



# SUMMARY ANALYSIS OF DELIBERATE SECONDARY FIRES THROUGHOUT LIVERPOOL DURING THE 2010 BONFIRE PERIOD

**VERSION 1.0**

**KNOWLEDGE & INFORMATION MANAGEMENT DIRECTORATE**

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Please note that the data in this document is based on the live Incident Recording System. As this is a live system, the data contained within this document is subject to review and can be changed without announcement.

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Related Documents

Title: Merseyside 2010 Bonfire Period Report Summary v1.0

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- **Introduction**

This report presents a comparative analysis of Deliberate Secondary Fires, Wheelie Bin Fires and incidents of Violence at Work that occurred during the 2009 and 2010 Bonfire Periods within Liverpool.

- **Methodology**

To identify and analyse any trends in incidents during the Bonfire Periods in 2009 and 2010 the following methodologies were followed:

- The period of analysis covered from 00.00hrs on 19<sup>th</sup> October to 23.59hrs on 7<sup>th</sup> November<sup>1</sup>.
- Fire related incidents analysed within this report are all Deliberate Secondary Fires<sup>2</sup>. Instances of Violence at Work have been collected from the OSHENS Health and Safety System.
- The analytical tools adopted in this report includes:
  - MapInfo Mapping Software – used to identify hotspot areas for incidents and used to filter data according to district, ward, Super Output Area and Police Beat level.
  - Crystal Reports – utilised to extract raw data and information from the BOSS Mobilisation System.
  - Microsoft Excel – used to analyse raw data.
- The wheelie bin analysis is based on the “Wheelie Bin” tag in Vision Boss; not on a narrative search.

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<sup>1</sup> Previous Bonfire reports ran from 07:00 20<sup>th</sup> October – 07:00 7<sup>th</sup> November. Therefore the historical figures in this report will differ slightly in comparison to previous reports

<sup>2</sup> FSEC (Fire Service Emergency Cover) incidents codes include: 04 01 – Derelict Building, 04 02 – Grassland, 04 03 – Bonfires, 04 04 – Outdoor Structure, 04 05 – Refuse, 04 06 – Derelict Vehicle.

- Findings
- Deliberate Secondary Fires
  - Retrospective

Chart 1: 5 Year Retrospective for Deliberate Secondary Fires within Liverpool  
**5-Year Retrospective for Deliberate Secondary Fires in Liverpool during the Bonfire Period (19th October - 7th November)**

