, they are outside the direct control of supervising officers on the fire ground and must rely on their training and experience to ensure their own safety. For this reason teamwork forms a vital and integral part of Fire Brigade training.

The two men in question were experienced firefighters and more than able to decide when conditions made it unsafe to remain any longer in the building based on their judgment of the effects of changing circumstances noted during their firefighting activities. They remained in contact with their officer throughout until the point at which Fireman 1 was rescued. During this period there were no radio transmissions from them to indicate rapidly worsening conditions or indeed of any notable changes in the fire situation. It is known that the radio they carried remained operative as various personnel report hearing the screams of pain and a request for assistance over it. The radio was recovered from the ground below the first floor window and it is presumed Fireman 1 dropped it on his rescue.  
(Appendix E)

As previously reported, the outward signs of fire, perceived by personnel outside the building, were diminishing, the flames were being 'knocked' and the thick black smoke originally emanating from the building was turning to pale grey, indicating that the firefighting operations were proving to be effective.

The situation as we now know, changed very rapidly indeed, described by outside observers as a sudden and rapid increase in the volumes of smoke and hot gases emanating from the building and by those inside as the sudden and intense increase in temperature accompanied by a complete smoke logging of the interior rendering visibility zero.

This swift change in circumstances brought about spontaneous action from all concerned. Outside, evacuation whistles were sounded to warn all personnel of the danger of remaining in the building. Inside, firefighters recognising the sudden danger took immediate steps to evacuate, regardless of whether or not they had heard the evacuation signal. It would appear that none of those from inside heard the evacuation whistles until outside of the building. All however evacuated the building with the exception of the team comprising Fireman Singleton and Fireman 1. Of those that escaped, all relate various degrees of difficulty they encountered in doing so. To a man they expressed their surprise and concern at the speed at which the situation inside the building had dangerously deteriorated.

The statements made by Fireman 1 (3 in number) vary slightly in their detail, however, it must be borne in mind that the reports were submitted at various intervals, the first whilst still in hospital and the last some 3 months following the incident.



Firefighting Operations ... continued

The final statement which forms part of this investigation, was given to the Police for submission to the Coroner and must therefore be considered to be the most accurate of the 3, particularly as this statement had the benefit of considered reflection by Fireman 1 at a period in his return to health, when he was less affected by the pain of his burns and the emotional trauma such a situation must impose on an individual. (Appendix F)

It seems reasonable to assume that the circumstances as related by Fireman 1 are as accurate as his reflections allow, given the emotional trauma faced by any man who has suffered such serious burns and witnessed the circumstances leading up to the death of his colleague. It is therefore accepted as firsthand information to be combined with other evidence from which a conclusion as to the cause of this fatality may be drawn.

Between approximately 1820 hours and the point when personnel inside found themselves in a life threatening situation the officers and personnel were of the opinion that the fire was being successfully controlled and would soon be extinguished.

The operational tactics employed by the officers and personnel in attendance were in accordance with established procedures and were based on the conditions prevailing at the time.

Water supplies were obtained by the initial appliances and to provide better firefighting jets some early reorganisation of supplies was undertaken, particularly to cater for the arrival of additional pumps. The water hydrants used had been checked and tested earlier in the year as part of the normal day-to-day operation of the Brigade. It should be noted that at the time the situation rapidly deteriorated only two firefighting jets were in use, one by Fireman 1 and Fireman Singleton and the second by Leading Fireman 1 and Fireman 3 the other jets having been shut off whilst additional access points were explored. Both jets were being fed from separate hydrants each of which were recorded as having a flow in excess of 750 litres/minute. The firefighting jets fed by 45mm hose each took approximately 300 litres/minute.

There were no apparent visual indications at the scene of any dangerous development which made a tragedy imminent. As the fire rapidly engulfed the building, personnel reacted with their customary skill and courage to save their trapped colleagues and it must be said at some personal risk to their own safety. Evacuation whistles were sounded. Those that could, evacuated the building and a full scale rescue operation was immediately implemented.

The rescue of Fireman 1 as a result of his distress signal unit being sounded, from the window adjacent to the Mather Street alleyway was well orchestrated and carried out with all speed and determination. Repeated attempts, under the most severe and punishing of conditions, were made to locate Fireman Singleton. With scant regard to personal safety rescue attempts continued to the point of personal exhaustion by which time fire conditions had escalated to the extent of ending any realistic hope of rescue or indeed of Fireman Singleton's continued survival.

In considering the statement of Fireman 1 it remains unclear why Fireman Singleton left his colleague at the window to return into the building or his actions which returned him to the fire area, particularly given the rescue activities immediately outside his previous window position.

