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FIRES IN POST-WAR DWELLINGS XV. AN ANALYSIS OF REPORTS OF FIRES ATTENDED BY FIRE BRIGADES IN GREAT BRITAIN 1955

by

J. E. L. Hinton

Summary

An analysis has been made of reports of fires in post-war temporary and permanent non-traditional dwellings in 1955.

Two hundred and eighty-two temporary dwellings were damaged in 1955, (18.0 damaged dwellings per 10 000 dwellings at risk) Eighty incidents (5.1 damaged dwellings per 10 000 at risk) were caused by faults in electric wire and cable, 58 of these incidents involved fuse boxes or distribution boards. Forty-six incidents (3.0 damaged dwellings per 10 000 at risk) were caused by open fires.

There were 14 serious fires in temporary dwellings (0.9 damaged dwellings per 10 000 at risk) and 2 fatal and 26 non-fatal casualties occurred as a result of fires in temporary dwellings.

Of the incidents involving 298 permanent non-traditional dwellings, (7.5 damaged dwellings per 10 000 at risk), 83 were caused by open fires, 24 by radiated heat and sparks from flues, and 24 by faults in electric wire and cable. There were 10 serious fires (0.2 damaged dwellings per 10 000 at risk) in permanent non-traditional dwellings in 1955.

Six fatal casualties and 22 non-fatal casualties occurred as a result of fires in permanent non-traditional dwellings.

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FIRES IN POST-WAR DWELLINGS

An analysis of reports of fires attended by Fire Brigades in Great Britain during 1955.

by

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INTRODUCTION

An analysis has been made of all reports of fires in post-war temporary dwellings (282 incidents) and in post-war permanent non-traditional dwellings (295 incidents). Two hundred and eighty-two temporary dwellings were damaged by fire in 1955 (18.0 damaged dwellings per 10 000 at risk) and 298 permanent non-traditional dwellings (7.5 damaged dwellings per 10 000 at risk) were also involved in fires.

The causes of these incidents, the materials first ignited and the extent of fire have been analysed in relation to the different types of dwelling.

I. TEMPORARY DWELLINGS

RATE OF INCIDENCE

The rates of incidence and the extent of fires in the various types of temporary dwellings are shown in Table 1.

The highest rate of incidence occurred in Phoenix dwellings, where 6 fires produced a rate of incidence of 24.7 damaged dwellings per 10 000 at risk. Aluminium, Arcon and Spooner type dwellings also had high rates of incidence although there were only about 2 000 Phoenix and Spooner dwellings at risk so that a small number of fires could greatly affect the rate of incidence.

Two hundred and fifty (89 per cent) of the fires in temporary dwellings were confined to the room of origin and 5 per cent of the incidents were "serious" fires involving more than half the dwelling.

CAUSE OF FIRES

The causes of fires in temporary dwellings are analysed in Table 2. Eighty incidents (5.1 damaged dwellings per 10 000 at risk) were caused by faults in electric wire and cable; 78 of these were due to faults in the electrical installations of the houses. Three-quarters of these incidents occurred in Aluminium and Arcon houses.

Embers, sparks, or radiated heat from fires in grates, or conducted heat through defective hearths caused 46 incidents (3.0 damaged dwellings per 10 000 at risk) and oil heaters a further 20 incidents.

CAUSE OF FIRES IN RELATION TO THE TYPE OF DWELLING

The causes of fires in the different types of dwellings are shown in Tables 3-9.

ALUMINIUM DWELLINGS

One hundred and seven incidents occurred in Aluminium temporary dwellings (19.6 damaged dwellings per 10 000 at risk). Forty-three incidents (7.9 damaged dwellings per 10 000 at risk) were caused by faults in electric wire and cable; 32 of these involved fuse boxes and distribution boards. Thirteen incidents were due to "fire in grate" and 11 to "radiated heat or sparks from flues".

ARCON DWELLINGS

There were 81 incidents in Arcon dwellings (20.8 damaged dwellings per 10 000 at risk). Eighteen of these were caused by faults in electric wire

and cable, nine of which involved fuse boxes and distribution boards. Nine incidents in this type of dwelling were caused by oil stoves.

TARRAN DWELLINGS

Twenty-six incidents occurred in dwellings of the Tarran type (13.7 damaged dwellings per 10 000 at risk). Five incidents were caused by faults in electric wire and cable and 5 by sparks or radiated heat from domestic fires.

UNISECO DWELLINGS

Forty-five incidents occurred in post-war temporary Uniseco dwellings (15.5 damaged dwellings per 10 000 at risk). Ten of these (3.4 damaged dwellings per 10 000 at risk) were caused by faults in electric wire and cable and 7 by embers, sparks or radiated heat from open fires.

PHOENIX, U.S.A., SPOONER DWELLINGS

There were no outstanding causes of fire in these dwellings

MATERIALS FIRST IGNITED

In 123 incidents in post-war temporary dwellings (7.8 damaged dwellings per 10 000 dwellings at risk) the materials first ignited were constructional. The nature of the constructional materials first ignited is shewn in Table 10.

There were 83 incidents in which electrical insulation was the material first ignited and in 58 of these the fuse boxes or distribution boards were involved.

SERIOUS FIRES

There were 14 serious" fires (0.9 damaged dwellings per 10 000 at risk) in post-war temporary dwellings in 1955. The causes of the fires and the types of dwellings in which they occurred are shown in Table 11.

CASUALTIES

Two fatal casualties and 26 non-fatal casualties, one a member of the Fire Services, occurred as a result of fires in temporary dwellings in 1955. Both the fatalities resulted from the ignition of clothing, in one case from contact with an electric fire and in the other from contact with an oil stove.

COMPARISON WITH PREVIOUS ANALYSES

The total rate of incidence of fires in post-war temporary dwellings increased from 16.3 in 1954 to 18.0 damaged dwellings per 10 000 at risk in 1955, returning to about the same level of incidence as in 1953 (Fig.1). This increase was due entirely to the increase in the number of fires in Aluminium dwellings. Fires due to faults in electric wire and cable made the major contribution to the increase.

II. PERMANENT NON-TRADITIONAL DWELLINGS

RATES OF INCIDENCE

The rates of incidence of fires in various types of permanent dwellings of non-traditional construction are shown in Table 12 together with the extent of the fires.

Two hundred and ninety-eight permanent, non-traditional dwellings were damaged by fire in 1955,(7.5 damaged dwellings per 10 000 at risk per year). In 269 of these (6.7 damaged dwellings per 10 000 at risk per year) the fire was confined to the room of origin and there were 10 serious fires which involved more than half the dwelling.