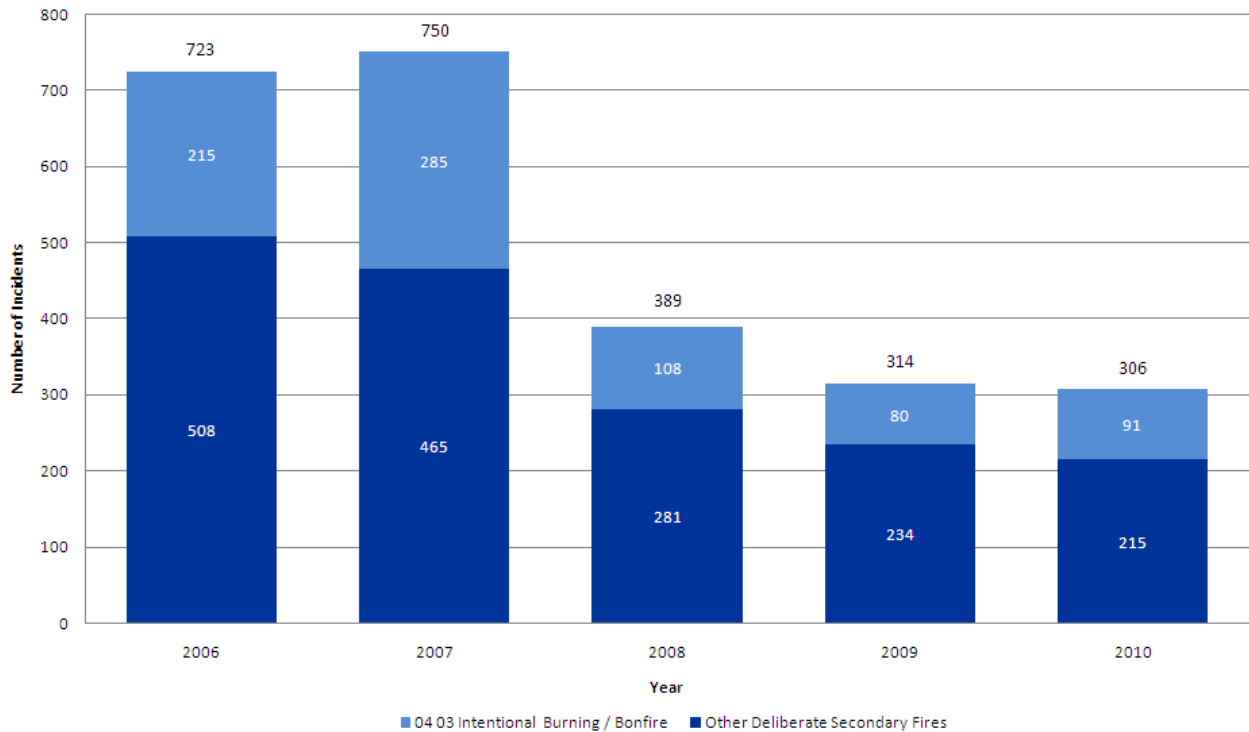


Chart 1 demonstrates the reoccurring trend that has been maintained in Liverpool once again, with the reduction in deliberate secondary fires, from the Bonfire Period 2009 to the Bonfire Period 2010. Between 2006 to 2010, there has been a reduction of 417 (57.7%) deliberate secondary fires, with consistent reductions in incidents from 2007 onwards within the district.

Table 1: Incidents attended by type within Liverpool, during 2009 and 2010 Bonfire Periods

Incident Type	2009	2010	Difference	% Change
04 01 Derelict Building	5	5	0	0.0%
04 02 Grassland	12	27	15	125.0%
04 03 Intentional Burning / Bonfire	80	91	11	13.8%
04 04 Outdoor Structure	6	9	3	50.0%
04 05 Refuse Fire	211	172	-39	-18.5%
04 06 Derelict Vehicle	0	2	2	N/A
Grand Total	314	306	-8	-2.5%

Table 1 indicates that although there has been an overall reduction of 8 deliberate secondary fires in Liverpool when comparing the Bonfire Periods of 2009 to 2010, several incident types witnessed increases, with: "Grassland" fires increasing by 15, "Intentional Burning / Bonfires" increasing by 11, "Outdoor Structure" fires increasing by 3 and an increase of 2 "Derelict Vehicle" fires. "Derelict Building" fires witnessed no change and there was a considerable reduction of 39 "Refuse" fires.

- **Temporal Analysis**

Chart 2: Day-to-Day Comparison of Deliberate Secondary Fires in Liverpool  
**Comparison of Deliberate Secondary Fires in Liverpool between 2009, 2010 and the 3 year average, by Day**

