ACCIDENTAL DWELLING FIRES IN BIRMINGHAM NORTH

Analysis of Fire and Casualty data to identify geographical areas and groups of the population most at risk of accidental dwelling fires in Birmingham North Command Area

April 2011 to March 2014

Data Intelligence Hub
2014

Introduction

The following document presents the results of the analysis of Accidental Dwelling Fires (ADF) in Birmingham North. Its aim is to assist in identifying geographical areas and groups of the population which are most at risk of ADF.

Three years of accidental dwelling fire and accidental dwelling fire casualty data were analysed: from April 2011 to March 2014.

In each section of this document, a box summarises the main features highlighted in the section.

The maps are also available in PDF format, including lower level maps focusing on the areas most at risk in the Data Hub Alfresco site's library.

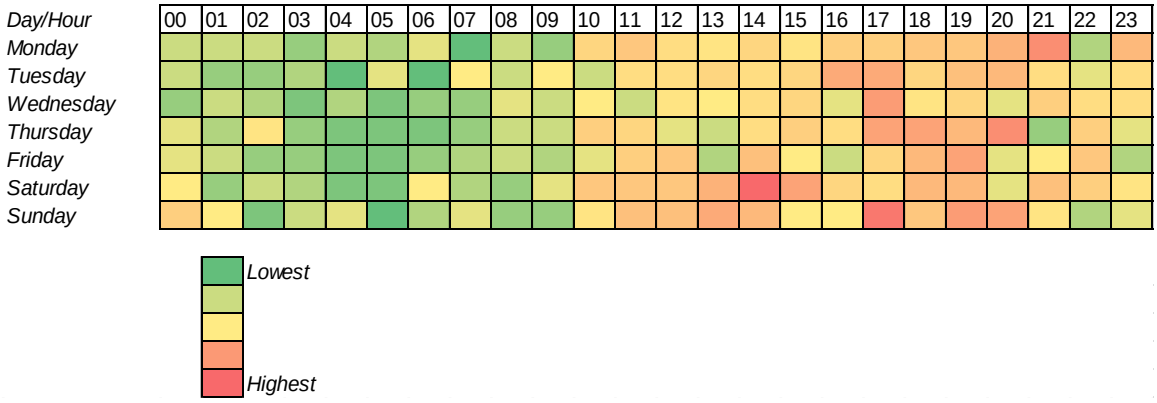
The results of this analysis are also available as a 'mind map' linking all main features together. This is also available in the Data Hub Alfresco site's library.

NB The border between Birmingham North and Birmingham South follows Ward boundaries. However, Lower Super Output Areas (a geographic hierarchy designed to improve the reporting of small area statistics) are not organised to match exactly with Wards. Therefore, if more than half of an LSOA area falls into one of the two Command Areas it has been deemed to be part of that Command Area

Temporal analysis

Table 1 illustrates the temporal distribution of accidental dwelling fires in Birmingham North.

Table 1. Acc Dwell Fires in Birmingham North per hour and day – Apr 2011 to Mar 2014



It shows that, over the course of a week, the four hours between 17:00 and 21:00 are the busiest, with 29.6% of ADF occurring during this time frame.

Chart 1 is the seasonality chart for accidental dwelling fires in Birmingham North. If the column is a positive number (above the 0) then the number of incidents in that month is higher than expected, if the column is a negative number then the number of incidents in that month is lower than expected (the values on the vertical (y) axis are relative values).

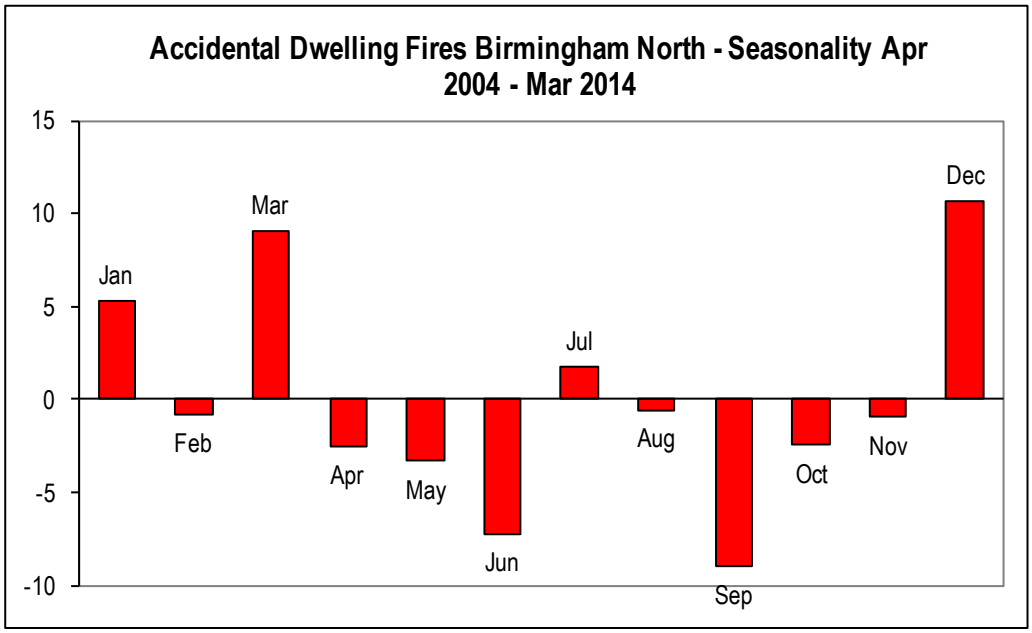
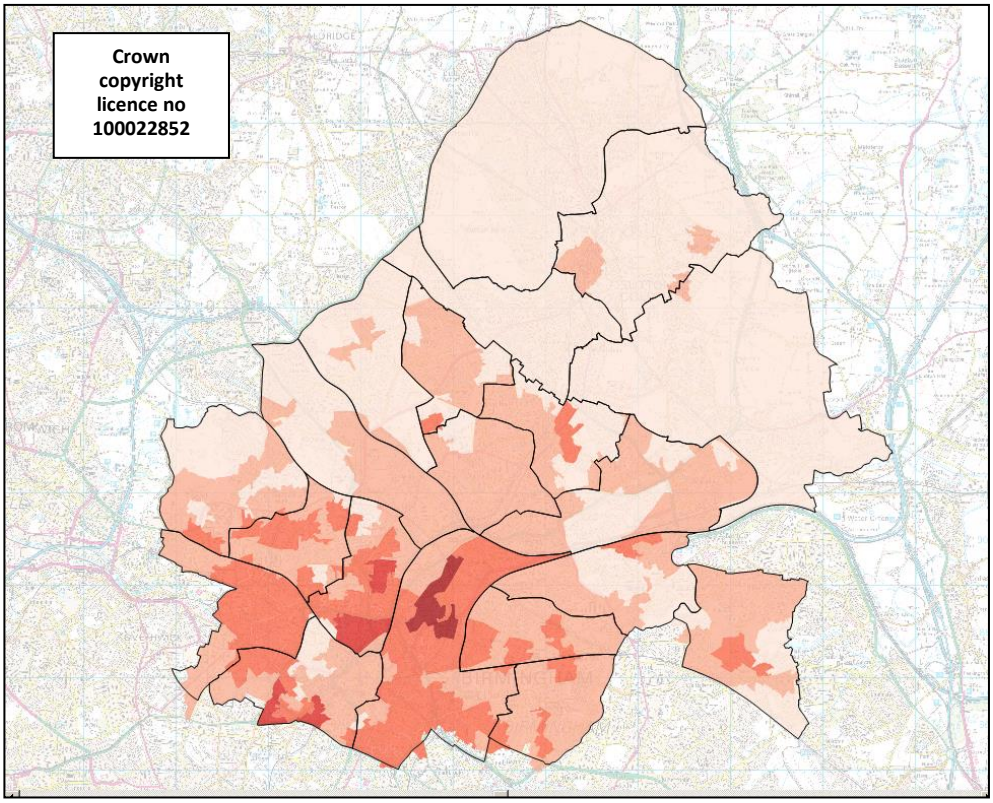