As a trained firefighter he would have known his best hope of rescue lay through that window even if this meant hanging outside the window and dropping to the ground or by taking the more desperate action of a blind leap. The height from the window sill was 19 feet to ground level. A hanging man can reduce the drop to 11 feet and this is well known as a method of self rescue within the service.

Given that Fireman 1 reports that Fireman Singleton was with him when they reached the window which afforded the prospect of rescue or escape, it remains a matter of speculation as to why he then gave up this position. It seems clear that conditions within the building had become unbearable and even at the window there was no respite. It is presumed, from the statements provided by Fireman 1 that the intense heat and smoke drove Fireman Singleton beyond his pain threshold limit to a point at which he was no longer capable of rational thought or action. It is feasible then, given this scenario, that in pain and panic he became confused and disorientated to the extent that his subsequent movements returned him to the point at which he and Fireman 1 had found and fought the fire in the ceiling void. Whatever the circumstances of his preceding movements over this period, which will remain unknown, it seems apparent that his body position on the ground floor of the building was vertically below this fire area.

It is considered from the damage sustained to the body, that he fell through the weakened floor in the upright position causing dislocation to both ankles, possibly suffering the damage to his skull on the way through the floor or as a result of landing and banging his head on vertically positioned debris, furniture or equipment. It would appear he pitched forward into the position he was later found. Other damage sustained to the body appears to have occurred as a result of falling debris.

The evidence suggests that he made no further movement from his ground floor position where he was found.

Had Fireman Singleton held a position at the window he may, like Fireman 1 have been rescued, but as reported by Fireman 1 he did not, he left the tenuous safety of the window, for reasons that will remain unknown, and contrary to all his training and experience, proceeded to a point beyond contact and available help.

After careful examination of all the reported evidence it is considered that the circumstances which led to the tragic death of Fireman Singleton and caused Fireman 1 to sustain his injuries were outside the direct control of Brigade personnel and their activities. The swiftly changing events at this fire could not have reasonably been foreseen, neither could the effects of the building structure in concealing and contributing to the spread of the fire to the extent that it did, have been recognised given the circumstances on arrival. It is therefore considered that Fireman Singleton's death was accidental and followed from his actions to escape from the heat and smoke,

He died doing his duty and that duty is described by Sir Eyre Massey Shaw, the considered Father of the British Fire Service which remains as relevant to-day as it did the day he wrote it -

"A Fireman, to be successful, must enter buildings. He must get in below, above, on every side; from opposite houses, over back walls, over side walls, through panels of doors, through windows, through skylights, through holes cut by himself in gates, walls and the roof. He must know how to reach the attic from the basement by ladders placed on half-burned stairs, and the basement from the attic by a rope made fast on a chimney. His whole success depends on his getting in and remaining there and he must always carry his appliances with him, as without them he is of no use."

Sometimes the price of that success is very high.



## RECOMMENDATIONS

As a consequence of this investigation, two issues which have national implications to future operational practices and procedures have been highlighted. These being the effectiveness of the whistles used for evacuation warning and the design and efficiency of personal warning devices used by Breathing Apparatus wearers namely, the distress signal units (DSU).

### Evacuation Whistles

The practice of using Acme Thunderer whistles for evacuation purposes followed from national guidance issued by the Home Office and contained in Fire Service Circular number 46/1969 which was intended to provide a uniform evacuation signal which would be recognised by all firefighters regardless of which brigade they are members.

The recommended signal for evacuation is repeated short blasts on the whistle. The advantage of whistles over loud signals made outside a premises is that they can be relayed inside a building to increase the chances of all persons concerned hearing them. They also allow the warning to be localised if it is desired to evacuate only part of the premises. A further advantage is that the sound of a whistle is distinctive.

The Joint Committee on Fire Brigade Operations completed a further review in 1980. In this review they compared the effectiveness of four evacuation warning devices, these devices were as follows:-

- a) Fog horn - aerosol operated horn
- b) Standard railway warning horn (ACME)
- c) ACME thunderer whistle
- d) Mini-might siren

In 1986 a study group of the Joint Committee on Fire Brigade Operations produced a report which indicated that all existing evacuation signal equipment had recognised limitations. Thunderer whistles, despite some drawbacks, were felt to be a very effective means of giving warning and the study group saw advantages in whistles in that they could be issued to all operational firefighters, as is the case at present.

It is recognised that the major limitation of the thunderer whistle is its lack of range, particularly in buildings, and attempts have already been made to identify a device with a louder and more penetrating sound and one, more over, which can be operated by a Breathing Apparatus wearer.

The Chief Fire Officer has written to Her Majesty's Chief Inspector of Fire Services, at the Home Office, highlighting the limitations of the ACME Thunderer whistle as an evacuation signal in respect of our operational experience at this incident.

continued .....

