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

VERSION 1.0

KNOWLEDGE & INFORMATION MANAGEMENT DIRECTORATE

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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● 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 Knowsley.

● 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 19th October to 23.59hrs on 7th November¹.
- Fire related incidents analysed within this report are all Deliberate Secondary Fires². 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.

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

² 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

Deliberate Secondary Fires Retrospective

Chart 1: 5 Year Retrospective for Deliberate Secondary Fires in Knowsley

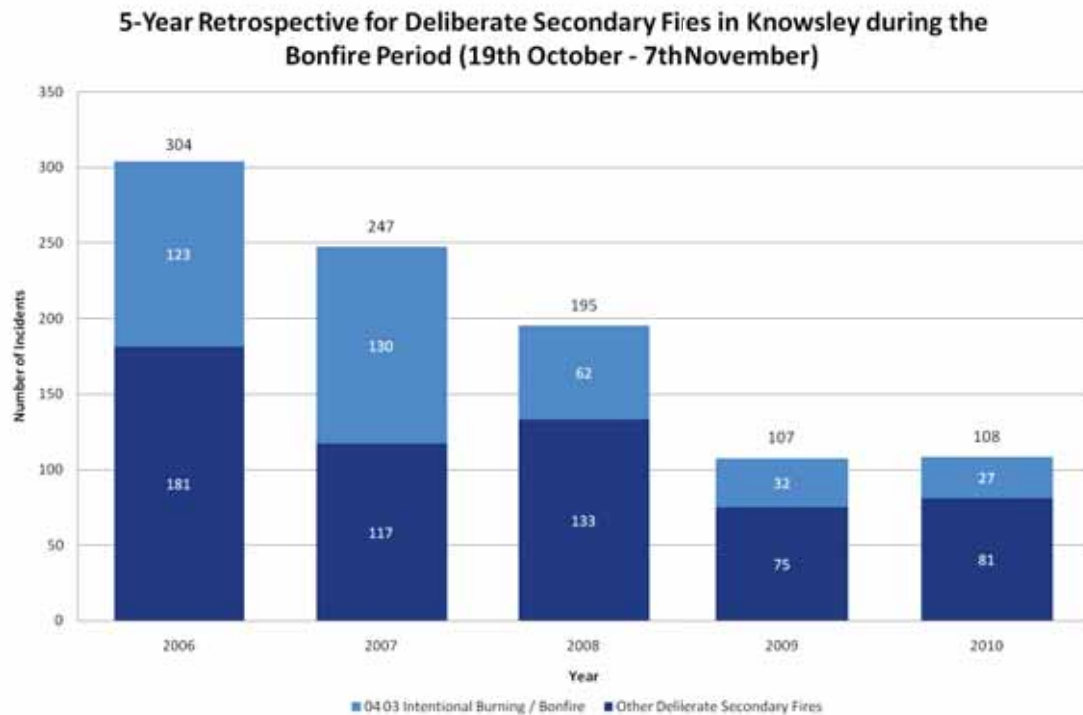


Chart 1 identifies that over the past five years there have been large reductions in the overall number of deliberate secondary fires occurring within Knowsley. When comparing the 2010 period to that of 2006 there has been a reduction of 196 incidents or 64.5%. When the 2009 period is compared to the 2010 period there has been a very minor increase of 1 incident, from 107 incidents in 2009 to 108 during 2010.

Overview of Deliberate Secondary Fires – by Incident Type

Table 1: Incidents attended by type within Knowsley, 2009 and 2010

Incident Type	2009	2010	Difference	% Change
04 01 Derelict Building	0	1	1	N/A
04 02 Grassland	8	4	-4	-50.0%
04 03 Intentional Burning / Bonfire	32	27	-5	-15.6%
04 04 Outdoor Structure	3	3	0	0.0%
04 05 Refuse Fire	64	73	9	14.1%
04 06 Derelict Vehicle	0	0	0	N/A
Grand Total	107	108	1	0.9%

Table 1 provides a breakdown of deliberate secondary fires by type, identifying that though there has been a minor increase of a single incident; there were reductions in: "Grassland" (by 4 incidents) and "Bonfire" incidents (by 5 incidents). "Refuse Fires" saw the largest comparative increase with 9 additional incidents and there was an increase of 1 "Derelict Building" fire.

