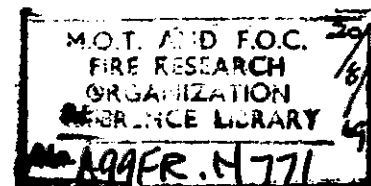


LIBRARY REFERENCE ONLY



# Fire Research Note

## No.771

LANCASHIRE COUNTY FIRE BRIGADE  
DOMESTIC FIRE HAZARDS REMOVED AFTER  
ADVICE FROM FIREMEN

by

W. N. DAXON

July 1969

# FIRE RESEARCH STATION

**Fire Research Station,  
Borehamwood,  
Herts.  
Tel. 01-953-6177**

F. R. Note No. 771  
July, 1969.

LANCASHIRE COUNTY FIRE BRIGADE  
DOMESTIC FIRE HAZARDS REMOVED AFTER ADVICE FROM FIREMEN

by

W. N. Daxon

Summary

An indication of the reactions of householders to visits by firemen giving advice on fire prevention in their homes and their willingness or otherwise to co-operate, has been obtained. A high proportion of householders were prepared to receive visits and over half of the hazards observed by the firemen were removed before a second visit was made.

Key words: Brigade, Domestic, Fire Hazard, Fire Prevention, Publicity.

Crown copyright

This report has not been published and should be considered as confidential advance information. No reference should be made to it in any publication without the written consent of the Director of Fire Research.

MINISTRY OF TECHNOLOGY AND FIRE OFFICES' COMMITTEE  
JOINT FIRE RESEARCH ORGANIZATION

LANCASHIRE COUNTY FIRE BRIGADE  
DOMESTIC FIRE HAZARDS REMOVED AFTER ADVICE FROM FIREMEN

by

W. N. Daxon

### Introduction

In an effort to assess the value of house-to-house visits made for fire prevention purposes, Lancashire County Fire Brigade agreed, together with other selected Fire Authorities, to take part in an experimental campaign, to determine the degree of co-operation from occupiers of dwellings visited.

### Method

The initial visit was preceded by the distribution of a letter advising householders of the intended visit, and each Division was allocated a different type of residential property.

The six Divisions of the Fire Brigade and the types of dwellings they were to visit were:-

- 'A' Division Detached houses.
- 'B' Division Single occupancy terraced houses.
- 'C' Division Semi-detached houses.
- 'D' Division Flats and maisonettes in newly constructed multi-storey development.
- 'E' Division Multi-occupancy terraced houses.
- 'F' Division Houses or rooms occupied by elderly persons.

The number of premises visited by each division was approximately 500. In the case of 'D', 'E' and 'F' divisions each flat or room has been counted as a separate dwelling.

The first stage of the experiment was an inspection of the properties by a fireman, who recorded the type of hazard encountered. This was shown by a series of ticks against the appropriate hazard listed on a specially prepared form (Form 277A, shown at Appendix 1).

The completed forms were retained by the Divisions for a period of three months, when the second stage of the experiment was carried out by a follow-up visit to the dwellings where hazards had been recorded on the first visit. The second column on the form was then completed to indicate whether or not the hazard had been removed.

Results

Table 1 and Figure 1 show an overall picture of the situation at the first stage. They indicate a high percentage of entrances gained, except for 'E' division, where the visiting firemen found a large proportion of the premises occupied by immigrants who seemed reluctant to admit strangers, and who did not always appear to understand the English language.

Table 1. Situation first stage

(a) Each division

Division	'A'		'B'		'C'		'D'		'E'		'F'	
No. of households visited	511		504		499		531		134		557	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Entrance gained	510	99.8	489	97.0	492	98.5	531	100	99	73.8	492	88.3
Found satisfactory	326	63.7	284	56.3	285	57.1	404	76.0	12	8.9	243	43.6
Requiring second visit	184	36.0	205	40.6	207	41.4	127	23.9	87	64.9	249	44.7
Total number of hazards	303		308		330		164		197		416	

(b) Totals - All divisions

Households visited	Entrance gained		Found satisfactory		Requiring second visit		Total number of hazard
No.	No.	Per cent	No.	Per cent	No.	Per cent	
2736	2613	95.5	1554	56.7	1059	38.7	1718

Table 2 and Figure 2 show the results of the second stage of the experiment.

It can be seen that of the 1059 dwellings requiring a second visit, admittance was gained to 908 (85.7 per cent) and while this figure was not so encouraging as on the initial visit, it is still a satisfactory indication of the willingness of the occupants to co-operate with the Fire Brigade.