### Distress Signal Units (DSU)

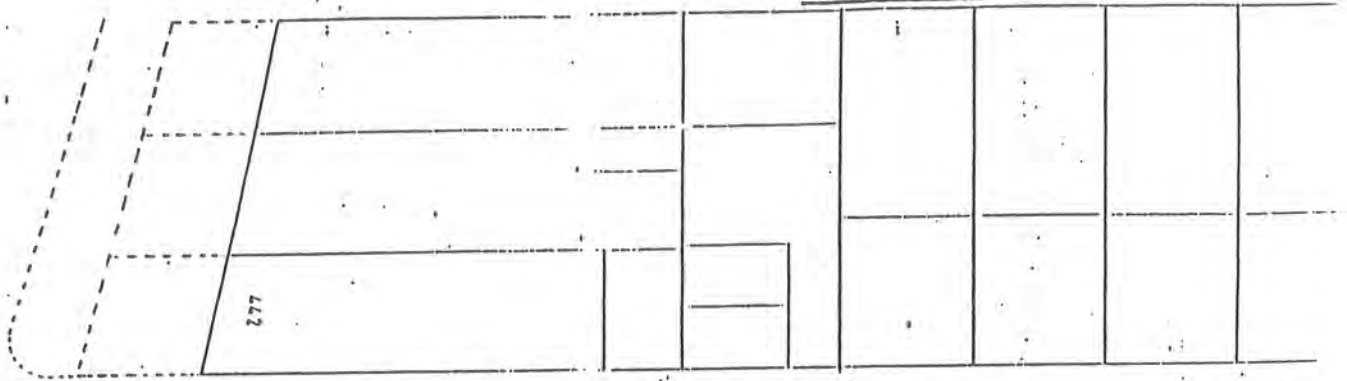
Distress signal units currently in use within fire services in Great Britain rely for their operation on the wearer firstly being conscious and secondly maintaining the manual dexterity necessary to activate the unit. These factors are commonly recognised and as a consequence, work has been carried out to perfect a unit which is automatic in operation and which will sound if the wearer becomes unconscious and unable to summon help.

As previously reported in the case of Fireman 1 due to having suffered extensive burns to his person, particularly to his hands, he had the greatest difficulty in operating his DSU to summon assistance due to being unable to apply the pressure necessary to operate the switch which activates the unit. An automatic unit would have obviated this problem.

Development of automatic unit prototypes has been plagued by equipment failures, in particular, the number of spurious signals which have undermined the confidence of wearers in the reliability of the device. In order to progress development of this type of unit, the Central Fire Brigade's Advisory Council Joint Committee on Appliances, Equipment and Uniform have produced a requirement specification for automatic distress signal units which will enable manufacturers to produce a unit which will meet the requirements of the British Fire Service.