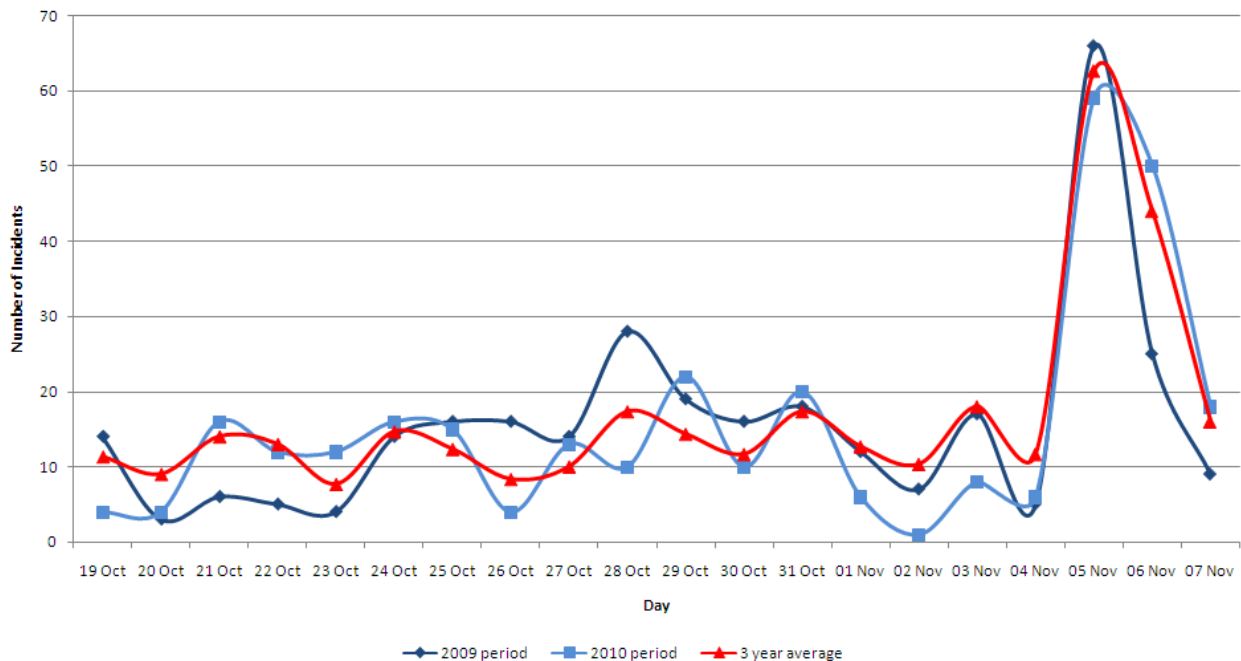


Chart 2 compares the number of incidents witnessed on a day-to-day basis during the 2010 Bonfire Period, the 2009 Bonfire Period and three year average.

There were 11 days during the 2010 Bonfire Period that witnessed fewer incidents than the corresponding day for the 3-year average, with this trend generally occurring at the start and towards the end of the period. Half of the 20 days during the 2010 Bonfire Period witnessed fewer incidents than the corresponding day of 2009.

A familiar trend occurred within the Liverpool district during 2010, with incidents peaking on 5<sup>th</sup> November, with the majority of incidents occurring during the 5<sup>th</sup> and 6<sup>th</sup> November and the rest of the period witnessing relatively few incidents in comparison.

Chart 3: Cumulative Daily Comparison of Deliberate Secondary Fires in Liverpool  
**Cumulative comparison of Deliberate Secondary Fires in Liverpool between 2009, 2010 and the 3 year average, by Day**