CAUSES OF FIRES

Open fires provided the largest single cause of fires in permanent non-traditional dwellings and gave rise to 83 fires (2.1 damaged dwellings per 10 000 dwellings at risk). Electric cookers were the cause of 35 incidents

to which the Fire Brigades were called, these were mainly small incidents involving overheated food. Faults in electric wiring, and radiated heat and sparks from flues were each the cause of 24 incidents.

CAUSES OF FIRES IN RELATION TO TYPE OF DWELLING

AIREY DWELLINGS

There were 14 incidents in Airey dwellings (5.4 damaged dwellings per 10 000 dwellings at risk) of which 6 were due to electrical apparatus and wire and cable and 2 to open fires.

ALUMINIUM DWELLINGS

Of the 12 incidents in permanent Aluminium dwellings (6.1 damaged dwellings per 10 000 dwellings at risk) 4 were due to electric cookers and 3 to faults in electric wire and cable.

ATHOLL DWELLINGS

Eight incidents occurred in Atholl dwellings (11.2 damaged dwellings per 10 000 at risk) 3 of which were due to faults in electric wire and cable.

B.I.S.F. DWELLINGS

There were 63 B.I.S.F. dwellings damaged by fire in 1955 (17.3 damaged dwellings per 10 000 dwellings at risk). Sixteen incidents were caused by radiated heat and sparks from flues and 18 by electrical apparatus and wire and cable.

BLACKBURN DWELLINGS

Open fires were the cause of 4 out of the 14 incidents involving Blackburn dwellings.

CORNISH UNIT DWELLINGS

Of the 11 incidents involving Cornish Unit dwellings (4.6 damaged dwellings per 10 000 dwellings at risk), 5 were due to electrical apparatus.

LAING EASIFORM DWELLINGS

There were 22 incidents in Laing Easiform dwellings (4.9 damaged dwellings per 10 000 dwellings at risk). Fifteen of these (3.3 damaged dwellings per 10 000 at risk) were caused by open fires.

ORLIT DWELLINGS

Nineteen incidents occurred in Orlit dwellings (10.8 damaged dwellings per 10 000 at risk), 6 incidents were due to radiated heat or sparks from open fires and 5 to flues.

UNITY and WEIR DWELLINGS

Of the 10 incidents which involved 11 Unity dwellings (7.7 damaged dwellings per 10 000 at risk) 6 were caused by sparks, embers or radiated heat from open fires. In Weir dwellings also there were 4 incidents due to this cause.

WIMPEY DWELLINGS

There were 18 dwellings of the Wimpey type damaged in 1955, (4.9 damaged dwellings per 10 000 at risk). Electrical apparatus and faults in wire and cable were the cause of 8 of these incidents and open fires were the cause of another 4 incidents.

MATERIAL FIRST IGNITED

The nature of the constructional materials first ignited in 79 permanent non-traditional dwellings is analysed in Table 27.

In 25 incidents insulation of electric wiring was the material first ignited, and in a further 11 incidents roof or roof linings were ignited first.

SERIOUS FIRES

There were 10 incidents (0.2 damaged dwellings per 10 000 at risk per year) in permanent non-traditional dwellings where the fire involved more than half the dwelling.

The causes of these incidents and the types of dwellings in which they occurred are shown in Table 28.

CASUALTIES

Six fatal casualties occurred as a result of fires in permanent non-traditional dwellings, 4 of which were due to the ignition of personal clothing - in 3 cases by an open fire and in one case by an electric fire.

There were also 22 non-fatal casualties one of which was a member of the Fire Service.

COMPARISON WITH PREVIOUS ANALYSES

The rate of incidence of fire in permanent non-traditional dwellings decreased from 8.8 in 1954 to 7.5 in 1955. This slight decrease continues the downward tendency for the rate of incidence of fire in this type of dwelling. (Fig.I). This decrease in the overall rate of incidence was due to a decrease in the number of incidents in Airey dwellings, mainly because there were fewer incidents due to open fires and slow combustion stoves. It will be seen from Table 30 that the rate of incidence in Airey dwellings in 1954 was considerably higher than that in previous years, and the rate of incidence observed in 1955 merely returned to about the same level as in 1953.

The rate of incidence of serious fires has decreased to 0.2 damaged dwellings per 10 000 at risk per year returning to the low level maintained in the years 1951-1953.

DISCUSSION AND CONCLUSIONS

The rate of incidence of fire in temporary dwellings has followed an increasing trend (Fig.I) since these analyses were started, and since 1951 it has remained somewhat higher than the rate of incidence observed in all types of dwellings.

In permanent non-traditional houses the rate of incidence of fire is now decreasing after having remained fairly constant until 1952, and its present level is less than half that observed in temporary dwellings.

In Tables 29 and 30 the rates of incidence of the main types of temporary and permanent non-traditional dwellings are shown over the entire period covered by these analyses.

In the majority of the types of dwellings fluctuations have occurred over the period, but the most outstanding features are the decreases in the rates of incidence in the Cruden and Unity types of non-traditional dwelling. It is known that improvements were made in the Cruden dwelling in 1951. The decrease in the rate of incidence in Unity dwellings seems to be mainly due to a decrease in the number of incidents caused by radiated heat or sparks from flues.

The rate of incidence of serious fires in both temporary and permanent non-traditional dwellings has remained fairly constant.

The rate of incidence of fires due to faults in electric wire and cable (Fig.II) has increased in temporary dwellings from 2 to 5 damaged dwellings per 10 000 dwellings at risk; 60 to 80 per cent of these fires occur in Aluminium and Arcon dwellings. This rate is high compared with that in all dwellings which remains fairly constant at about 1.0 damaged dwellings per 10 000 at risk.

Fires due to radiated heat or sparks and embers from domestic fires are an important section of the fires in permanent non-traditional dwellings (Fig.3) but the incidence has remained fairly constant at a level less than half that for fires due to the same cause in all dwellings. The difference may be partly due to the fact that many of the non-traditional houses have incombustible floors, and therefore cases involving the ignition of floor joists or timber under hearth are not common.

It is apparent that many incidents that occur in dwellings could be avoided by a better standard of housekeeping. The causes which produce the largest groups of fires (faults in electric wire and cable being the exception) are almost invariably due to some careless action on the part of the occupant.

The evidence of this and previous analyses shows that the factors contributing to the incidence of fires in post-war non-traditional dwellings are established and that while it will be necessary to observe the general trend of fires in these dwellings no useful purpose will be served at present by any further detailed analyses of this type.