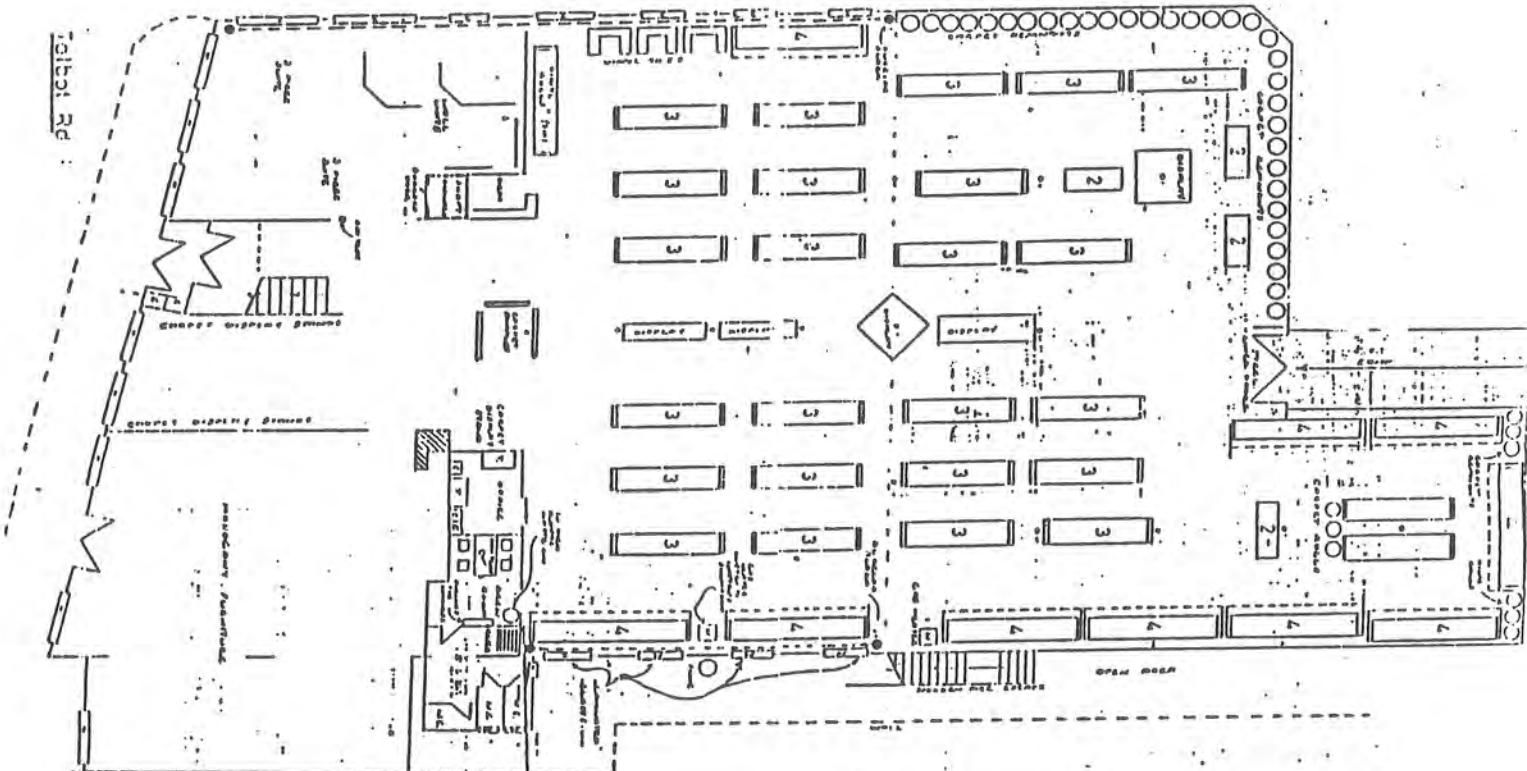
Both of the issues related above are in the hands of the Central Fire Brigade's Advisory Council who are actively involved in researching the various options currently available and will no doubt in due course advise Chief Fire Officers nationally of their findings.

APPENDIX A.



BLACK STREET

Talbot Rd



- 4: ROLLS 2m. 15cm. high  
Base roll just off floor.  
Top of base roll approximately  
1m. from floor.
- 3: ROLLS 1m. 53cm. high
- 2: ROLLS 91 cm. high