Chart 1. Seasonality - Accidental Dwelling Fires in Birmingham North

It shows that, overall, accidental dwelling fires are most likely in December, March and January.

Location

In the map below, LSOAs (Lower Super Output Areas) are highlighted according to a calculated risk score based on the correlation between the number of accidental dwelling fires in each LSOA and various other datasets (please see Appendix A for a list of datasets used): the darker the LSOA, the greater the score and therefore the risk of accidental dwelling fires.



Map 1. Accidental Dwelling Fire calculated risk score in Birmingham North

The map shows that areas of Aston, Nechells, Ladywood and Soho Wards in Birmingham North presented the highest risk.

Correlation analysis suggests that the number of accidental dwelling fires has a strong correlation with the number of residents of **black and Afro-Caribbean ethnicities**. This link also emerges when analysing the ethnicity recorded in the ADF data (whether for the person present during the fire/owner occupier or the casualties)

There is a strong correlation with the number of residents in **Socially rented accommodation**. This is also reflected when looking at the tenure of ADFs in Birmingham North – 42.5% of fires occurred in properties either rented from the council or from a housing association while these properties represent only 25.7% of all properties within Birmingham North

Accidental dwelling fires also show stronger correlations with **mixed ethnicity, those not in employment, the employment deprivation index,** and to a lesser extent with **the**

income deprivation index, single person aged <65 households, and single parent households.

There is an inverse correlation between the number of accidental dwelling fires and the number of white households (ie, the greater the number of white households, the smaller the number of accidental dwelling fires). This contrasts with their over-representation as PI casualties.

It should be noted that correlation is only an indicator that two variables fluctuate together; it however does not necessarily imply causation.

Mosaic

Mosaic groups the UK population into 15 broad groups and 69 more detailed types according to their demographic and lifestyle traits

The Mosaic types below incurred the greatest number of Accidental Dwelling Fires in Birmingham North:

I42	South Asian communities experiencing social deprivation	
O69	Vulnerable young parents needing substantial state support	
N66	Childless, low income tenants in high rise flats	
N61	Childless tenants in social housing flats with modest social needs	
I43	Older town centres terraces with transient, single populations	

Correlation analysis shows that N66 had a stronger correlation to ADF while both N63 and N61 showed a moderate correlation:

N66	Childless, low income tenants in high rise flats	
N63	Multicultural tenants renting flats in areas of social housing	
N61	Childless tenants in social housing flats with modest social needs	

Source of ignition

The top three sources of ignition for accidental dwelling fires in Birmingham North are **cooking appliances** (51.9% of accidental dwelling fires), **electricity supply** (11.7%), and **smoking related (including cigarette lighter)** (8.2%).

Cooking appliances fires:
Cooking fires accounted for over half of accidental dwelling fires, and resulted in nearly a third of all accidental dwelling casualties (31.6%)

Chart 2 is the seasonality chart for cooking accidental dwelling fires in Birmingham North. If the column is a positive number (above the 0) then the number of incidents in that month is higher than expected, if the column is a negative number then the number of incidents in that month is lower than expected (the values on the vertical (y) axis are relative values).

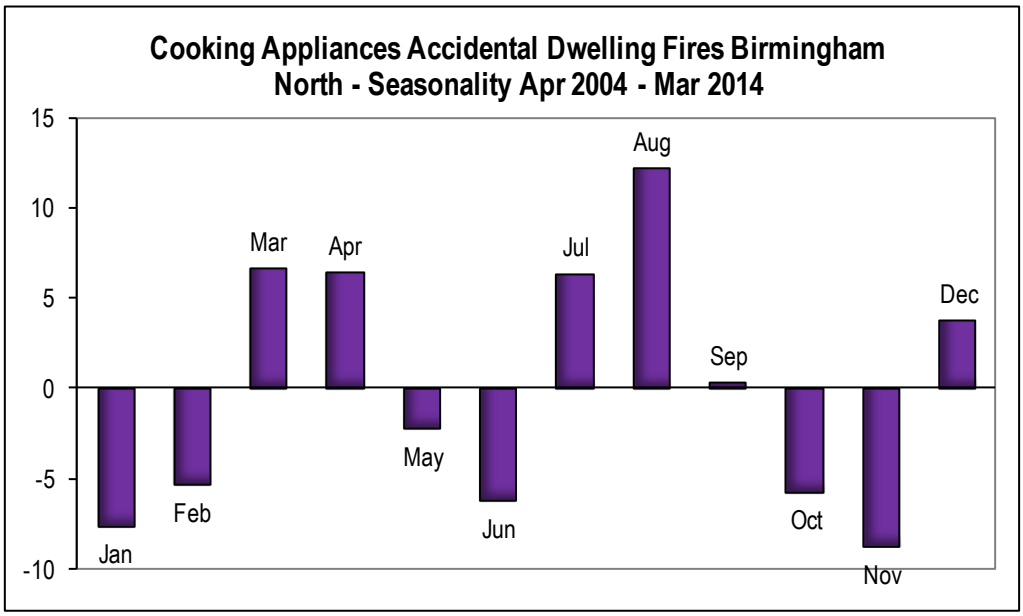


Chart 2. Seasonality – Cooking Appliance Accidental Dwelling Fires in Birmingham North

This shows that accidental dwelling fires are most likely to occur in spring and in summer, more particularly in **August**.

Table 2 shows that the temporal distribution of cooking fires is less spread out than accidental dwelling fires in general:

Table 1. Cooking Acc Dwell Fires Birmingham North per hour and day – Apr 2011 to Mar 2014

Day/Hour	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								
Sunday																								

Over a third of incidents took place between **17:00 and 21:00** and over a quarter took place between **12:00 and 16:00** (to be expected as these hours cover meal times) Saturday and Sunday had **32.4%** of all incidents.