Table 1

THE RATE OF INCIDENCE OF FIRES IN OCCUPIED POST-WAR TEMPORARY DWELLINGS

Reports from Fire Brigades in Great Britain 1955

Type of dwelling	Number of dwellings at risk	Number of incidents	Number of damaged dwellings				Number of damaged dwellings per 10 000 at risk			
			Total	Fire confined to room of origin	Fire spread beyond room damaging		Total	Fire confined to room of origin	Fire spread beyond room damaging	
					less than half the dwelling	more than half the dwelling			less than half the dwelling	more than half the dwelling
Aluminium ..	54 456	107	107	98	4	5	19.6	18.0	0.7	0.9
Arcon	38 859	81	81	71	6	4	20.8	18.3	1.5	1.0
Phoenix	2 428	6	6	6	-	-	24.7	24.7	-	-
Tarran	19 014	26	26	20	3	3	13.7	10.5	1.6	1.6
Uniseco	28 999	45	45	39	5	1	15.5	13.4	1.7	0.3
U.S.A.	8 462	13	13	13	-	-	15.4	15.4	-	-
Orlit	255	-	-	-	-	-	-	-	-	-
Spooner	2 000	4	4	3	-	1	20.0	15.0	-	5.0
Universal ..	2 000	-	-	-	-	-	-	-	-	-
Other types	150	-	-	-	-	-	-	-	-	-
Total	156 623	282	282	250	18	14	18.0	16.0	1.1	0.9

N.B. The numbers of dwellings at risk quoted here are the numbers of each type at risk when the temporary housing programme was completed in 1949 - it is not possible to account for any demolitions.

Table 2

CAUSE OF FIRES IN OCCUPIED POST-WAR TEMPORARY DWELLINGS

Reports from Fire Brigades in Great Britain 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	2 (0.1)	21 (1.3)	23 (1.5)
fire	1 -	8 (0.5)	9 (0.6)
other apparatus	4 (0.3)	10 (0.6)	14 (0.9)
wire and cable	79 (5.0)	1 -	80 (5.1)
Fire in grate, embers, sparks, radiated heat	8 (0.5)	34 (2.2)	42 (2.7)
Fire in grate, defective hearth	2 (0.1)	2 (0.1)	4 (0.3)
Flue - radiated heat or sparks	15 (1.0)	3 (0.2)	18 (1.1)
Flue - defective	3 (0.2)	-	3 (0.2)
Gas cooker	1 -	6 (0.4)	7 (0.4)
fire	-	1 -	1 -
Oil stove	-	18 (1.1)	18 (1.1)
Oil stove overturned	-	2 (0.1)	2 (0.1)
Smoking materials and matches .	-	20 (1.3)	20 (1.3)
Children playing with matches .	-	11 (0.7)	11 (0.7)
Miscellaneous causes	8 (0.5)	8 (0.5)	16 (1.0)
Total fires of known cause	123 (7.8)	145 (9.3)	268 (17.1)
Unknown cause	-	1 -	14 (0.9)
Total all fires	123 (7.8)	146 (9.3)	282 (18.0)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 3

THE CAUSES OF FIRE IN POST-WAR TEMPORARY ALUMINIUM DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	1 (0.2)	3 (0.6)	-	4 (0.7)
fire	-	3 (0.6)	-	3 (0.6)
other apparatus	1 (0.2)	1 (0.2)	-	2 (0.4)
wire and cable	43 (7.9)	-	-	43 (7.9)
Fire in grate, embers, sparks, radiated heat	1 (0.2)	12 (2.2)	-	13 (2.4)
Flue, radiated heat	9 (1.7)	1 (0.2)	-	10 (1.8)
defective	1 (0.2)	-	-	1 (0.2)
Gas cooker	-	3 (0.6)	-	3 (0.6)
Children playing with matches .	-	6 (1.1)	-	6 (1.1)
Oil stove	-	5 (1.0)	-	5 (1.0)
Oil stove overturned	-	1 (0.2)	-	1 (0.2)
Smoking materials and matches .	-	5 (1.0)	-	5 (1.0)
Miscellaneous causes	1 (0.2)	3 (0.6)	-	4 (0.7)
Unknown	-	1 (0.2)	6 (1.1)	7 (1.3)
Total fires	57 (10.5)	44 (8.1)	6 (1.1)	107 (19.6)

Table 4

THE CAUSES OF FIRE IN POST-WAR TEMPORARY ARCON DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	-	7 (1.8)	-	7 (1.8)
fire	1 (0.3)	4 (1.0)	-	5 (1.3)
other apparatus	1 (0.3)	3 (0.8)	-	4 (1.0)
wire and cable	17 (4.4)	1 (0.3)	-	18 (4.6)
Fire in grate, embers, sparks, radiated heat	3 (0.8)	12 (3.1)	-	15 (3.9)
Fire in grate, defective hearth	2 (0.5)	1 (0.3)	-	3 (0.8)
Flue, radiated heat	2 (0.5)	1 (0.3)	-	3 (0.8)
defective	2 (0.5)	-	-	2 (0.5)
Gas cooker	1 (0.3)	1 (0.3)	-	2 (0.5)
fire	-	1 (0.3)	-	1 (0.3)
Children playing with matches .	-	2 (0.5)	-	2 (0.5)
Oil stove	-	9 (2.3)	-	9 (2.3)
Smoking materials	-	4 (1.0)	-	4 (1.0)
Miscellaneous	4 (1.0)	1 (0.3)	-	5 (1.3)
Unknown	-	-	1 (0.3)	1 (0.3)
Total fires	33 (8.5)	47 (12.1)	1 (0.3)	81 (20.8)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 5

THE CAUSES OF FIRE IN POST-WAR TEMPORARY UNITED KINGDOM DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	1 (0.3)	6 (2.1)	-	7 (2.4)
other apparatus	2 (0.7)	3 (1.0)	-	5 (1.7)
wire and cable	10 (3.4)	-	-	10 (3.4)
Fire in grate, radiated heat and sparks	2 (0.7)	5 (1.7)	-	7 (2.4)
Fire in grate, defective hearth	-	1 (0.3)	-	1 (0.3)
Flue, radiated heat	3 (1.0)	-	-	3 (1.0)
Smoking material and matches ..	-	5 (1.7)	-	5 (1.7)
Children playing with matches .	-	3 (1.0)	-	3 (1.0)
Miscellaneous causes	-	1 (0.3)	-	1 (0.3)
Unknown	-	-	3 (1.0)	3 (1.0)
Total fires	18 (6.2)	24 (8.3)	3 (1.0)	45(15.5)