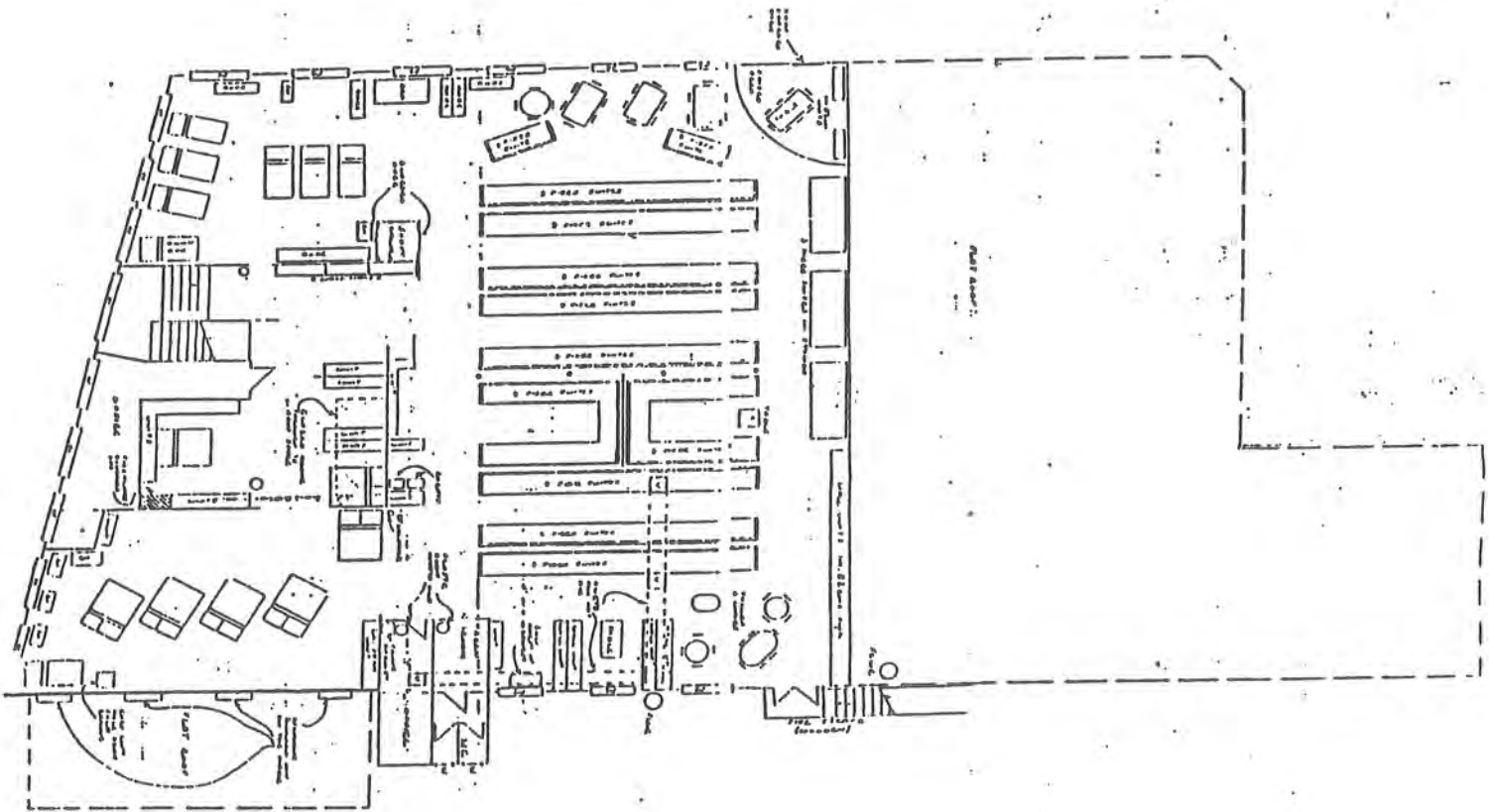
TALBOT SHOWROOMS  
 440 TALBOT RD  
 BLACKPOOL  
 5/5/90 I.O.C. 17:58

SCALE 1:100  
 DRWG. No. 1

GROUND FLOOR







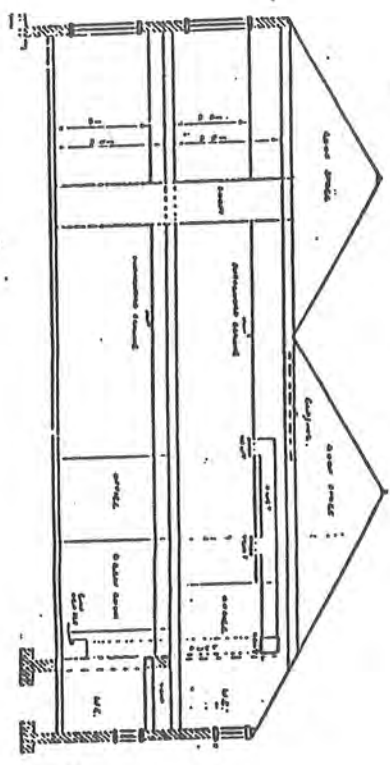
Heating duct & vents  
Glazing to roof space  
7cm. noise through to