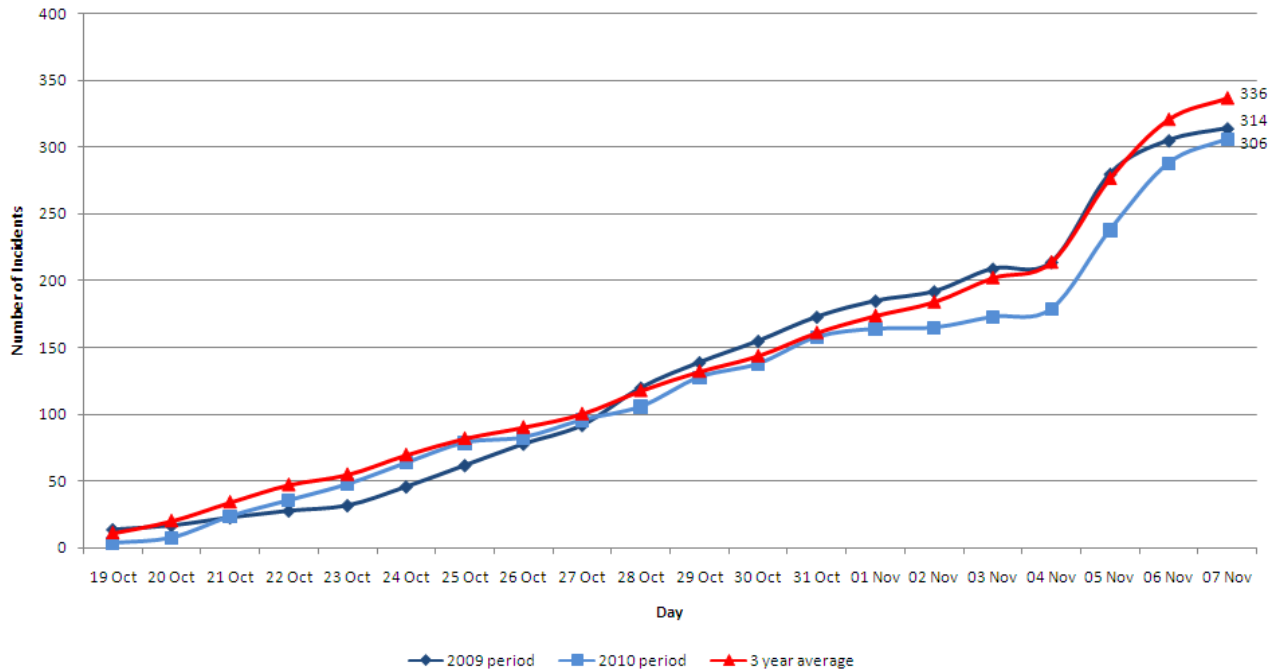


Chart 3 compares the cumulative total throughout the 2010 Bonfire Period, to the 2009 Bonfire Period and the three year average. The Chart further illustrates that the majority of incidents occurred on the 5<sup>th</sup> and 6<sup>th</sup> of November, with notable rises in incidents for each of the three comparators. It is clear that between the 1<sup>st</sup> and 6<sup>th</sup> November there was a greater increase in incidents during 2009 and the three year average than the 2010 Bonfire Period. The cumulative total for incidents during the 2010 Bonfire Period was consistently fewer than the three year average throughout the period.

Chart 4: Distribution of Incidents by hour  
**Comparison of Deliberate Secondary Fires in Liverpool between 2009, 2010 and the 3 year average, by Hour**

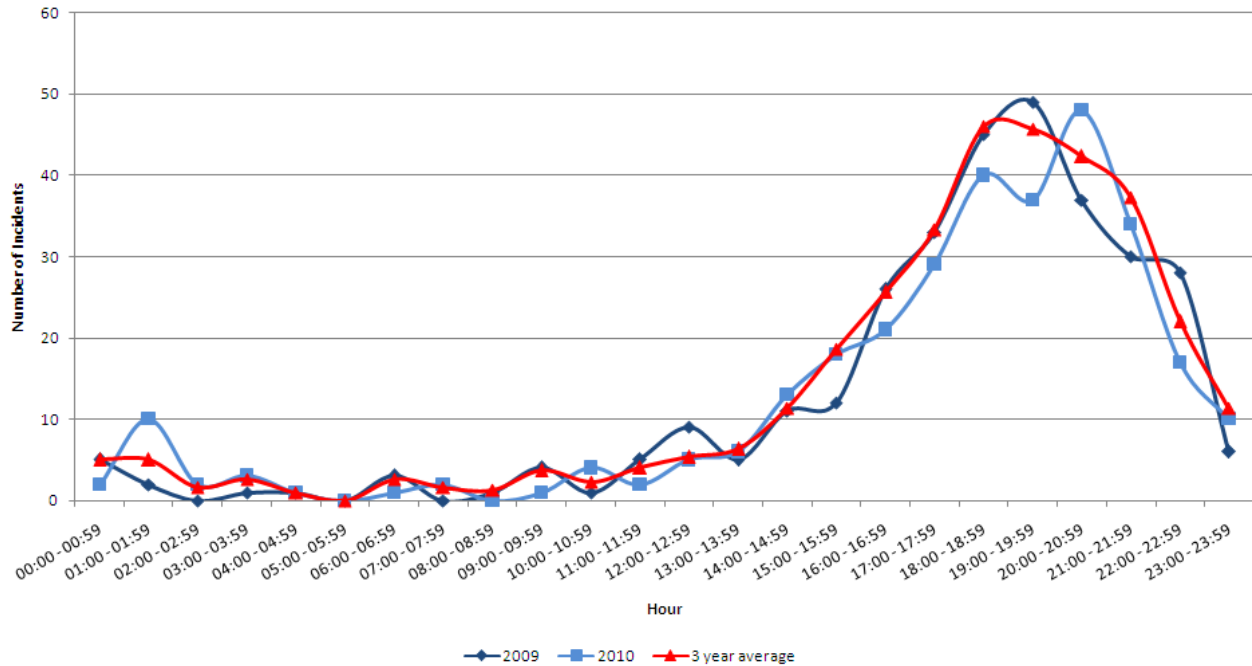


Chart 4 indicates that, once again deliberate secondary fires frequented during the late afternoon to late evening hours, with the majority of incidents during the 2010 Bonfire period occurring between 16:00 and 22:59, as was the case with the 2009 Bonfire Period and the three year average. It is apparent though that the peak hour for incidents has consistently become later, with the three year average peaking at 18:00-18:59, the 2009 period peaking at 19:00-19:59 and the 2010 Bonfire Period peaking at 20:00-20:59. It is also of note that deliberate secondary fires tend to maintain a lull in numbers between 00:00 and 13:59.