Table 6

THE CAUSES OF FIRE IN POST-WAR TEMPORARY U.S.A. DWELLINGS
Reports from Fire Brigades in Great Briatin, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	-	2 (2.4)	-	2 (2.4)
wire and cable	2 (2.4)	-	-	2 (2.4)
Flue, radiated heat	-	1 (1.2)	-	1 (1.2)
Gas cooker	-	1 (1.2)	-	1 (1.2)
Matches	-	1 (1.2)	-	1 (1.2)
Oil stove	-	1 (1.2)	-	1 (1.2)
Miscellaneous	-	3 (3.5)	-	3 (3.5)
Unknown	-	-	2 (2.4)	2 (2.4)
Total fires	2 (2.4)	9 (10.6)	2 (2.4)	13 (15.5)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 7

THE CAUSES OF FIRE IN POST-WAR TEMPORARY PHOENIX DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Fire in grate, embers, sparks, radiated heat	1 (4.1)	-	-	1 (4.1)
Flue, radiated heat	1 (4.1)	-	-	1 (4.1)
Oil stove	-	1 (4.1)	-	1 (4.1)
Smoking material and matches ..	-	2 (8.2)	-	2 (8.2)
Miscellaneous	1 (4.1)	-	-	1 (4.1)
Total fires	3 (12.3)	3 (12.3)	-	6 (24.7)

Table 8

THE CAUSES OF FIRE IN POST-WAR TEMPORARY SPOONER DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	-	1 (5.0)	-	1 (5.0)
wire and cable	2 (10.0)	-	-	2 (10.0)
Fire in grate, embers, sparks, radiated heat	-	1 (5.0)	-	1 (5.0)
Total fires	2 (10.0)	2 (10.0)	-	4 (20.0)

Table 9

THE CAUSES OF FIRE IN POST-WAR TEMPORARY TARRAN DWELLINGS
Repprts from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignired			
	Constructional Materials	Contents	Unknown	Total
Electric cooker	-	2 (1.0)	-	2 (1.0)
fire	-	1 (0.5)	-	1 (0.5)
other apparatus	-	3 (1.6)	-	3 (1.6)
wire and cable	5 (2.6)	-	-	5 (2.6)
Fire in grate, embers, sparks, radiated heat	1 (0.5)	4 (2.1)	-	5 (2.6)
Gas cooker	-	1 (0.5)	-	1 (0.5)
Oil stove	-	2 (1.1)	-	2 (1.1)
Oil stove overturned	-	1 (0.5)	-	1 (0.5)
Smoking materials and matches ..	-	3 (1.6)	-	3 (1.6)
Miscellaneous causes	2 (1.1)	-	-	2 (1.1)
Unknown	-	-	1 (0.5)	1 (0.5)
Total fires	8 (4.2)	17 (8.9)	1 (0.5)	26 (13.7)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 10

NATURE OF CONSTRUCTIONAL MATERIAL FIRST IGNITED
IN FIRES IN POST-WAR TEMPORARY DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Material first ignited	Number of fires
Roof or roof lining	7 (0.4)
Ceilings	7 (0.4)
Partitions, walls, linings to walls	2 (0.1)
Floor	7 (0.4)
Timber set in chimney	2 (0.1)
Other internal wooden fittings (including built-in cupboards)	3 (0.2)
Insulation of electric wiring	
a. (1) no fire spread	9 (0.6)
(2) fire spreading to floorboards, rafters, walls, ceilings	11 (0.7)
b. (1) fire confined to fuse box panel, switchboard, distribution board	43 (2.7)
(2) fire involving (1) but spread to floorboards, rafters, walls, ceilings	13 (0.8)
(3) fire involving (1) but spread to other materials	2 (0.1)
c. fire spread to other materials	5 (0.3)
Flue casings	1 -
Miscellaneous constructional materials	11 (0.7)
Total fires where constructional materials were first ignited	123 (7.8)

Table 11

CAUSES OF SERIOUS FIRES IN POST-WAR TEMPORARY DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Alum-inium	Arcon	Tarran	Uniseco	Spooner	Total
Electric wireless or television	1	-	-	1	-	2
wire and cable	-	1	-	-	-	1
Fire in grate	1	1	2	-	1	5
Children playing with matches	1	-	-	-	-	1
Oil stove	-	1	-	-	-	1
Smokers' materials	-	1	-	-	-	1
Unknown	2	-	1	-	-	3
Total	5	4	3	1	1	14

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 12

THE RATE OF INCIDENCE OF FIRES IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL DWELLINGS

Reports from Fire Brigades in Great Britain 1955

Type of dwelling	Number of dwellings at risk	Number of incidents	Number of damaged dwellings				Number of damaged dwellings per 10 000 at risk			
			Total	Fire confined to room of origin	Fire spread beyond room damaging		Total	Fire confined to room of origin	Fire spread beyond room damaging	
					less than half the dwelling	more than half the dwelling			less than half the dwelling	more than half the dwelling
Airey	25 729	14	14	13	-	1	5.4	5.1	-	0.4
Aluminium ...	19 760	12	12	12	-	-	6.1	6.1	-	-
Atholl	7 112	8	8	8	-	-	11.2	11.2	-	-
B.I.S.F.	36 344	62	63	55	7	1	17.3	15.1	2.0	0.3
Blackburn ...	9 399	14	14	13	1	-	14.9	13.8	1.1	-
British Steel	4 026	1	1	1	-	-	2.5	2.5	-	-
Cornish Unit	23 942	11	11	11	-	-	4.6	4.6	-	-
Cruden	12 268	1	1	1	-	-	0.8	0.8	-	-
Dorran	362	1	1	1	-	-	27.6	27.6	-	-
Dunedin	...	2	2	2	-	-	...	-	-	-
Hills Pressweld ..	...	1	1	1	-	-	...	-	-	-
Howard	1 404	2	2	2	-	-	14.2	14.2	-	-
Laing Easiform ...	44 685	22	22	21	1	-	4.9	4.7	0.2	-
Miller	6 574	1	1	1	-	-	1.5	1.5	-	-
Myton	2 812	4	4	2	1	1	14.2	7.1	3.5	3.5
Orlit	17 600	19	19	17	2	-	10.8	9.7	1.1	-
Reema	7 543	2	2	2	-	-	2.6	2.6	-	-
Spooner	3 588	2	2	2	-	-	5.6	5.6	-	-
Stuart	5 935	3	3	3	-	-	5.1	5.1	-	-
Unity	14 253	11	11	10	-	1	7.7	7.0	-	0.7
Swedish	6 010	8	9	6	2	1	15.0	10.0	3.3	1.7
Wates	19 062	6	6	6	-	-	3.1	3.1	-	-
Weir	21 121	10	10	8	1	1	4.7	3.8	0.5	0.5
Whitson-Fairhurst ..	3 358	4	4	3	1	-	12.0	8.9	-	3.0
Wimpey	61 182	18	18	18	-	-	2.9	2.9	-	-
Woolaway	5 014	1	1	1	-	-	2.0	2.0	-	-
Other undefined	...	55	56	49	3	4	...	-	-	-
Total	397 507	295	298	269	19	10	7.5	6.7	0.5	0.2