Table 2. Situation at second stage

(a) Each division

Division	'A'		'B'		'C'		'D'		'E'		'F'	
No. of households visited	184		205		207		127		87		249	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Entrance gained	183	99.4	186	90.7	175	84.5	115	90.5	79	90.8	170	68.2
Hazards recorded first visit	303		308		330		164		197		416	
Hazards removed	181	57.7	215	69.8	208	63.0	115	70.1	85	43.1	202	48.5

(b) Totals - All divisions

Entrance gained to households requiring second visit		Hazards recorded first visit		Hazards removed second visit	
No.	Per cent	No.		No.	Per cent
908	85.7	1718		1006	58.5

The records of each division, of the number and type of hazard encountered, are shown in Table 3; together with the number of hazards removed on the second visit.

Table 3. Number and type of hazard encountered and removed

Divisions	'A'		'B'		'C'		'D'		'E'		'F'	
	Hazards found first visit	Hazards removed second visit	Hazards found first visit	Hazards removed second visit	Hazards found first visit	Hazards removed second visit	Hazards found first visit	Hazards removed second visit	Hazards found first visit	Hazards removed second visit	Hazards found first visit	Hazards removed second visit
Room heating including electric fires	26	14	8	7	27	20	15	13	17	8	54	37
Electrical wiring	100	63	63	47	68	34	37	26	48	19	44	18
Electrical switches	19	9	10	6	19	11	3	2	11	4	10	2
Electrical sockets	36	21	49	34	56	35	26	19	31	14	36	13
Electric appliances	70	51	69	51	102	78	60	38	21	12	61	37
Cookers Electric and gas	3	NIL	5	3	9	4	2	2	4	3	16	3
Flammable substances	1	NIL	14	14	4	2	3	3	13	6	44	28
No fire guards	16	8	45	27	15	7	1	1	23	6	96	43
Clothing over fires or cookers	5	3	15	12	7	3	5	4	16	6	16	10
Mirrors over fires	1	1	24	10	13	9	NIL	NIL	7	3	17	3
Others	26	11	6	4	10	5	12	7	6	4	22	8
Total	303	181	308	215	330	208	164	115	197	85	416	202

Table 4. Entrance not gained

	'A' Division		'B' Division		'C' Division		'D' Division		'E' Division		'F' Division		Total all divisions
	first visit	second visit	first visit	second visit	first visit	second visit	first visit	second visit	first visit	second visit	first visit	second visit	
Vacant	-	1	-	-	-	-	-	-	2	3	6	6	24
No reply, illness etc.	1	-	15	19	2	21	-	12	30	3	47	67	217
Refused entrance	-	-	-	-	5	11	-	-	3	2	12	6	39
Total households visited	511	184	504	205	499	207	531	127	134	87	557	249	



It is clear that electrical appliances and defective wiring account for a high proportion of the obvious fire hazards in old dwellings. The newly constructed properties of 'D' division show a considerably lower figure for electrical wiring defects; this may indicate some need for more frequent maintenance as dwellings age, but probably also reflects the need for more power outlets than is usual in older property.

The houses and rooms occupied by elderly persons, and visited by 'F' division, have a noticeably high proportion of "no fire guards", and if one considers the obvious danger of the elderly falling and coming in contact with heating appliances, it is encouraging to see that at least just under half of these had acquired a fire guard by the time the second visit was carried out.

Remarks from the firemen visiting this division indicated that the elderly occupants were extremely co-operative and quite willing for the firemen to carry out preventative measures on the spot, if they were unable to do so themselves (e.g. removing mirrors from above fireplaces to a safer position).

Perhaps the most encouraging figure in Table 4, is the low number of actual refusals to allow the firemen to enter. Out of a total of 2736 households visited only 39 refused entry for no apparent reason and 217 refused for domestic reasons such as illness, bereavement, and night workers sleeping at the time of the visit.

#### Conclusions

During the first stage of the experiment 1718 hazards were recorded in 2736 houses - each of which could be regarded as a potential fire. At the second stage well over half had been removed, and this is an encouraging indication of the effectiveness of the visiting firemen, and the willingness of the householders, to be guided by, and to act upon advice given.

An important consideration is the cost of carrying out visits of the type described which has to be weighed against the benefit obtained.

As the firemen and the vehicles they used were presumably "on call" at all times during the programme of visits the actual cost, although difficult to estimate, was probably low.

If this assumption is correct, it is probable that the saving in life, injury, fire-fighting, and fire damage costs would outweigh the cost of this particular Fire Prevention activity.

#### Acknowledgements

Thanks are due to The Chief Fire Officer and Firemen of the Lancashire Fire Brigade for their co-operation and help in carrying out the experiment.