12.2% of cooking fires were alcohol- or drug-related, which is higher than the average of 9.6% for all accidental dwelling fires in Birmingham North.

Cooking fires PI casualties are more likely to be aged 65+ (50% of cooking fires)

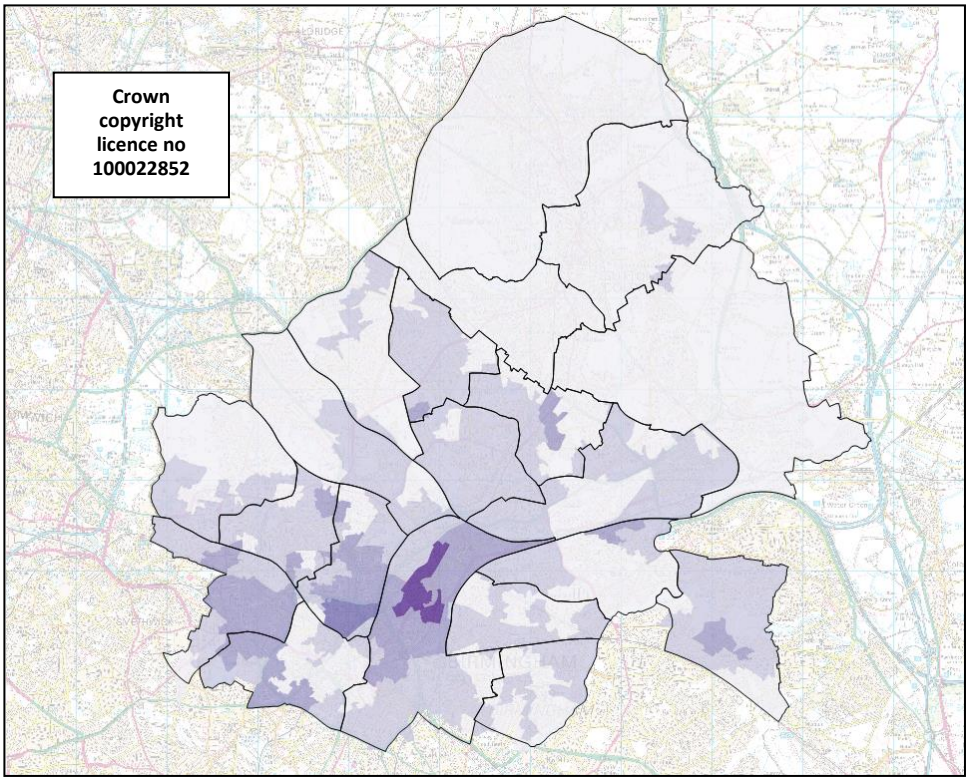
Compared with the 2011 Census, where they represent 12.2% of Birmingham North's population, people of **black and Afro-Caribbean ethnicities** were over-represented as the owner occupier or person present during accidental dwelling fires (26.4%). People of **white ethnicity** were also over-represented as PI casualties: 52.6% compared with 45.7% of the population.

In 32.4% of incidents where 'human factors' were recorded, **distraction** was recorded as a factor. Mental health issues were recorded as a factor in only 3.8% of cooking ADF, but in 51.5% of incidents where mental health issues have been recorded those aged 80+ were either the person present during the fire or the owner occupier.

Analysis also showed that the proportion of **single person households** was higher for cooking fires (47.6%) than accidental dwelling fires overall (37.3%).
Properties **rented from the council** accounted for 32.1% of accommodation type where a cooking ADF occurred.

Cooking fires tended to be **caused by adults** aged 18-64 (62.6% of incidents) and the **elderly-65+** (26.1%). However, according to Census 2011 data, 18-64 year olds account for 60.9% of usual residents in Birmingham North while only 12.3% of people are 65+

As cooking fires make up such a large proportion of ADF, the geographical distribution of the risk of cooking fires is very similar to that of ADF overall, with areas of Nechells, Aston & Soho wards presenting the most risk:



Map 2. Cooking Acc Dwell Fire calculated risk score in Birmingham North

The box below summarises the main features of cooking accidental dwelling fires in Birmingham North:

COOKING FIRES:

- Over half of all Accidental Dwelling Fires
- August
- 17:00 to 21:00 and 12:00 to 16:00
- 10.9% alcohol- or drug-related
- One third of PI casualties over 80
- White ethnicities: casualties
- Distraction, especially for those aged 65+
- Single person households, especially aged 45-64
- Rented properties, particularly from the council
- Caused by adults and the elderly

Electricity supply

Between April 2011 and March 2014, accidental dwelling fires caused by electricity supply accounted for 11.7% of all ADFs, and resulted in 19 casualties overall (1 PI fatality) which was 5.6% of all casualties, but 1.8% of PI injuries and fatalities).

The seasonality chart below shows that electricity supply accidental dwelling fires are most likely in the **winter months**, which is consistent with more electricity being used for lighting or heating, as daylight diminishes and the weather becomes colder.

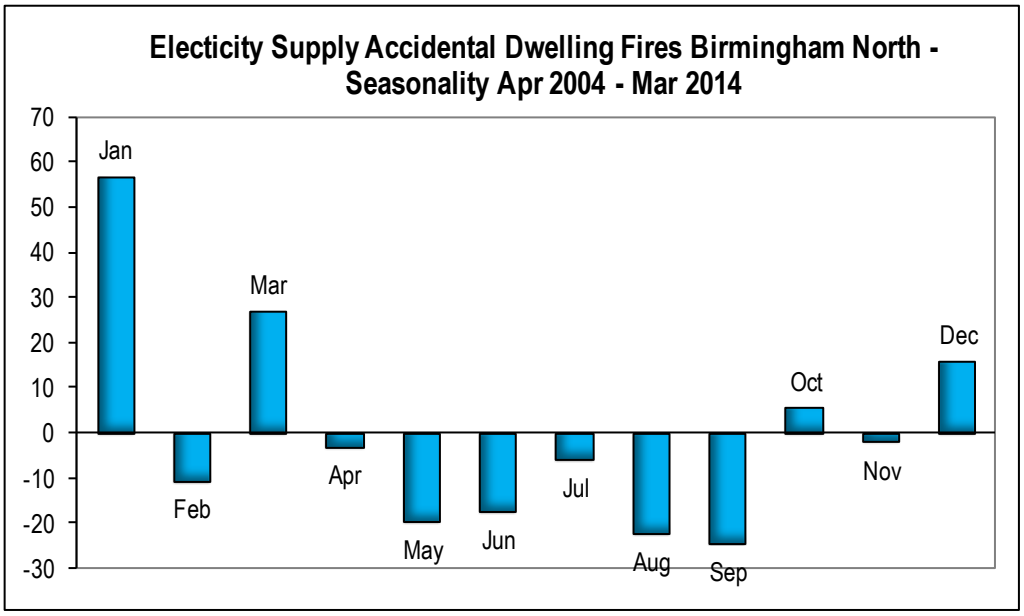
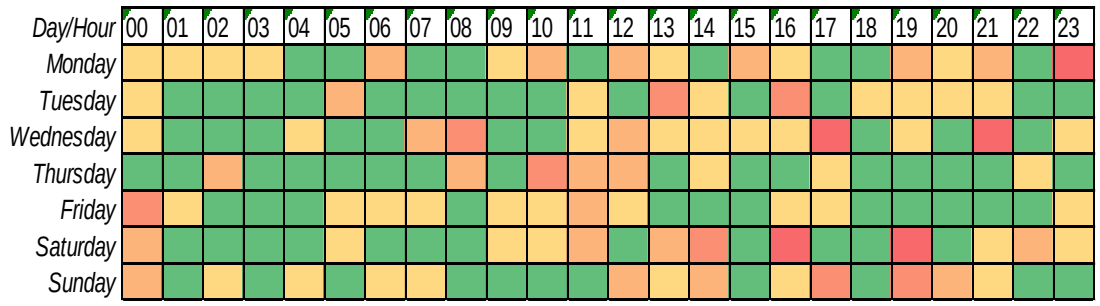