TALBOT SHOWROOMS  
440 TALBOT RD  
BLACKPOOL

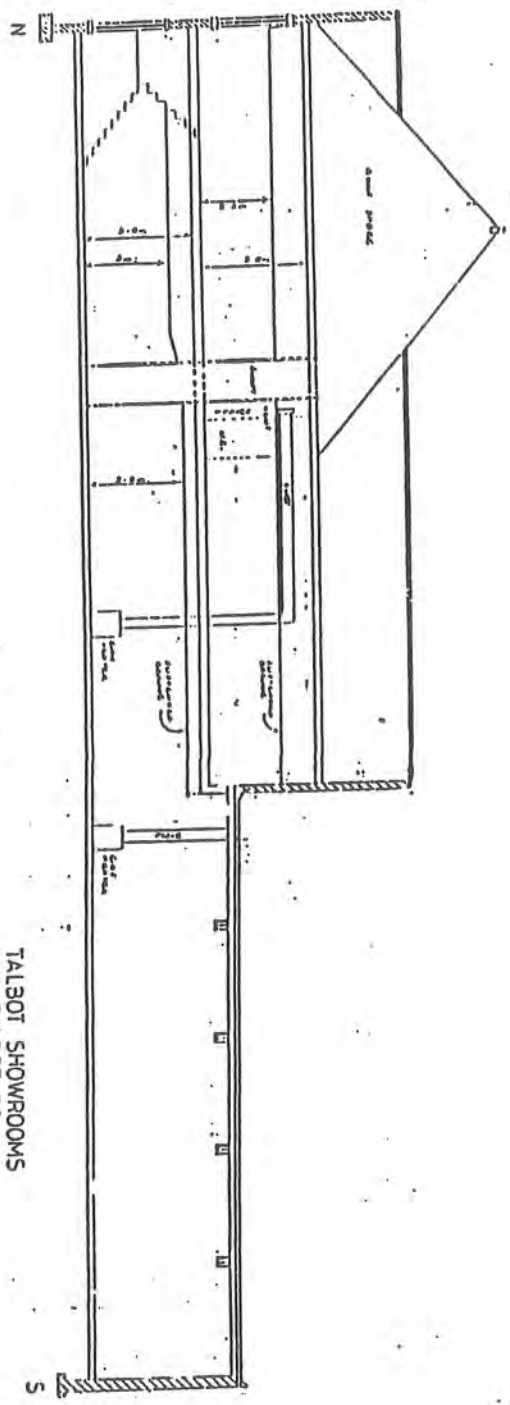
SCALE 1:100  
DRWG. No. 2



FIRST FLOOR



CROSS SECTION East/West

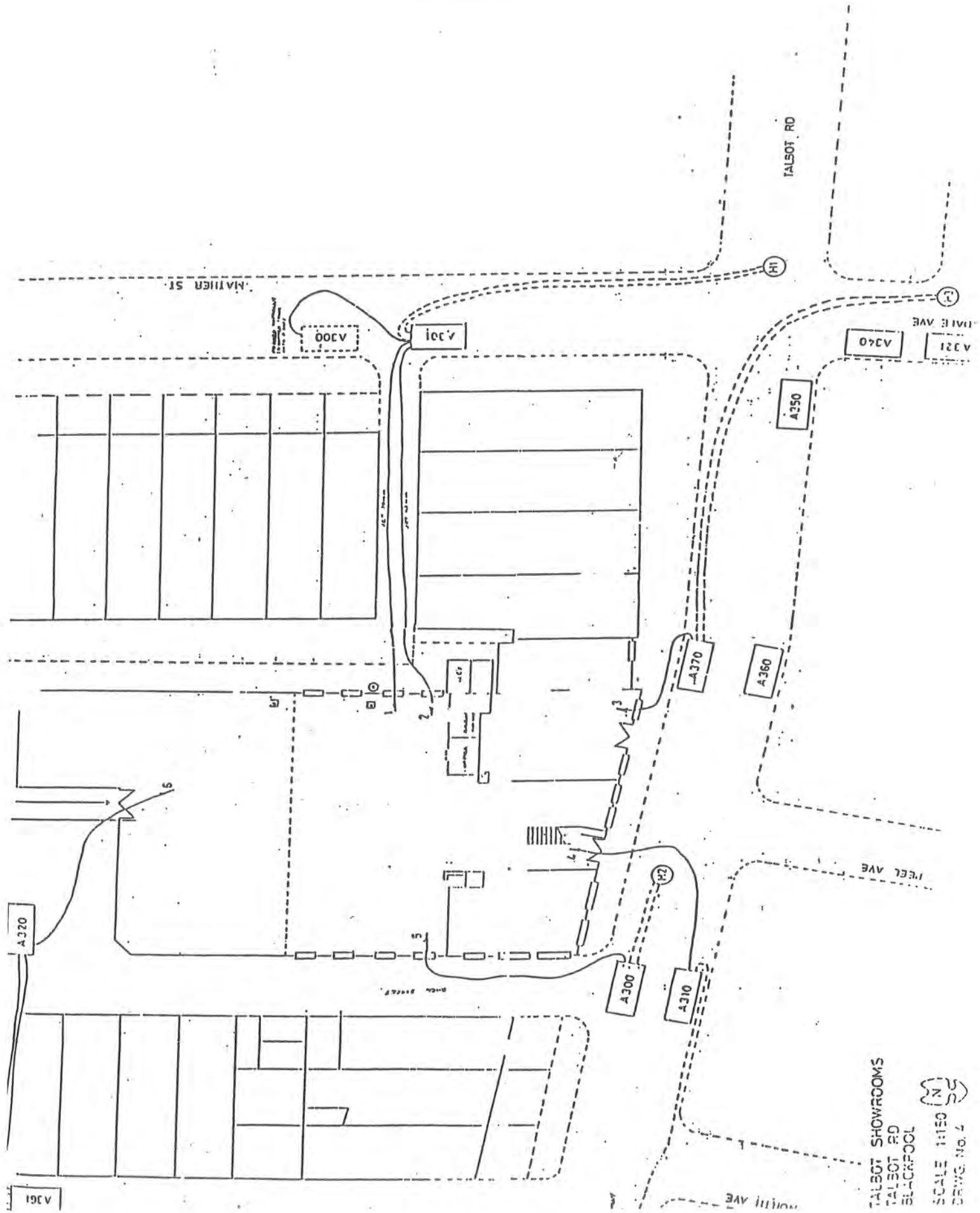


CROSS SECTION North/South

SCALE 1:100  
DRWG. NO. 3

TALBOT SHOWROOMS  
440 TALBOT RD  
BLACKPOOL

APPENDIX D.