FIG. 1. PERCENTAGES OF ENTRANCES GAINED AND HAZARDS FOUND—1st VISIT

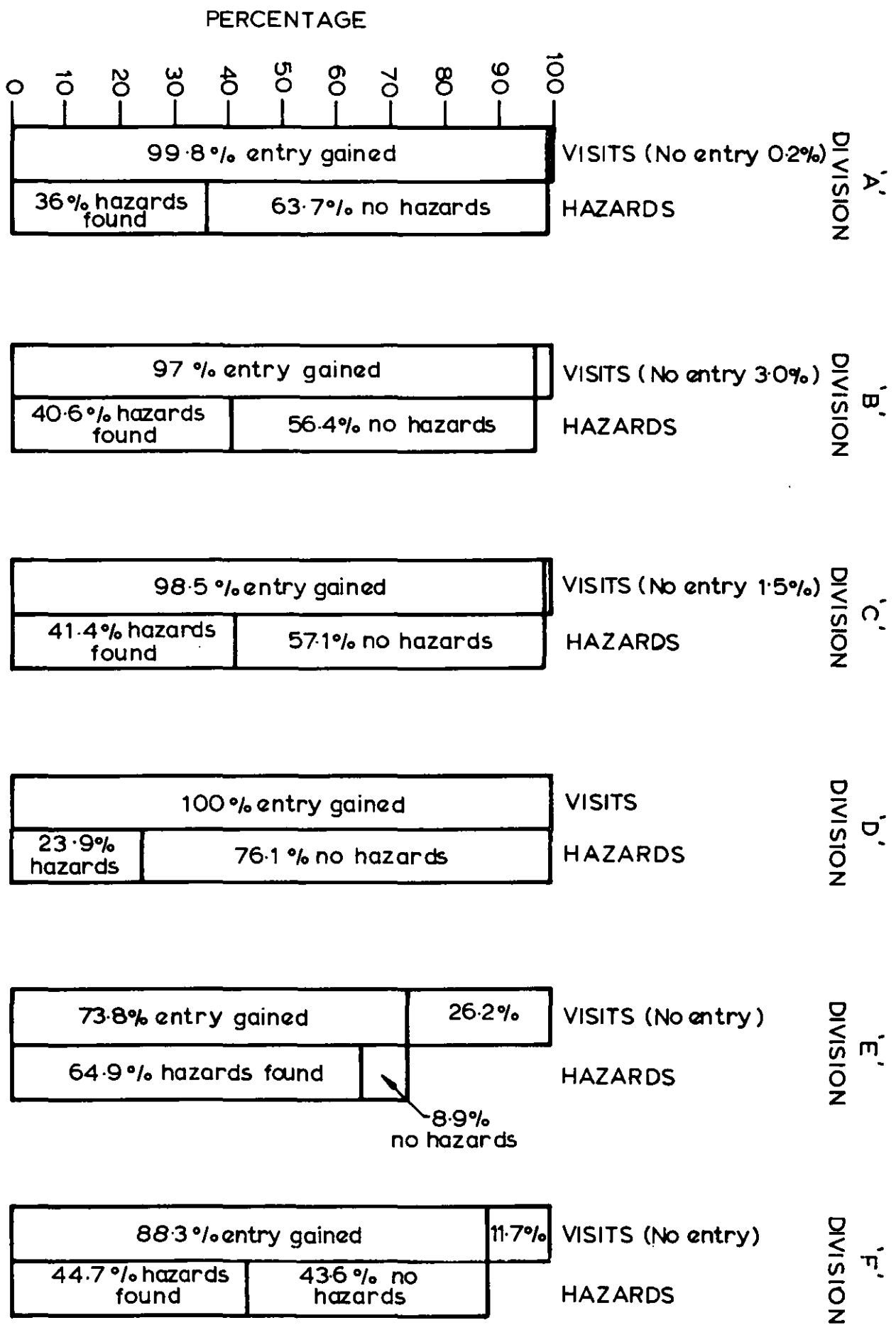
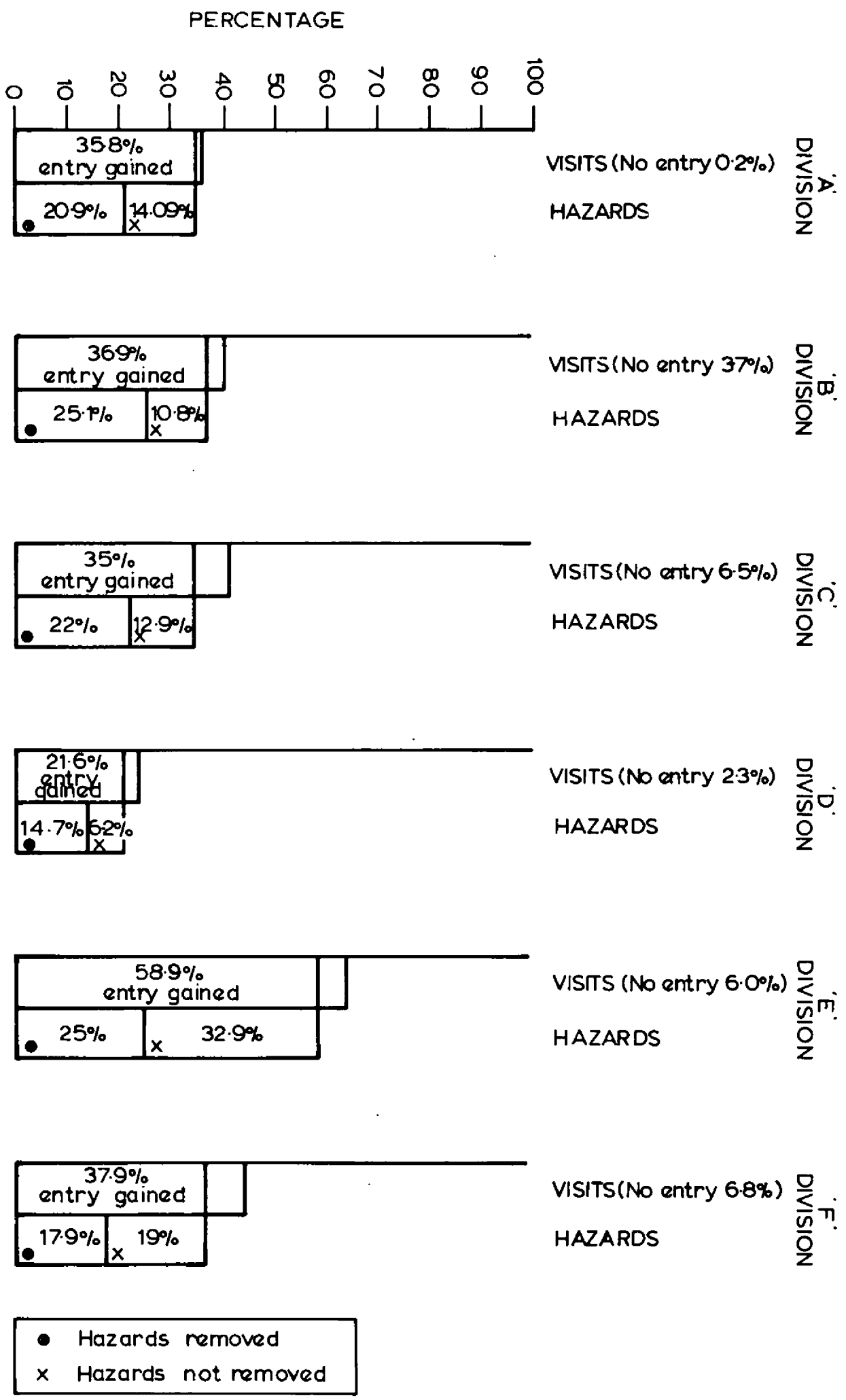