Table 13

CAUSE OF FIRES IN OCCUPIED POST-WAR NON-TRADITIONAL DWELLINGS

Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Material	Contents	Total
Electric cooker	3 -	32 (0.8)	35 (0.9)
fire	-	4 (0.1)	4 (0.1)
other apparatus	3 -	18 (0.5)	21 (0.5)
wire and cable	18 (0.5)	6 (0.1)	24 (0.6)
Fire in grate, embers, sparks, radiated heat	7 (0.2)	69 (1.7)	76 (1.9)
faulty hearth	2 -	5 (0.1)	7 (0.2)
Flue, radiated heat or sparks ...	21 (0.5)	-	21 (0.5)
defective	2 -	1 -	3 (0.1)
Gas cooker	-	9 (0.2)	9 (0.2)
fire	-	-	-
other apparatus	1	3 (0.1)	4 (0.1)
Oil stove	1	5 (0.1)	6 (0.1)
overturned	-	-	-
Smoking materials and matches ...	-	18 (0.5)	18 (0.5)
Children playing with matches ...	1	6 (0.1)	7 (0.2)
Spread of fire from house or flat	5 (0.1)	-	5 (0.1)
Miscellaneous causes	14 (0.3)	28 (0.7)	42 (1.0)
Total fires of known cause	78 (2.0)	204 (5.1)	282 (7.1)
Unknown cause	1	3 (0.1)	16 (0.4)
Total all fires	79 (2.0)	207 (5.2)	298 (7.5)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 14

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL WIMPEY DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	3 (0.5)	3 (0.5)
other apparatus	-	1 (0.2)	1 (0.2)
wire and cable	2 (0.3)	2 (0.3)	4 (0.6)
Fire in grate, embers, sparks, radiated heat	-	4 (0.6)	4 (0.6)
Gas cooker	-	1 (0.2)	1 (0.2)
Oil stove	-	1 (0.2)	1 (0.2)
Miscellaneous causes	-	1 (0.2)	1 (0.2)
Unknown	-	-	3 (0.5)
Total	2 (0.3)	13 (2.1)	18 (2.9)

Table 15

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL CORNISH UNIT DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	1 (0.4)	1 (0.4)	2 (0.8)
fire	-	1 (0.4)	1 (0.4)
other apparatus	-	2 (0.8)	2 (0.8)
Fire in grate, embers, sparks, radiated heat	-	1 (0.4)	1 (0.4)
Gas other apparatus	-	1 (0.4)	1 (0.4)
Smoking materials and matches	-	1 (0.4)	1 (0.4)
Miscellaneous causes	-	2 (0.8)	2 (0.8)
Unknown	-	-	1 (0.4)
Total	1 (0.4)	9 (3.8)	11 (4.6)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 16

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL UNITY DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	1 (0.7)	1 (0.7)
Fire in grate, embers, sparks, radiated heat	-	6 (4.2)	6 (4.2)
Flue, radiated heat	1 (0.7)	-	1 (0.7)
Oil stove	1 (0.7)	-	1 (0.7)
Smoking materials and matches	-	1 (0.7)	1 (0.7)
Spread from other house	1 (0.7)	-	1 (0.7)
Total	3 (2.1)	8 (5.6)	11 (7.7)

Table 17

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL WATES DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric, other apparatus	-	1 (1.0)	1 (1.0)
wire and cable	2 (1.0)	-	2 (1.0)
Miscellaneous causes	-	3 (1.6)	3 (1.6)
Total	2 (1.0)	4 (2.1)	6 (3.1)

Table 18

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL WEIR DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric, other apparatus	1 (0.5)	-	1 (0.5)
Fire in grate, embers, sparks, radiated heat	-	3 (1.4)	3 (1.4)
Flue defective	1 (0.5)	-	1 (0.5)
Gas other apparatus	-	1 (0.5)	1 (0.5)
Smoking materials and matches	-	3 (1.4)	3 (1.4)
Unknown	-	-	1 (0.5)
Total	2 (0.9)	7 (3.3)	10 (4.7)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 19

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL ORLIT DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric fire	-	1 (0.6)	1 (0.6)
wire and cable	1 (0.6)	-	1 (0.6)
Fire in grate, embers, sparks, radiated heat	2 (1.1)	4 (2.3)	6 (3.4)
Flue, radiated heat	3 (1.7)	1 (0.6)	4 (2.3)
defective	1 (0.6)	-	1 (0.6)
Gas cooker	-	1 (0.6)	1 (0.6)
Oil stove	-	1 (0.6)	1 (0.6)
Miscellaneous causes	-	1 (0.6)	1 (0.6)
Unknown	-	1 (0.6)	3 (1.7)
Total	7 (4.0)	10 (5.7)	19 (10.8)

Table 20

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL SWEDISH TIMBER DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	1 (1.7)	1 (1.7)
other apparatus	-	1 (1.7)	1 (1.7)
Matches	-	1 (1.7)	1 (1.7)
Spread of fire from house or flat	1 (1.7)	-	1 (1.7)
Miscellaneous causes	1 (1.7)	2 (3.3)	3 (5.0)
Unknown cause	1 (1.7)	-	2 (3.3)
Total	3 (5.0)	5 (8.3)	9 (15.0)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 21

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL ALUMINIUM DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	1 (0.5)	3 (1.5)	4 (2.0)
wire and cable	3 (1.5)	-	3 (1.5)
Fire in grate, embers, sparks, radiated heat	1 (0.5)	1 (0.5)	2 (1.0)
Flue, radiated heat	2 (1.0)	-	2 (1.0)
Unknown	-	-	1 (0.5)
Total	7 (3.5)	4 (2.0)	12 (6.1)