- **Spatial Analysis**

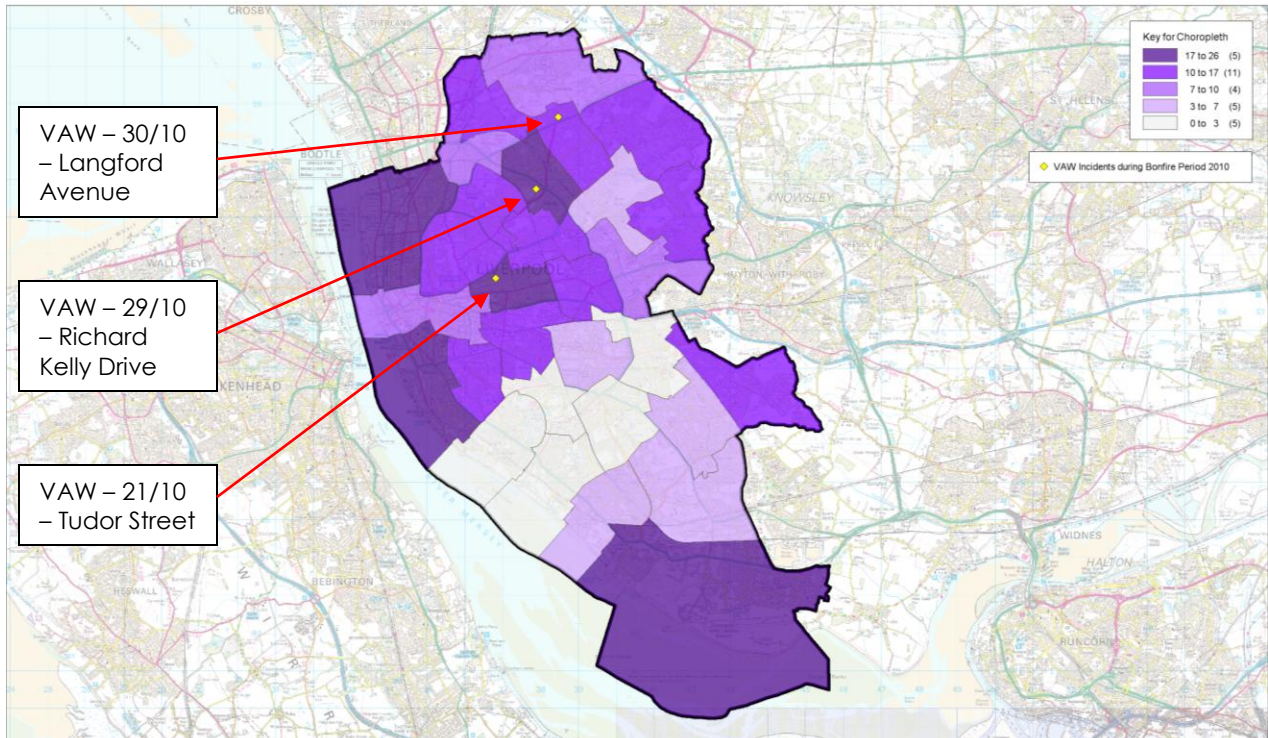
Table 2: Top Wards in Liverpool for Deliberate Secondary Fires (Ranked by 2010 Bonfire Period Total)<sup>3</sup>

Ward	2009	2010	Difference	% Change
Clubmoor	41	26	-15	-36.6%
Kensington & Fairfield	13	21	8	61.5%
Kirkdale	15	20	5	33.3%
Riverside	21	18	-3	-14.3%
Speke-Garston	21	17	-4	-19.0%
Tuebrook & Stoneycroft	18	15	-3	-16.7%
Croxteth	17	15	-2	-11.8%
Everton	23	15	-8	-34.8%
Norris Green	14	15	1	7.1%
Anfield	10	14	4	40.0%
Princes Park	7	14	7	100.0%

Table 2 reveals that the top ward for deliberate secondary fires during the Bonfire Periods of 2009 and 2010 was Clubmoor, with the Abingdon Road / Richard Kelly Drive in particular witnessing numerous incidents during both years. However it should be noted that there was a reduction of 15 (36.6%) incidents in Clubmoor across the two Bonfire Periods. Kensington & Fairfield, Kirkdale, Anfield and Princes Park witnessed considerable increases in deliberate secondary fires from the 2009 Bonfire Period to the 2010 Bonfire Period.