TALSOT SHOWROOMS  
TALSOT RD  
BLACKPOOL  
SCALE 1:150  
DRAWING No. 7

A361





# Lancashire Constabulary

Headquarters, P.O. Box 77, Hutton, Preston, PR4 5SB.  
Telephone: L (0773) 61114  
7 6 and 67610 Lancun.

# Police 1

[ The Chief Fire Officer,  
 Fire Brigade Headquarters,  
 Garstang Road,  
 Fulwood,  
PRESTON,  
 PR2 3LH ]

Your Ref.:  
 Our Ref.: **Radio/RB/JBM**  
 Date: **2nd August, 1990**

For the attention of The Communications Officer

Dear Sir,

EXPF85 SNO 0901-0029 STATION A31 - TESTS AND OBSERVATIONS

1. The on/off volume knob was found to be in the "on" position, with a volume setting of approximately one third, and the channel switch set to 3.
2. The leather case was removed from the set and the battery examined.
3. The battery was found to be in a discharged state and with a badly cracked case. This was eventually proved to be unserviceable.
4. The set was tested using a new battery but still failed to function.
5. Removal of the cover from the set revealed that the regulator module had become dislodged from its socket.
6. Having straightened the connection pins the module was re-fitted and the set tested with apparent success on all channels. A specification test revealed that whilst the receiver performed virtually to specification, the transmitter was unstable.
7. Some water damage was apparent on the print side of the circuit board.

8. It was noted that the leather case and aerial had sustained damage and the facility connector contacts were tarnished (protective cover not fitted).
9. Our records show that the above set has not been subjected to any repairs.
10. It may be possible to refurbish the set for further use.

Yours faithfully,

# DCE 1

Deputy Chief Engineer  
for Assistant Chief Constable

LANCASHIRE CONSTABULARY

STATEMENT OF WITNESS

(Criminal Justice Act, 1967, ss. 2, 9; M.C. Act 1980, s. 102; M.C. Rules 1981, r.70)

STATEMENT OF.....FM 1
Age of witness (if over 21 enter 'over 21').....Over 21.....
Occupation of witness.....Fireman.....
Address.....Bispham Fire Station.....
.....Red Bank Rd., Blackpool.....

This statement (consisting of ....7... pages each signed by me) is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated the.....10th..... day of .....July....., 19.....90

(Signed).. FM 1

I have been employed by the Lancashire County Fire Brigade for over 11 years, and worked for seven months at Preston after initial training, transferring to Bispham after that time, where I have remained since. Apart from initial training I have received refresher training in the use of breathing apparatus, the last time certainly being within six months of the fire at Talbot Salerooms.

On Saturday 5th May, 1990, my tour of duty was 6.00pm to 9.00am. Shortly after reporting for duty that day a call was received to attend a fire at Talbot Salerooms, Talbot Road, Blackpool, to assist Blackpool Central crews already at the scene.

I went to the incident in the Bispham engine, in charge was Sub Officer 1 the driver was Fireman 4 and myself and John Singleton were the nominated breathing apparatus crew.

(signed) FM 1

not taken by:

DS 1

10.7.90



On arrival at the incident the fire engine was parked on Talbot Road outside the premises but on the opposite side of the road. This was because Station Officer 1 : thought there may have been liquid petroleum gas cylinders in the premises which could explode.

We (John Singleton and myself) were immediately instructed to 'go under air' by Sub Officer 1 This means that we would don our facemasks and start breathing the compressed air in the tank carried on our backs. We had put the sets on, on the journey to the fire, as is standard practice. As well as this instruction we were told, again by Sub Officer 1 to make an entry via the front doors with a charged length of 45mm hose, make our way to first floor level and locate and fight any fire in that area.

At that time I recall a man coming to the front doors and offering to open up for us, he obviously had the keys.

After receiving these instructions we had to wait a couple of minutes for the hose length to be charged. Once this had occurred myself and John entered the premises via the front doors with the charged hose.

On entry at the ground floor level there was smoke within the premises, but visibility was quite good, the smoke layer was about head height, but underneath this layer visibility was almost normal.

The temperature at that time was just slightly above the external temperature.