Table 22

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL BLACKBURN DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	1 (1.1)	1 (1.1)
other apparatus	1 (1.1)	-	1 (1.1)
wire and cable	-	1 (1.1)	1 (1.1)
Fire in grate, embers, sparks, radiated heat	-	4 (4.3)	4 (4.3)
Flue, radiated heat	1 (1.1)	-	1 (1.1)
Gas cooker	-	1 (1.1)	1 (1.1)
Smoking materials	-	1 (1.1)	1 (1.1)
Miscellaneous	1 (1.1)	2 (2.1)	3 (3.2)
Unknown	-	1 (1.1)	1 (1.1)
Total	3 (3.2)	11 (11.7)	14 (14.9)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 23

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL B.I.S.F. DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	8 (2.2)	8 (2.2)
fire	-	2 (0.6)	2 (0.6)
other apparatus	1 (0.3)	4 (1.1)	5 (1.4)
wire and cable	3 (0.8)	-	3 (0.8)
Fire in grate, embers, sparks, radiated heat	-	7 (1.9)	7 (1.9)
Flue, radiated heat	13 (3.6)	2 (0.6)	15 (4.1)
defective	-	1 (0.3)	1 (0.3)
Gas cooker	-	3 (0.8)	3 (0.8)
other apparatus	1 (0.3)	-	1 (0.3)
Children playing with matches	-	3 (0.8)	3 (0.8)
Smoking materials and matches	-	4 (1.1)	4 (1.1)
Spread from house or flat	1 (0.3)	-	1 (0.3)
Miscellaneous causes	6 (1.7)	4 (1.1)	10 (2.7)
Total	25 (6.9)	38 (10.5)	63 (17.3)

Table 24

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL LAING-EASIFORM DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	1 (0.2)	1 (0.2)	2 (0.4)
other apparatus	-	1 (0.2)	1 (0.2)
Fire in grate, embers, sparks, radiated heat	-	15 (3.3)	15 (3.3)
Gas cooker	-	1 (0.2)	1 (0.2)
Smoking materials and matches	-	2 (0.4)	2 (0.4)
Miscellaneous causes	-	1 (0.2)	1 (0.2)
Total	1 (0.2)	21 (4.7)	22 (4.9)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 25

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL AIREY DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	2 (0.8)	2 (0.8)
other apparatus	-	2 (0.8)	2 (0.8)
wire and cable	2 (0.8)	-	2 (0.8)
Fire in grate, embers, sparks, radiated heat	-	2 (0.8)	2 (0.8)
Smoking materials and matches	-	1 (0.4)	1 (0.4)
Miscellaneous causes	-	4 (1.6)	4 (1.6)
Unknown	-	1 (0.4)	1 (0.4)
Total	2 (0.8)	12 (4.7)	14 (5.4)

Table 26

CAUSE OF FIRE IN OCCUPIED POST-WAR PERMANENT NON-TRADITIONAL ATHOLL DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Material first ignited		
	Constructional Materials	Contents	Total
Electric cooker	-	1 (1.4)	1 (1.4)
wire and cable	2 (2.8)	1 (1.4)	3 (4.2)
Gas other apparatus	-	1 (1.4)	1 (1.4)
Children playing with matches	-	1 (1.4)	1 (1.4)
Miscellaneous causes	1 (1.4)	1 (1.4)	2 (2.8)
Total	3 (4.2)	5 (7.0)	8 (11.2)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 27

NATURE OF CONSTRUCTIONAL MATERIALS FIRST IGNITED IN POST-WAR PERMANENT NON-TRADITIONAL DWELLINGS
Reports from Fire Brigades in Great Britain, 1955

Material first ignited	Number of fires
Roof or roof lining	11 (0.3)
Ceilings	6 (0.1)
Partitions, walls, linings to walls	5 (0.1)
Floor	9 (0.2)
Timber set in chimney	-
Other internal wooden fittings (including built-in cupboards)	10 (0.2)
Insulation of electric wiring	
a. (1) no fire spread	2 -
(2) fire spreading to floorboards, rafters, walls, ceilings	7 (0.2)
(3) fire spreading to other materials	4 (0.1)
b. (1) fire confined to fuse box panel, switchboard, distribution board	9 (0.2)
(2) fire involving (1) but spread to floorboards, rafters, walls and ceilings ..	2 -
(3) fire involving (1) but spread to other materials	1 -
Flue casings	2 -
Miscellaneous constructional materials	11 (0.3)
Total fires where constructional materials were first ignited	79 (2.0)

Note. The figures in brackets are the numbers of damaged dwellings per 10 000 at risk per year.

Table 28

CAUSE OF SERIOUS FIRES IN POST-WAR PERMANENT NON-TRADITIONAL DWELLINGS

Reports from Fire Brigades in Great Britain, 1955

Cause of fire	Type of dwelling							
	Airey	B.I.S.F.	Myton	Unity	Swedish	Weir	Other	Total
Fire in grate, radiated heat or sparks	-	-	-	-	-	-	1	1
Flue, radiated heat ...	-	1	-	-	-	-	-	1
Gas cooker	-	-	-	-	-	-	1	1
Oil stove	-	-	-	1	-	-	-	1
Smoking materials and matches	1	-	-	-	-	1	-	2
Unknown	-	-	1	-	1	-	2	4
Total	1	1	1	1	1	1	4	10

Table 29

RATES OF INCIDENCE OF FIRE IN THE MAIN TYPES OF TEMPORARY DWELLING
Reports received from Fire Services in Great Britain, 1947-1955

Type of dwelling	Year 1947	1948	1949	1950	1951	1952	1953	1954	1955
Aluminium	8.2	10.5	12.9	16.2	22.8	17.4	17.1	14.5	19.6
Arcon	11.4	12.8	11.8	13.4	13.1	22.1	23.2	19.8	20.8
Tarran	9.7	10.7	12.6	10.5	13.7	10.5	14.7	12.1	13.7
Uniseco	10.2	8.4	12.8	10.3	16.2	12.4	15.9	16.2	15.5

Table 30

RATES OF INCIDENCE OF FIRE IN THE MAIN TYPES OF PERMANENT NON-TRADITIONAL DWELLING
Reports received from Fire Services in Great Britain, 1947-1955

Type of dwelling	Year 1947	1948	1949	1950	1951	1952	1953	1954	1955
Airey	-	33.3	5.6	6.9	8.9	9.1	6.0	14.6	5.4
Aluminium	-	4.6	6.9	7.3	8.6	6.6	6.7	7.1	6.1
B.I.S.F.	5.5	8.7	13.5	17.6	17.2	19.0	14.6	17.1	17.3
Cornish Unit	-	79.1	7.4	5.6	6.4	6.3	4.4	3.1	4.6
Cruden	-	42.3	43.8	41.7	14.8	8.7	3.6	1.9	0.8
Laing	-	2.1	3.1	3.7	3.9	1.3	5.1	3.8	4.9
Orlit	-	12.7	8.8	10.2	8.1	13.8	12.9	10.1	10.8
Unity	370.0	130.0	29.3	46.9	50.6	37.5	12.1	3.7	7.7
Wates	-	23.4	11.2	4.0	8.2	3.8	2.8	2.6	3.1
Weir	-	-	8.1	5.2	5.2	9.3	10.8	5.2	4.7
Wimpey	-	6.1	12.5	6.1	1.0	5.8	3.3	3.7	2.9

Note. The rates of incidence shown above are the number of damaged dwellings per 10 000 at risk per year.