<sup>3</sup> See Appendices section for full table of incidents in each ward.

Map 1: Choropleth map identifying incident density by ward and incidents of violence at work



**Choropleth Analysis for Deliberate Secondary Fires in Liverpool, during Bonfire Period 2010 (19th October - 7th November)**

Author: James Watson  
Date: 09/11/2010  
Produced using MapInfo  
Knowledge and Information Management

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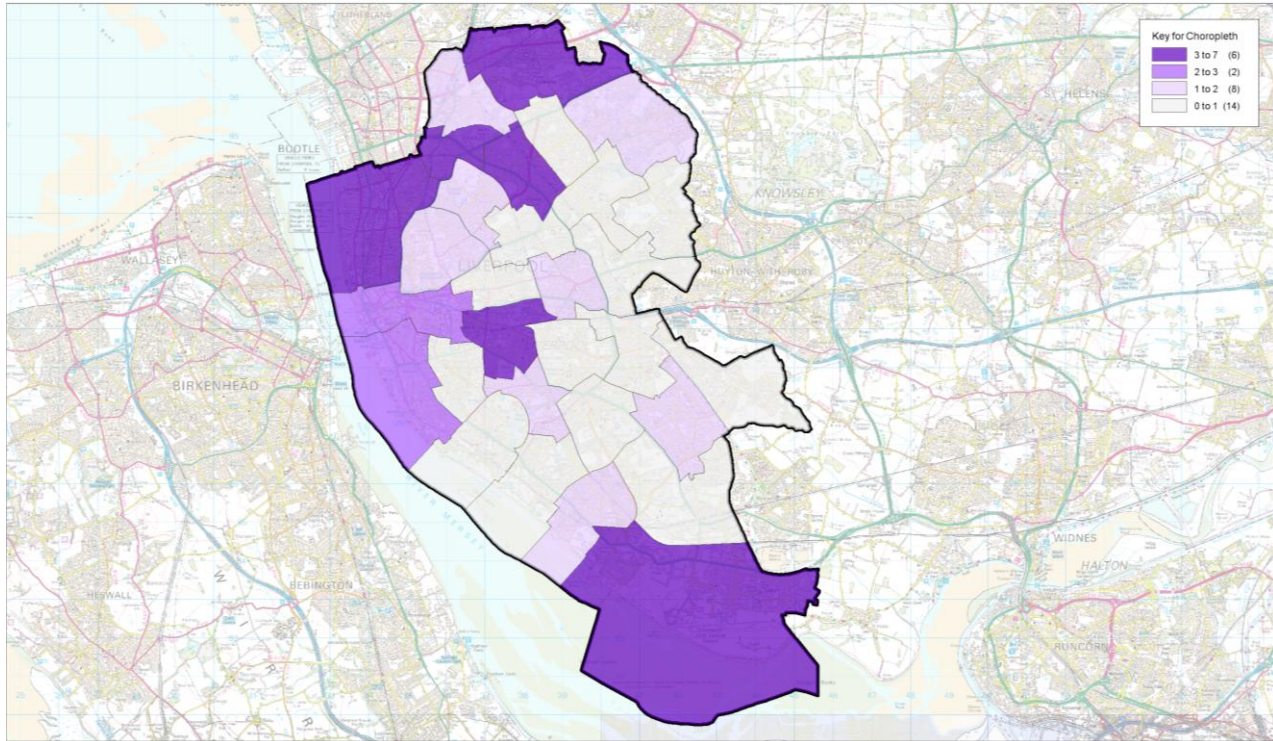
Map 1 indicates that north Liverpool contained more wards to witness a higher number of deliberate secondary fires, as illustrated by the darker colour. The wards in the north, including: Kirkdale, Clubmoor and Kensington & Fairfield in particular witnessed a large proportion of the incidents. The other two wards to witness a high number of incidents during the 2010 Bonfire Period were Speke-Garston and Riverside located in the south of the district.