After entering, John Singleton was carrying the hand-held radio, each breathing apparatus team is equipped with, and I was carrying the branch of the hose, we made our way to first floor level via two flights of stairs just inside the front doors.

On arrival at the first floor it was noticeably hotter but quite bearable. Again there was a smoke layer from ceiling level downwards, somewhat thicker than on the ground floor, with reasonably good visibility below the smoke layer.

After reaching first floor level we turned right and proceeded along that northerly wall, or as close as we could get to it due to furniture on display along the wall.

We didn't at that stage get far into the building as the hose was getting snagged on obstacles, and John Singleton radioed for another crew to assist us with this problem. There was an acknowledgement on the radio that someone would be sent to assist us, but we started to backtrack the hose ourselves, leaving the branch at our last position, and straightening out kinks in the hose. As we reached the top of the stairs we were met by another breathing apparatus crew, who had been sent to assist us.

(signed) FM 1

# FM 1

Continued Statement of ..... Sheet No. <sup>4</sup>.....

We explained to them that we were struggling to pull the hose through because of the obstacles in our path, and they stayed in that area to assist us.

We then went back towards the branch of the hose, during this time John Singleton was sorting out 'kinks' in the hose, and handed me the radio. Once we reached the branch of the hose, John Singleton took over as 'branchman', i.e. actually holding the jet of the hose.

I recall at some stage the hose going soft, although I am not aware if it happened at that stage in the proceedings.

Once we had regained the branch of the hose, we continued together along the northerly wall of the premises, and then turned left to go along the westerly wall. This is standard procedure, to keep close to a wall in order that you can retrace your steps should the situation deteriorate.

We went along the westerly wall, and noticed a broken window some distance along that wall. The window had broken quite clearly with little glass remaining on the frame. As we reached this point we agreed that this would be a potential escape point rather than retracing our steps, because of the distance we'd come into the building. At this point the conditions had remained similar to those on entry.

As we were at that point we noticed flame in the ceiling above us about 12 metres away towards the centre of the

I used the radio at that point to inform Sub Officer  
1 that we had found a fire in the false ceiling  
void, this is standard procedure. We made our way towards  
this point and used the hose with some success against  
the fire, starting to extinguish it. There was a smoke  
layer at ceiling level but we were able to see the  
flames through the smoke, and could tell that the fire at  
this point was quite extensive, with part of the false  
ceiling burnt away, although I cannot quantify it in terms  
of size.

Whilst fighting the fire at this point we suddenly lost  
all pressure on the hose, and were forced to back away  
from the fire, and I used the radio to inform Sub Officer  
1 of the problem.

Water was restored back to us shortly afterwards, I  
don't know how the loss of water had occurred initially,  
and we advanced back towards the fire in the ceiling void  
and started to try and extinguish it again.

Very shortly afterwards there was an intense build up  
of heat, and we lost water to our branch, I don't know  
which happened first. The increase in temperature was  
so acute that we simultaneously decided to evacuate. I  
saw that several articles of furniture had burst into  
flame around us on the floor.

(signed) FM 1



We initially started to back track our hose, but it had become so entangled through the furniture on display that it was impossible to follow it. All the time this was happening the temperature was increasing and we decided very quickly, without discussing it I think, to run towards the position of the broken window on the westerly wall.

We held hands and ran towards that position, I was screaming on the radio, incoherently probably, that we were in serious trouble. I remember running and falling over obstacles, as was John Singleton, we were pulling each other up and helping each other. It was at this time that I was feeling pain from my burns, it seemed almost unbearable, so much so that I considered jumping from the window when we reached it together.

When we reached the window I sounded my distress signal unit, although I had trouble doing this because of my burnt hands and gloves.

I looked out of the window and saw that there was obvious activity outside in response to my distress signal, but it was too hot to stay stood at the window. Both of us lay down to see if it was cooler, but it wasn't. We tried various other positions to try and get cooler, but it was impossible.

At this point there was no coherent conversation between myself and John Singleton, we were both screaming and shouting in pain and panic.

(signed) (FM 1

All of a sudden, without any explanation or conversation John Singleton went away from me, walking south along the westerly wall. I cannot think why he did this as he was aware as I was that there was activity outside to assist us. I never saw him again. Almost immediately I became aware of a jet of water being played through the broken window, I stood up and hung half in, half out of the window in order that the jet would cool me.

I then became aware of a ladder being pitched below me, the head of the ladder was some distance below me, so I stretched out the window, hung by my hands and dropped to the top of the ladder, when I was assisted to the ground.

Because of the incident I received extensive, 25% first and second degree burns to my back, arms, hands, ears, scalp and under my chin.

(signed) FM 1