Deliberate Secondary Fires by Day – Daily and cumulative

Chart 2: Day to day comparison of Deliberate Secondary Fires in Knowsley

Comparison of Deliberate Secondary Fires in Knowsley between 2009, 2010 and the 3 year average, by Day

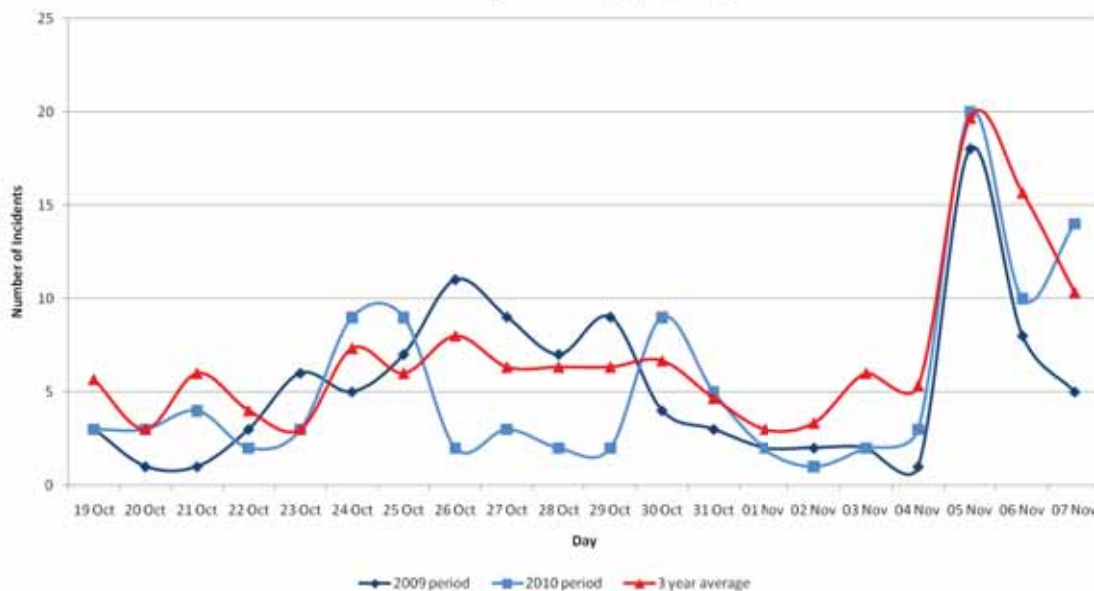


Chart 2 gives a daily comparison of incidents attended with Knowsley for the: 2009, 2010 Bonfire Periods and a 3 year average. The chart illustrates that there were three distinctive peaks in activity between the 24th and 25th October

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(weekend period), 30th and 31st (Halloween weekend) and the 5th and 6th of November.

It should also be noted that there was comparatively little activity during the half term week of 25th to the 29th October a time where traditionally activity tends to increase.

A further unexpected peak occurred on the 7th November, ultimately resulting in Knowsley witnessing an increase in incidents when compared to 2009. The influence of this spike in activity is clearly demonstrated on Chart 3 where if it were not for the activity on the 7th then there would have been an overall reduction in incidents.