FIG. 2. PERCENTAGE OF ENTRANCES GAINED AND HAZARDS REMOVED — 2nd VISIT



**LANCASHIRE COUNTY FIRE BRIGADE**  
**HOUSE-TO-HOUSE INSPECTIONS 1967/1968**

**APPENDIX I**

**FIRE PREVENTION SURVEY**

Name :—

Address :—

NOTES

1            2

Room heating (inc. electric fires)

Electrical wiring

Electrical switches

Electrical sockets

Electrical appliances (excl. fires and cookers)

a.

b.

Cooker gas/electric \*

Inflammable substances

Others a.

b.

c.

NOTES :

column 1—tick if fire hazard exists

column 2—tick if now considered safe

\* delete which is not applicable

TOTAL No.    ✓

Dates visited

1st part

2nd part

P.T.O.

**LANCASHIRE COUNTY FIRE BRIGADE**

**HOUSE-TO-HOUSE INSPECTIONS**

**FIRE PREVENTION SURVEY**

**NOTES ON QUESTIONNAIRE**

**NOTES Column**— Record brief notes on the location of the hazard and its nature, e.g. living room—coal fire, no guard.

**Column 1** — For use on the first visit. A tick should be placed in every relevant box, if no hazard exists leave the box blank. The ticks should be counted and the total recorded at the end of the form in the box provided.

**Column 2** — For use on the second visit. A tick should be placed in the relevant box if it is considered that the hazard reported in column 1 has been removed. If it still exists or another hazard in the same area has arisen, leave the box blank. Total the ticks and record the number in the box provided.

**The dates** of all visits, effective and ineffective, should be recorded at the foot of the form. The last date on each line will be that of the effective visits.