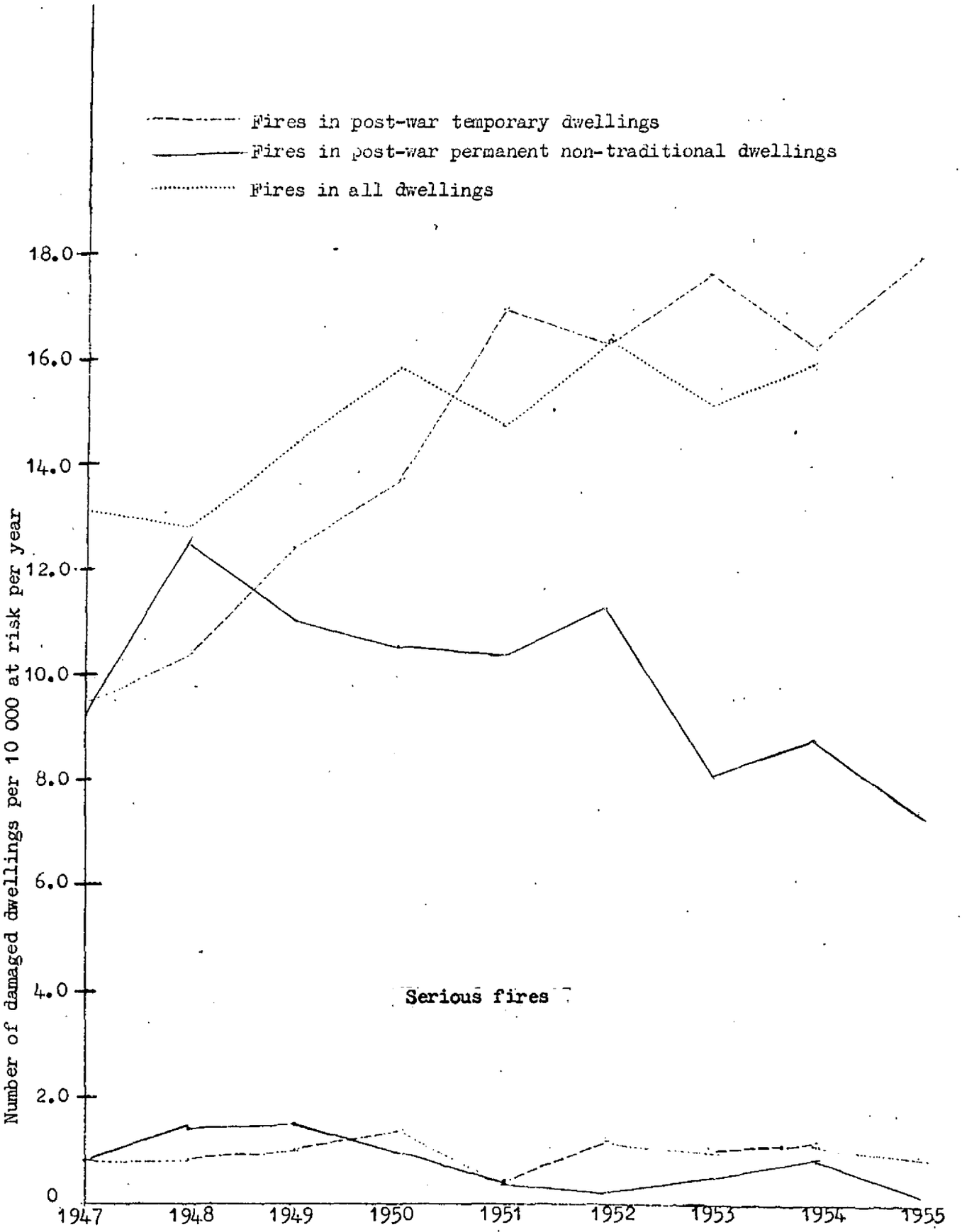

Fig.1. INCIDENCE OF FIRES IN DWELLINGS 1947-1955
(Reports from Fire Brigades in Great Britain)