Chart 3. Seasonality - Electricity Supply Accidental Dwelling Fires in Birmingham North

Table 3 shows that electricity supply fires tend to be highest in the afternoon, particularly on Wednesdays and Saturdays:

Table 2. Electricity supply Acc Dwell Fires in Birmingham North per hour and day – Apr 2011 to Mar 2014



Wiring, cabling and plugs were responsible for 90.5% of electricity supply fires. Current recording practices do not allow for analysis of the type of appliances the wiring, cable and plugs were connected to, although wiring insulation was recorded as the item mainly responsible in over 65% of incidents.

Those incidents are highest in **owner occupied properties**, with 41.6% of electricity supply incidents at this type of accommodation. Properties rented privately accounted for over 32% of electricity supply ADF.

Electricity supply accidental dwelling fires were most likely to start in a **kitchen** (18.2%) or in the **living room** (17.5%).

48.2% of the owner occupier or the person present during the fire were within the **25-44 years** age bracket, which is higher than accidental dwelling fires in general (38.9%).

Correlation analysis did not result in strong enough correlations to enable a calculated risk score and an illustrative map, but the box below summarises the main features of electricity supply accidental dwelling fires in Birmingham North:

ELECTRICITY SUPPLY FIRES:

- Winter months
- Quarter of fires between 11:00 and 15:00
- Wiring, cabling and plugs
- Owner occupied
- Kitchen and Living Room
- Largest average area damaged by burning
- Owner occupiers/person present aged 25-44

Smoking related (including cigarette lighter)

Between April 2011 and March 2014, smoking related accidental dwelling fires accounted for 8.2% of all accidental dwelling fires, and resulted in 48 of all casualties – including two fatalities (14.2% of all casualties, and 21.1% of PI injuries and fatalities).

Temporal analysis did not identify any pattern in the day or time smoking related accidental dwelling fires occur, although 1700-2200 in general and Monday night in particular showed a slightly higher concentration than the rest of the week.

Chart 4 is the seasonality chart for smoking related dwelling fires in Birmingham North. It shows that, in Birmingham North, these types of incidents are more likely in the March and then the early summer months.

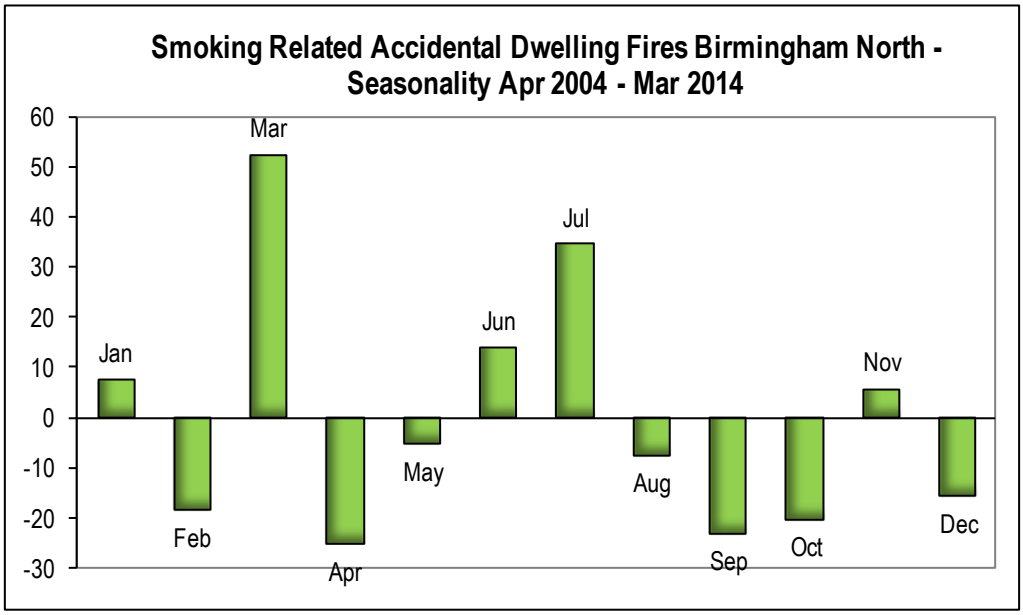


Chart 4. Seasonality - Smoking related Accidental Dwelling Fires in Birmingham North

Smoking related fires had the highest proportion of alcohol / drug related incidents, with 24.0% recorded as believed to be linked to alcohol or drug consumption, almost triple the proportion of overall ADF.
There was also 13.5% of smoking related ADF where falling asleep was a contributory factor and 6.3% where mental health issues were deemed a factor.

Smoking related ADF also had the second highest proportion of properties recorded as single person households (after cooking appliance ADFs – 47.6%), which accounted for 38.5% of incidents.

Over half of smoking related ADF started either in the bedroom (33.3%), living room (19.8%) or refuse store/bin store/chute (11.5%)

Adults **between the ages of 25 and 44** were the most likely **person present during the fire/owner occupier** for smoking related ADF (although 19.8% of incidents had no person recorded), and also were more likely to be **casualties** in smoking related ADF.

While **adults (aged 18-64)** are most likely to cause smoking related ADF (their proportion is increasing each financial year (60.6%,75.9%,79.4% respectively)), the past three years have seen a reduction of the elderly as a cause of smoking related ADF by 57% (from 7 incidents to 3 incidents)

Rented properties were over-represented compared with ADF overall and also compared with the area's tenure distribution according to the Census 2011, accounting for 77.1% of smoking related fires, compared to 64.4% of all ADF, and 44.3% of households in Birmingham North (Census 2011).