There were several wards located in south Liverpool to account for very few or no incidents during the 2010 Bonfire Period (indicated by the lightest shade on the key), with St Michael's, Mossley Hill, Church, Greenbank and Childwall all shown in a pale grey colour.



- **Wheelie Bin Incidents**

Map 2: Choropleth map identifying density of wheelie bin related fires in Liverpool



**Choropleth Analysis for Wheelie Bin Related Fires in Liverpool during the 2010 Bonfire Period (19th October - 7th November)**

Author: James Watson  
Date: 17/11/2010  
Produced using MapInfo  
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Map 2 shows that several of the wards to witness the greatest proportion of wheelie bin related fires were the same as those to witness high numbers of deliberate secondary fires. However there were exceptions, with County, Picton and Fazakerley (highlighted in dark purple on the above map), indicating proportionately high numbers of incidents, but not for deliberate secondary fires (Map 1). There were numerous wards across Liverpool to witness either 0 or 1 wheelie bin related fire (14 wards).

- **Violence at Work**

Table 3: Violence at Work Incidents in Liverpool during 2010 Bonfire Period

Incident Number	Date & Time	Location	Station	Incident Type	Details of VAW	Ward	SOA
031244-27102010	27/10/2010 17:48:00	RO/SCHOOL,TUDOR STREET,BOALER STREET,	12	Bonfire	WHILST RETURNING FROM INCIDENT AN EGG WAS THROWN AT THE MACHINE CAUSING A CHIP TO THE BODYWORK REAR OF THE CREW DOOR ON THE DRIVERS SIDE	Kensington & Fairfield	E01006694
031605-29102010	29/10/2010 22:05:59	RICHARD KELLY DRIVE,ALLEYNE ROAD,	19	Refuse	After attending an incident on Cherry Lane Clubmoor, near to Alleyene Rd a bottle was thrown at the appliance as we were leaving the incident. The bottle missed the appliance and smashed in the road. Group of 10 youths at scene	Clubmoor	E01006603
031820-30102010	30/10/2010 21:41:32	LANDFORD AVENUE, LONG LANE, LIVERPOOL, FAZAKERLEY, L9 6BP	19	Information Only	WHILST IN ATTENDANCE FS ADVOCATE IN RENAULT CLEO WAS EGGED BY APPRIX 20 YOUTHS, NO VISIBLE DAMAGE TO FS VEHICLE REG NO. DA54 YXH. NO INJURIES	Norris Green	E01006735

- Appendices**

Table 4: Deliberate Secondary Fires in Liverpool, by Ward (Ranked by 2010 Bonfire Period Total)<sup>4</sup>

Ward	2009	2010	Difference	% Change
Clubmoor	41	26	-15	-36.6%
Kensington & Fairfield	13	21	8	61.5%
Kirkdale	15	20	5	33.3%
Riverside	21	18	-3	-14.3%
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Croxteth	17	15	-2	-11.8%
Everton	23	15	-8	-34.8%
Norris Green	14	15	1	7.1%
Anfield	10	14	4	40.0%
Princes Park	7	14	7	100.0%
Yew Tree	16	13	-3	-18.8%
Picton	14	13	-1	-7.1%
Old Swan	9	12	3	33.3%
Warbreck	9	10	1	11.1%
Belle Vale	10	10	0	0.0%
Fazakerley	3	9	6	200.0%
County	5	8	3	60.0%
Central	6	8	2	33.3%
Knotty Ash	8	8	0	0.0%
Wavertree	3	5	2	66.7%
Cressington	6	4	-2	-33.3%
West Derby	3	4	1	33.3%
Allerton and Hunts Cross	2	3	1	50.0%
Woolton	9	3	-6	-66.7%
St Michael's Liverpool	3	2	-1	-33.3%
Mossley Hill	5	2	-3	-60.0%
Greenbank	1	1	0	0.0%
Childwall		1	1	N/A
Church Liverpool	2		-2	-100.0%
<b>Grand Total</b>	<b>314</b>	<b>306</b>	<b>-8</b>	<b>-2.5%</b>

<sup>4</sup> See Appendices section for full table of incidents in each ward.