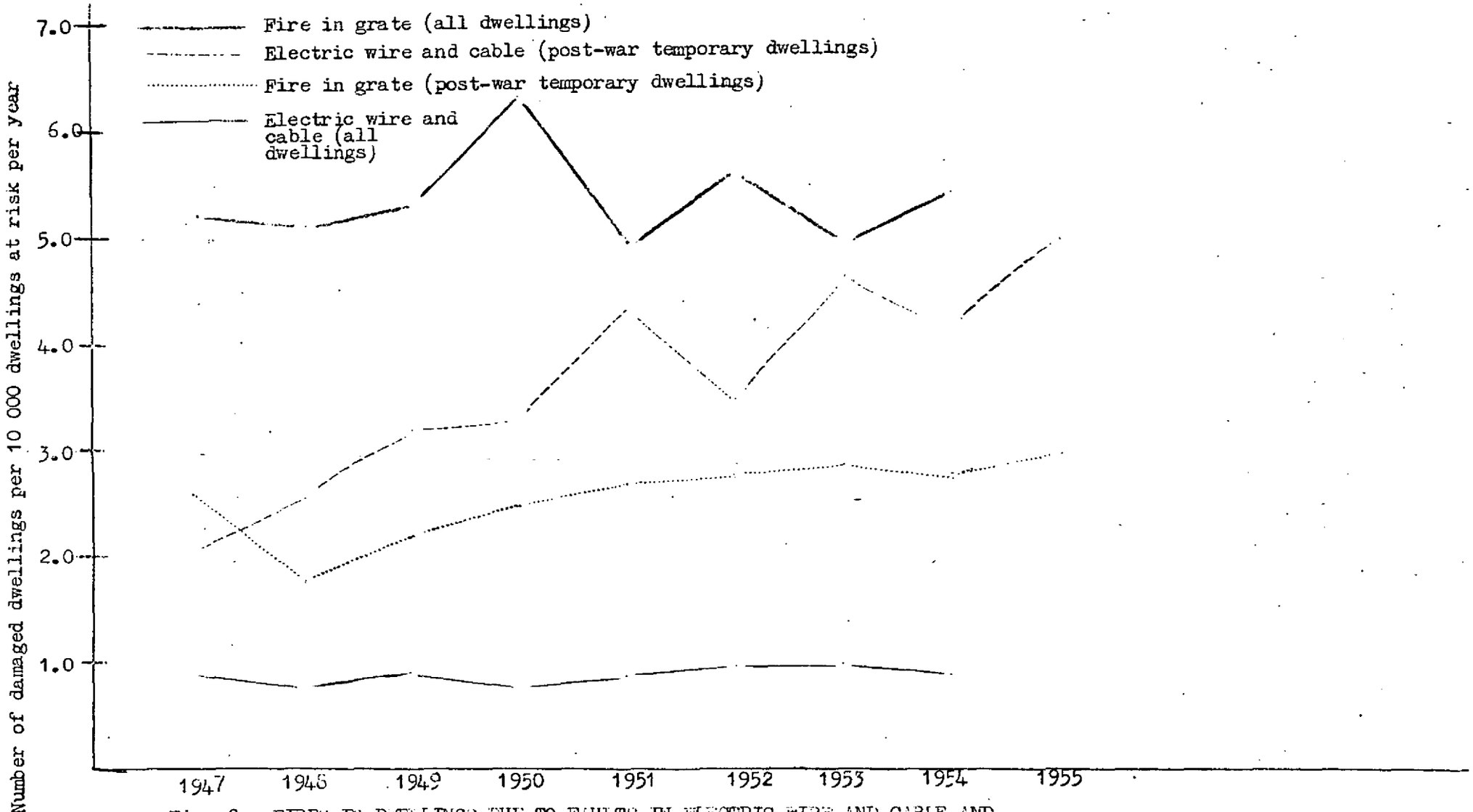

Fig. 2. FIRES IN DWELLINGS DUE TO FAULTS IN ELECTRIC WIRE AND CABLE AND RADIATED HEAT, SPARKS ETC. FROM DOMESTIC FIRES.

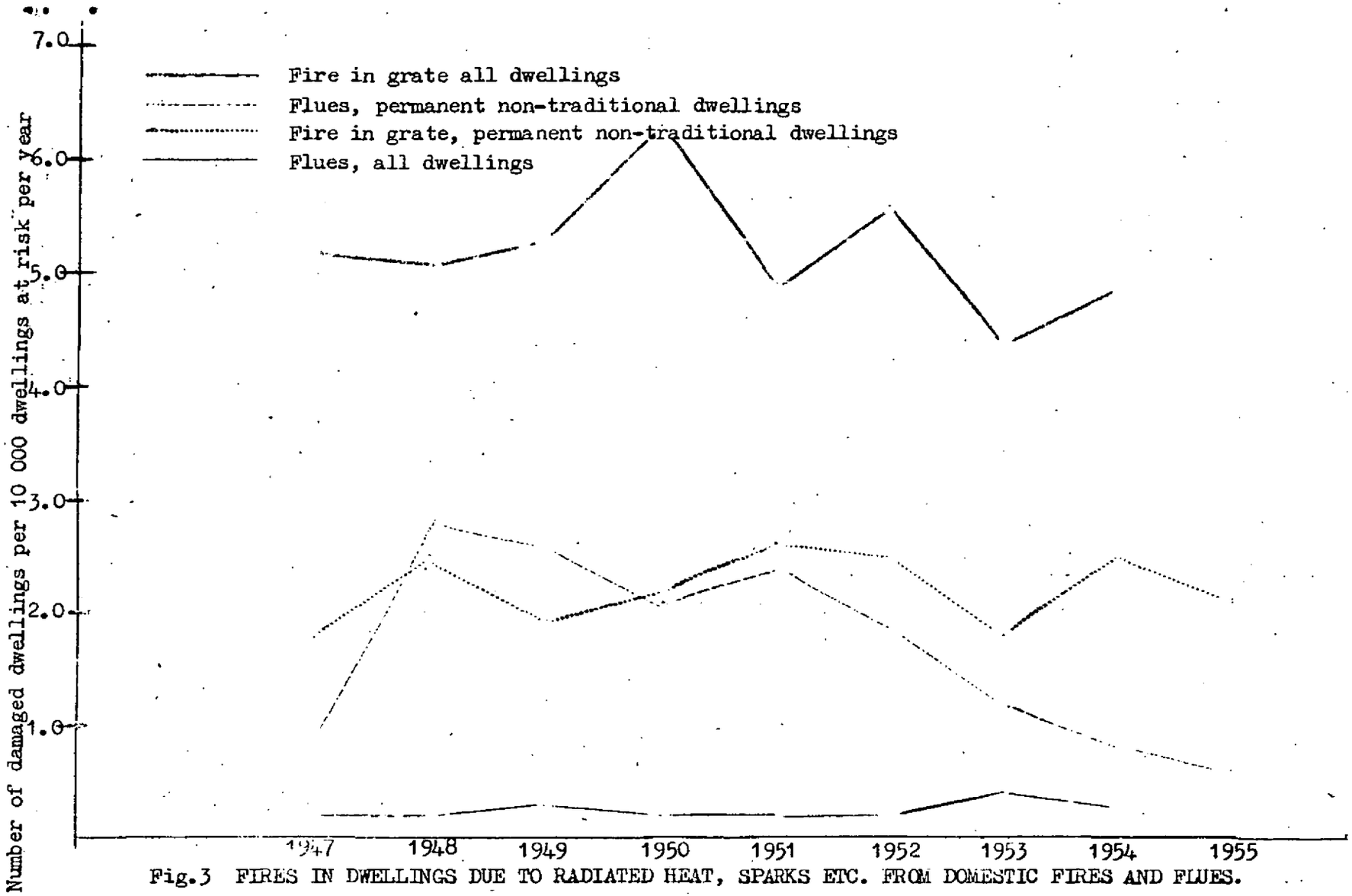

Fig.3 FIRES IN DWELLINGS DUE TO RADIATED HEAT, SPARKS ETC. FROM DOMESTIC FIRES AND FLUES.