Correlation analysis did not result in strong enough correlations to enable a calculated risk score and an illustrative map, but the box below summarises the main features of smoking related accidental dwelling fires in Birmingham North:

SMOKING RELATED FIRES:

- March, July, June
- Between 17:00 and 22:00, particularly Monday & Saturday
- 24.0% alcohol or drug related
- Falling asleep, mental health
- Single person households, particularly aged 65+
- Bedroom, living room, refuse store/bin/chute
- Person present/owner occupier: aged 25 - 44
- Casualties: overall aged 65+
- Rented properties
- Caused by Adults (18-64)

Place the fire started

Kitchen fires accounted for 61.1% of all ADF in Birmingham North, which is consistent with cooking appliance being the greatest source of ignition.
Bedroom fires were the second largest place where ADF started (10.6%) and have increased by 59.4% from 2011/12 to 2013/14; they are also more likely to result in larger burn damage than kitchen fire.

Living room fires resulted in a disproportionately large percentage of PI casualties, while kitchen fires and the resulting proportion of casualties were reversed:

Place where fire started	% of ADF	% of PI Fatalities & Casualties
Kitchen	61.1%	35.1%
Bedroom	10.6%	17.5%
Living Room	8.2%	24.6%

It could be possible that the above figures are due to kitchen fires having a larger percentage of alarms operating and raising the alarm in the kitchen (51.5% of incidents) compared with the bedroom or living room (38.7% and 30.2%).

Damage

Burn damage
Where burn damage was recorded, the average damaged area for Birmingham North accidental dwelling fires was 2.2 m².
There was only one incident where burn damage covered an area over 200 m².

Fires where the source of ignition was **chimneys** and **fireworks** had the greatest average burn damage; however they represented a very small proportion of incidents: one chimney fire and two resulting from fireworks over the time period analysed.

Aside from the above, **electricity supply** fires had the highest average area of burn damage, with 5.1 m², while **cooking fires** were the most likely to result in no fire damage and had the lowest average burn damage with 0.7 m².

The graph below compares the average area of burn damage, the number of incidents and the number of casualties for the six sources of ignition which resulted in the greatest number of incidents.
The size of the bubbles varies according to the total number of casualties resulting from this source of ignition; the number within it is that of PI casualties (injuries and fatalities).

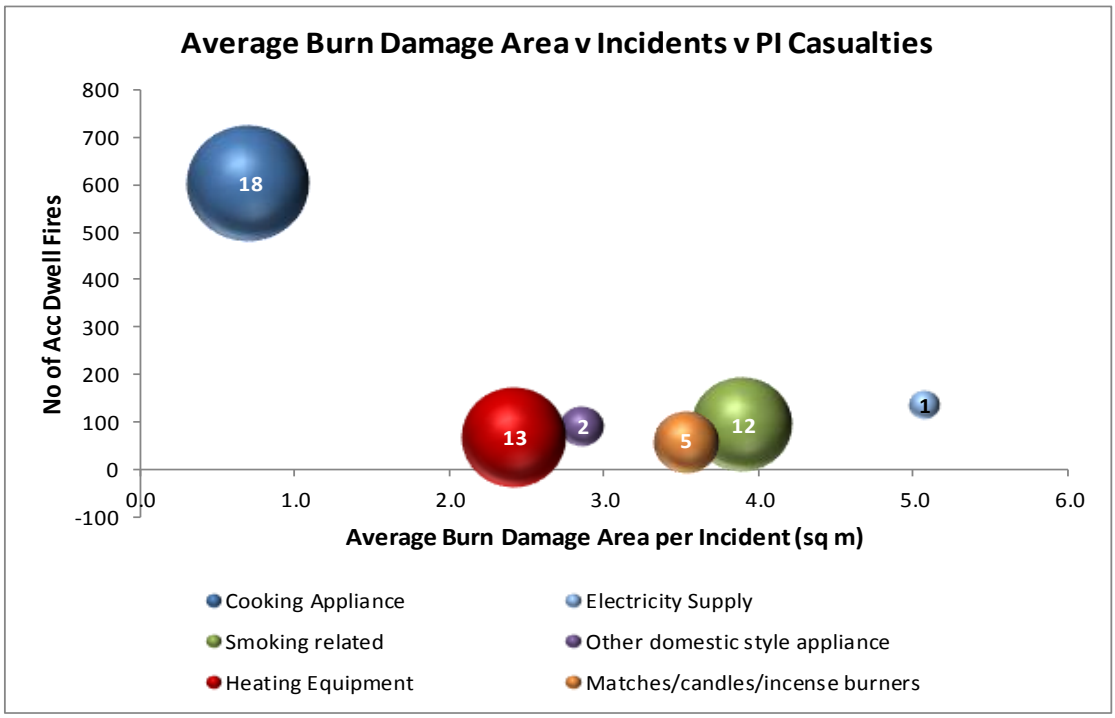


Chart 5. Average Burn Damage and Casualties in Birmingham North

It shows that although **cooking fires** are more numerous and incur more casualties, the resulting area damaged by fire is relatively small compared to other sources of ignition.
Smoking related fires are lower in overall volume, but much higher in average burn damage, and resulted in two thirds of the PI casualties of cooking fires.

Unsurprisingly, burn damage was also on average greater where **no alarm** system was installed and, if one was installed, where it did not operate or did not raise the alarm.

Detached houses tended to suffer greater burn damage, which is perhaps due to being larger than other types of properties.
Average burn damage in high-rises (four floors or more) was slightly **lower** than in other types of properties (1.7 m² compared to 2.4 m²)

Properties rented privately tended to incur greater burn damage than other property types.

Alcohol or drug related incidents resulted in greater burn damage (4.8 m² compared with an overall average of 2.2 m²). This could be due to a slower reaction from the person impaired by intoxicants, resulting in a longer delay in alerting the Fire Brigade.
Total damage
Average total damage for ADF in the Birmingham North was 12.8 m²

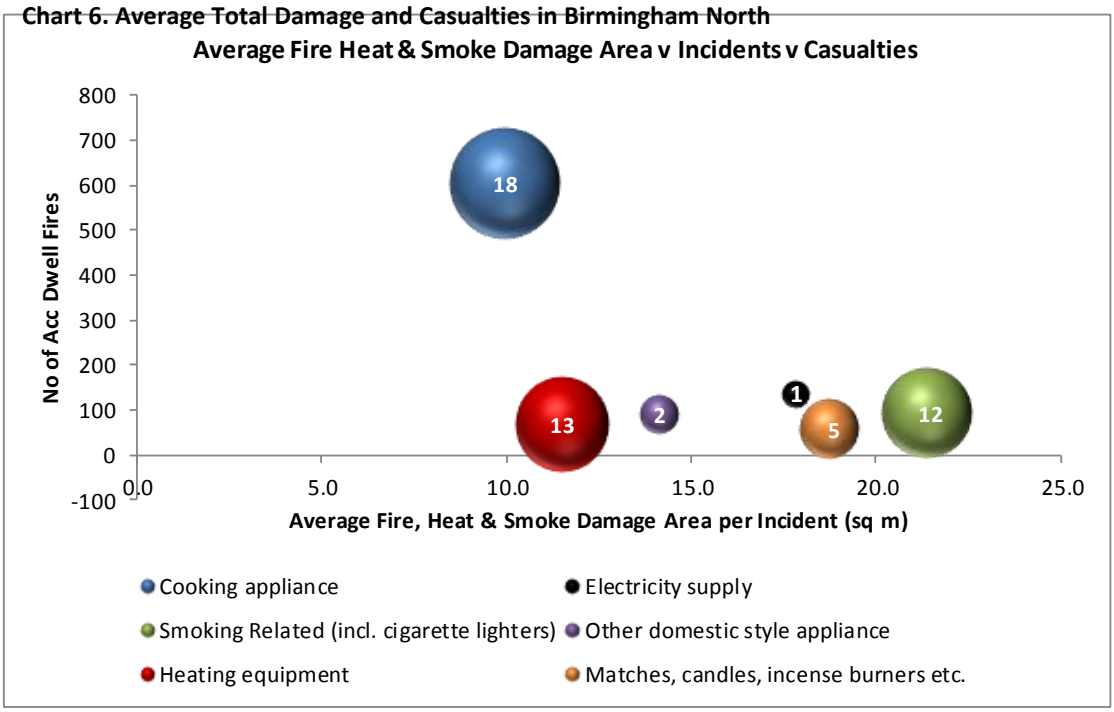
Chimney, **smoking related** fires and electric lighting fires had the largest area damaged.

Of the top three sources of ignition in Birmingham North, **smoking related** fires had the largest average area damaged of 21.3 m², followed by electricity supply and cooking appliance (17.8m² and 9.9m² respectively)

Like burn damage, owner occupied properties incurred greater total damage than other property types, although properties where no alarm systems was installed had slightly less average damage overall, mostly due to a large proportion of properties with an operation alarm where the damage was **51-100 m²**.

The graph below compares the average area of total damage, the number of incidents and the number of casualties for the six sources of ignition which resulted in the greatest number of incidents.
The size of the bubbles denotes the total number of casualties resulting from this source of ignition; the number is that of PI casualties (injuries and fatalities).

Chart 6. Average Total Damage and Casualties in Birmingham North



Like burn damage, it suggests that cooking fires resulted in minimal damage, while for example, smoking related fires resulted in 12 PI casualties and the highest average damaged area, despite the smaller number of incidents.

Like burn damage, alcohol or drug related incidents tended to result in greater overall damage, (an average of 26.7m² compared with 11.5 m²)

Property

64.4% of accidental dwelling fires in Birmingham North occurred in **rented properties**, while representing only 44.3% of households according to Census data[1].

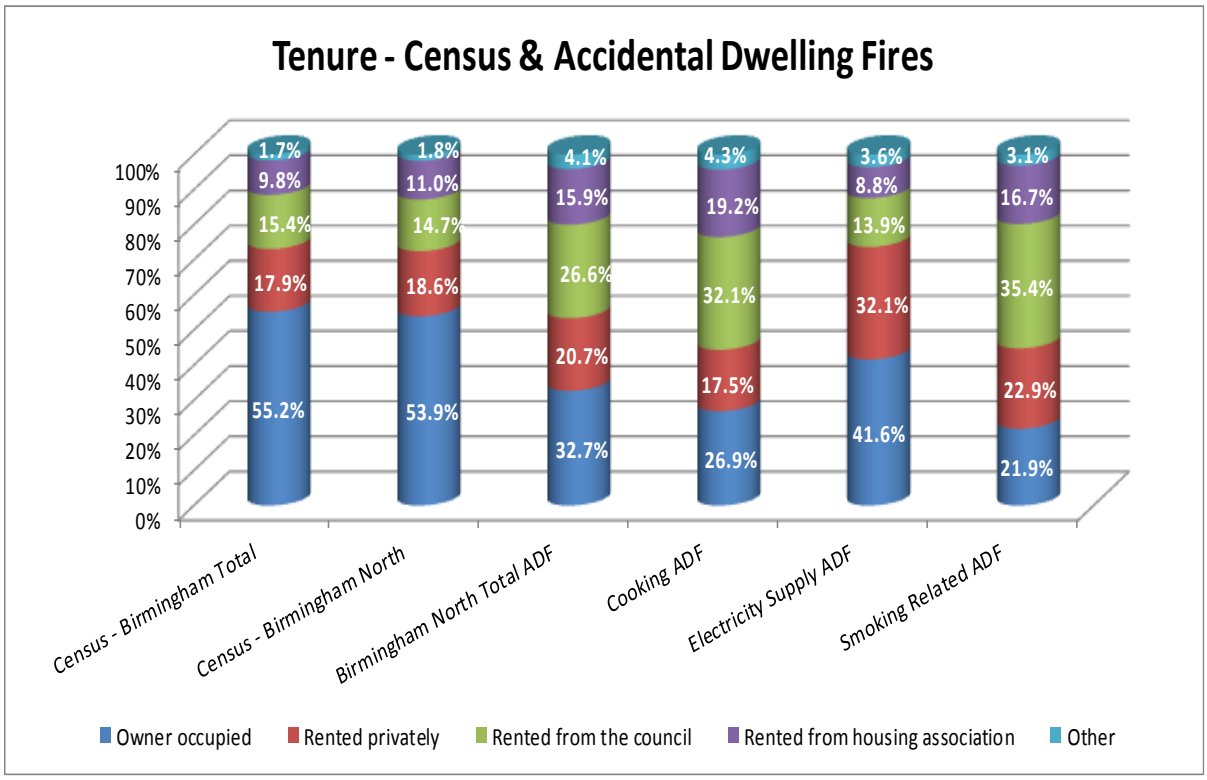


Chart 7. Tenure types in Birmingham North: Accidental Dwelling Fire and Census 2011

Properties **rented from the Council** in particular were over-represented when comparing accidental dwelling fires and Census data. This is likely to be linked to the correlations between ADF and the income and employment deprivation indices.

Purpose built flats/maisonettes accounted for the greatest proportion of accidental dwelling fires, with 38.1%. Alcohol or drug related show the largest percentage in Bungalows, although the number of incidents is small.

Demographics

Person present during the fire/owner occupier

There was no great disparity between men and women with regards to the person present at the fire or owner occupier for accidental dwelling fires as a whole, with 46.4% and 47.0% respectively.

[1] Tenure Census data also includes a "living rent free" category which is included in 'Other'. Tenure Census data does not contain categories for unknown tenure type or "rented, landlord not known".

However, some types of ADF showed differences in the distribution (please note the percentages in the table may not add up to 100% due to incidents where the gender is "unknown" or was left blank):

Table 3. Gender distribution of person present during fire / owner occupier for Accidental Dwelling Fires in Birmingham North

Gender	Cooking appliance	Electricity supply	Heating equipment	Matches, candles, incense burners etc.	Other domestic style appliance	Smoking Related (incl. cigarette lighters)
Male	46.4%	**47.4%**	**60.0%**	39.0%	37.6%	**56.3%**
Female	**51.2%**	42.3%	37.1%	**57.6%**	**60.2%**	27.1%

In general, the person present at the fire / owner occupier was more likely to be **aged between 25 and 44.**

8.7% of accidental dwelling fires were believed to be linked to alcohol or drug use; 69.6% of those took place in single person households.

In 37.3% of accidental dwelling fires the owner occupier or person present during the fire was recorded as "lone person", while Census data shows that in 2011 31.7% of households in Birmingham North were **single person households**, suggesting that people living on their own are slightly more at risk of accidental dwelling fires.
Compared with accidental dwelling fires as a whole, incidents where the owner occupier or the person present during the fire was recorded as a lone person were more likely to:

- be due to cooking appliances, smoking materials and electricity supply
- involve someone aged 65 or over
- be related to alcohol or drugs (16.3%)

Analysis shows that, in Birmingham North, the aspects of deprivation which align most with the risk of accidental dwelling fires are **income and employment deprivation**.

Cause of the fire

Overall, **adults (18 – 64)** were the greatest cause of the fire, causing 52.0% of accidental dwelling fires in the Birmingham North.

Table 4. Cause of Accidental Dwelling Fires in Birmingham North

Caused By	% of ADF
Adult (18 - 64)	52.0%
Faults in system or appliance	19.8%
Elderly (65 plus)	16.6%
Person, unknown age	3.3%
Child (0 - 9)	2.2%
Youth (10 - 17)	1.9%
Other	1.8%
Not known	1.3%
Animal	0.6%
Natural occurrences (e.g. lightning strikes)	0.5%

Over the three years analysed, the annual figure for total ADF in Birmingham North has remained very constant (2011/12- **365**, 2012/13- **400**, 2013/14- **401**)

81.4% of the ADF caused by the **elderly (65+)** were **cooking appliance fires**, followed by **smoking related** (5.7%) fires. The percentage of cooking fires has remained constant over the three years analysed.

Proportionally, accidental dwelling fires caused by the elderly tended to result in a greater number of casualties:

Caused by	% of All casualties	% of PI casualties
Adult (18 - 64)	59.0%	47.4%
Elderly (65 plus)	22.1%	24.6%
Child (0 - 9)	4.4%	14.0%
Faults in system or appliance	10.6%	10.5%
Not known	0.3%	1.8%
Person, unknown age	2.7%	1.8%
Other	0.3%	0.0%
Youth (10 - 17)	0.6%	0.0%

The most common human factor recorded as believed to have been contributory to the cause, spread or resulting injuries from the fire was **distraction**, with 19.6% of accidental dwelling fires in Birmingham North.
Falling asleep was recorded as a factor in 9% of accidental dwelling fires overall. It was a human factor in 13.5% of smoking related ADF, 13.1% of cooking appliance ADF and 8.5% of matches, candles, incense burners etc fires.

Half of incidents where **mental health** was a contributory factor were caused by the elderly.

Casualties

Casualties were more likely to result from **cooking and smoking related** fires:

Source of Ignition	% of ADF	% of all casualties	% of PI casualties
Cooking appliance	51.9%	58.1%	31.6%
Heating equipment	6.0%	5.9%	22.8%
Smoking Related (incl. cigarette lighters)	8.2%	14.2%	21.1%
Matches, candles, incense burners etc.	5.1%	5.9%	8.8%
Naked flame	2.2%	1.2%	3.5%
Other domestic style appliance	8.0%	5.6%	3.5%
Electric Lighting	2.1%	0.9%	1.8%
Electricity supply	11.7%	5.6%	1.8%
Other	1.1%	0.9%	1.8%
Other appliance or equipment	0.4%	0.9%	1.8%
Spread from secondary fire	1.3%	0.3%	1.8%

Cooking appliance fires resulted in more fatal casualties than any other types, with three (two in 2011/12 and one in 2012/13). The three more recent fatalities (2013/14) had source of ignition as heating equipment, matches/candles/incense burners etc and other domestic style appliance

Accidental dwelling fires from **heating equipment** only accounted for 6.0% of incidents but resulted in 22.8% of PI casualties, including one fatality. ADFs with source of ignition as **smoking related materials** only accounted for 8.2% of incidents, yet resulted in 21.1% of PI casualties, including two fatal casualties.

The elderly (65+) accounted for 33.0% of PI casualties from accidental dwelling fires, while they made up 12.3% of Birmingham North's population according to the 2011 Census.
Those **over 85** in particular were over-represented as PI casualties, accounting for 10.5% of casualties but only 1.6% of the population. This part of the population was most at risk of being a casualty in fires due to cooking appliances and to naked flame.

Those **aged 0-18** were also more likely to be a PI casualty, accounting for 15.8% of PI casualties. Two thirds of these injuries had the source of ignition as heating equipment

In contrast with the person present at the fire / owner occupier, men and women were unequal as casualties, with **men** accounting for 73.2% of PI casualties and women 26.8%. In all age brackets, the number of male PI casualties exceeded the number of female PI Casualties

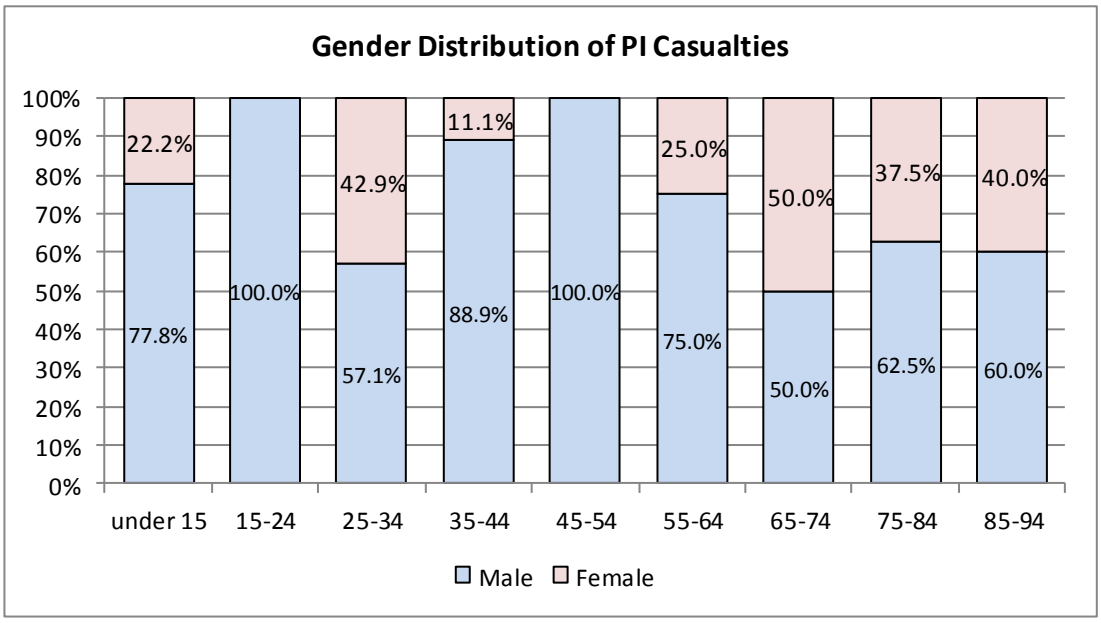


Chart 8. Gender distribution of PI casualties of Accidental Dwelling Fires in Birmingham North

When looking at all casualties the picture changes slightly and there are more female than male casualties in the 25-34, and 65+ age ranges:

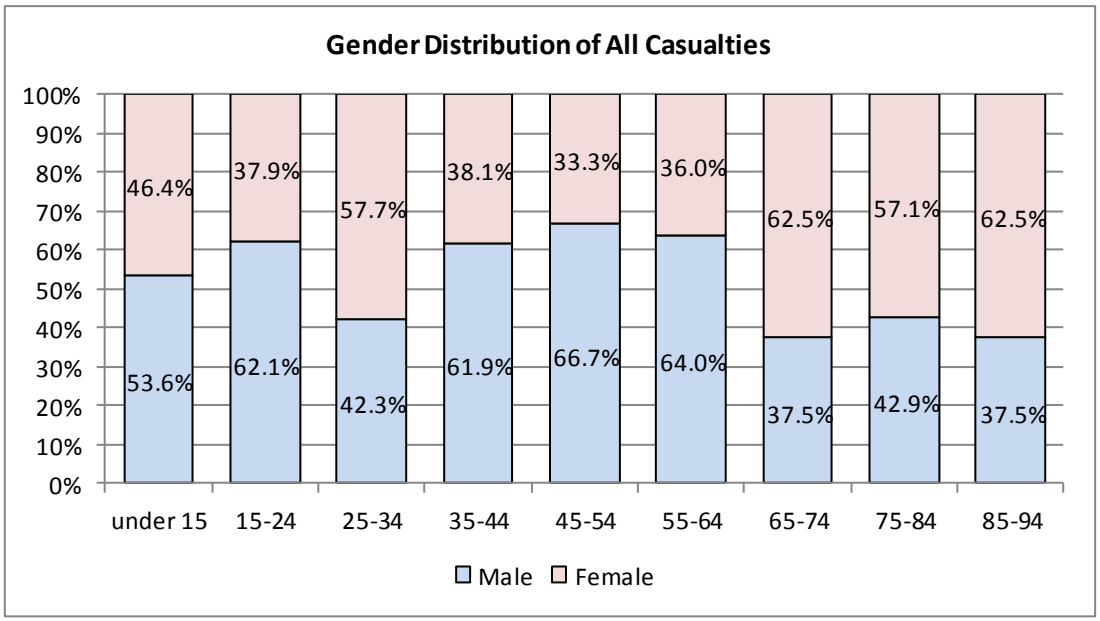


Chart 9. Gender distribution of ALL casualties of Accidental Dwelling Fires in Birmingham North

Although the majority of casualties were of white ethnicities (46.3% of all casualties and 52.6% of PI casualties) residents of black and Afro-Caribbean ethnicities were over-represented compared to Census data, making up 22.7% of all casualties and 14.0% of PI casualties, compared to 12.2% of the population. Asian ethnicities make up only 19.5% of all casualties but 22.8% of PI casualties, suggesting that they are more likely to have a serious injury when they are involved in an ADF

Alcohol or drugs was a factor in 8.7% of accidental dwelling fires, yet resulted in 16.2% of all casualties. In particular, 44.4% of fatalities and 18.8% of PI injuries resulted from fires where alcohol or drug was a factor.

The box below summarises the main features of casualties and rescues of accidental dwelling fires in the Birmingham North:

CASUALTIES:

- Cooking fires for volume, smoking fires for severity
- Over 65 and especially over 85 for PI casualties
- Under 18 heating equipment as source of ignition
- Single-person households
- More males than females, and males sustain more serious injuries
- Male injured linked to fighting fire
- White ethnicities for volume, but black Afro-Caribbean over-represented

APPENDIX A – Correlation analysis: datasets used

The datasets used for this analysis were as follows (all were broken down into LSOAs):
The number Accidental Dwelling Fires (Apr 2011 to Mar 2014)
The number of households (Census 2011)
Income Deprivation Index
Employment Deprivation Index
The number of children aged 0 to 16 (Census 2011)
The number of elderly residents (aged 65 and over) (Census 2011)
The number of single parent households (Census 2011)
The number of households socially renting (Census 2011)
The number of Disability Living Allowance claimants (as of May 2013, NOMIS)
The number of people not in employment (Census 2011)
The number of Accidental Dwelling Fires casualties, both fatal and non-fatal (Apr 2011 to Mar 2014)
The number of Incapacity Benefit/Severe Disability Allowance (as of August 2013, NOMIS)
The number of single person households where the resident is aged under 65 (Census 2011).
The number of residents of all Black and Afro-Caribbean ethnicities (Census 2011)
The number of residents of all mixed ethnicities (Census 2011)
The number of addresses for each of the 69 Mosaic types

All of the above were included in the overall Accidental Dwelling Fires calculated risk score; other datasets were also included in the initial correlation analysis, but showed weak or no correlation, and so were not included in the risk scoring.

Correlation analysis showed a moderate to strong correlation between Accidental Dwelling Fires and all other datasets, although the number of elderly residents showed a negative correlation:

	ADF Bham N
ADF	1
Income deprivation index	0.433465761
Employment deprivation index	0.466456327
Single Parent	0.365324879
Socially Rented	0.547617517
Not in Employment	0.476385779
IB/SDA claimants	0.346681983
Single Person aged <65 HH	0.416518469
Afro/Caribb all (no)	0.57193291
Mixed all (no)	0.494895121
single person HH	0.346811295
White	-0.315903326
Other	0.375187175

Strong correlations are highlighted in dark orange, moderate correlations in light orange, and negative moderate correlations in green.
Please note, the 'number of people not in employment' dataset differs from Employment deprivation in that it refers to the count of people who were not in

employment at the time of the Census, while the Employment Deprivation index measures employment deprivation in an area conceptualised as involuntary exclusion of the working age population from the labour market.

Cooking fires showed no or weak correlation to the number of households, the number of IB/SDA claimants, the number of Disability Living Allowance claimants, or the number of elderly residents or Children <16, and so these datasets were not included in the scoring for this type of accidental dwelling fires.

Electricity supply fires and smoking related fires showed only weak correlations to any of the datasets used.

It should be noted that correlation analysis is only intended as an indicator that two variables fluctuate together; it does not imply causation and may in some instances show no correlation where analysis of fire data demonstrates a link.