Chart 3: Cumulative daily comparison of deliberate secondary fires in Knowsley

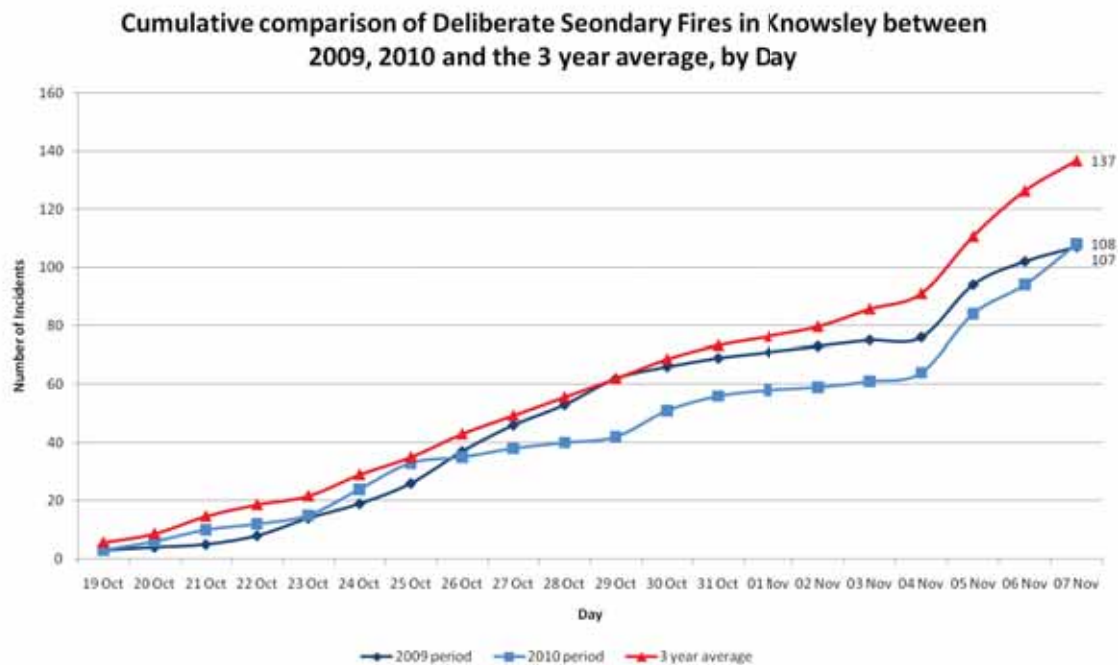


Chart 3 describes performance on a cumulative basis throughout the 2010 bonfire period. The chart details that during the earlier stages of the period; between 19/10/2010 and 25/10/2010 there were more incidents in Knowsley than 2009. Following this period the number of incidents fall consistently below the level of 2009 until as previously mentioned there is an abrupt increase in incident numbers on the 7th November.

Deliberate Secondary Fires by Hour

Chart 4: Distribution of incidents by hour

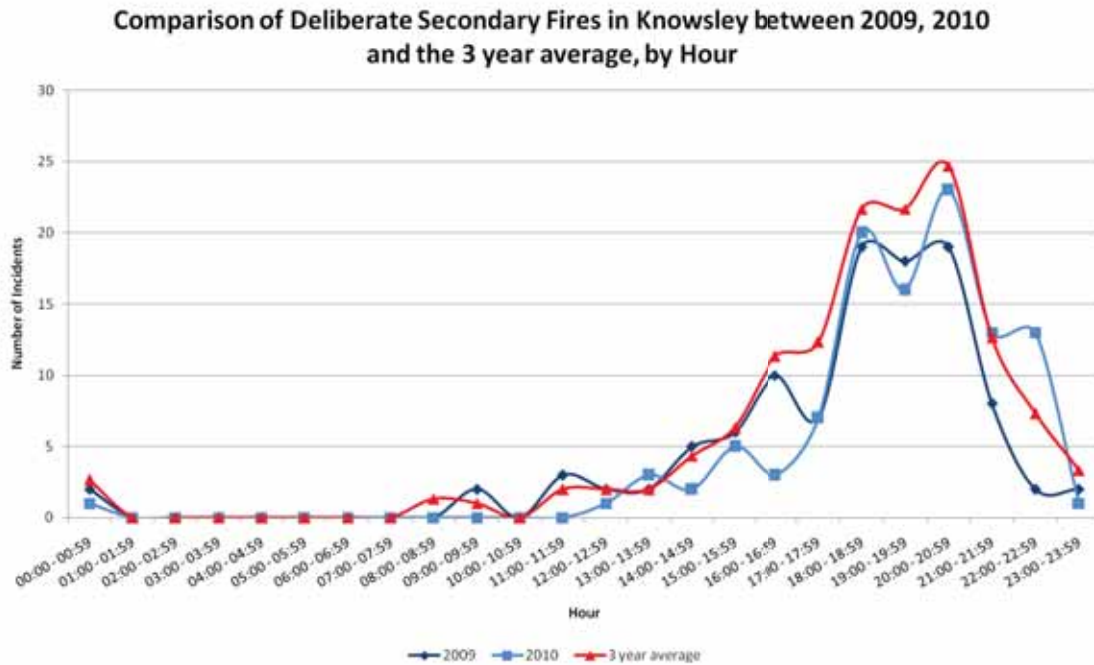


Chart 4 details the distribution of incidents attended by time noting that the general trend for incidents matched that of previous years with the busiest periods being between 18:00hrs and 22:00hrs. A further observation from the 2010 period which differs to previous trends is that there is a secondary peak later in the evening between 22:00-22:59.

Location Analysis of Deliberate Secondary Fires

Table 2: Incidents attended in Knowsley by ward

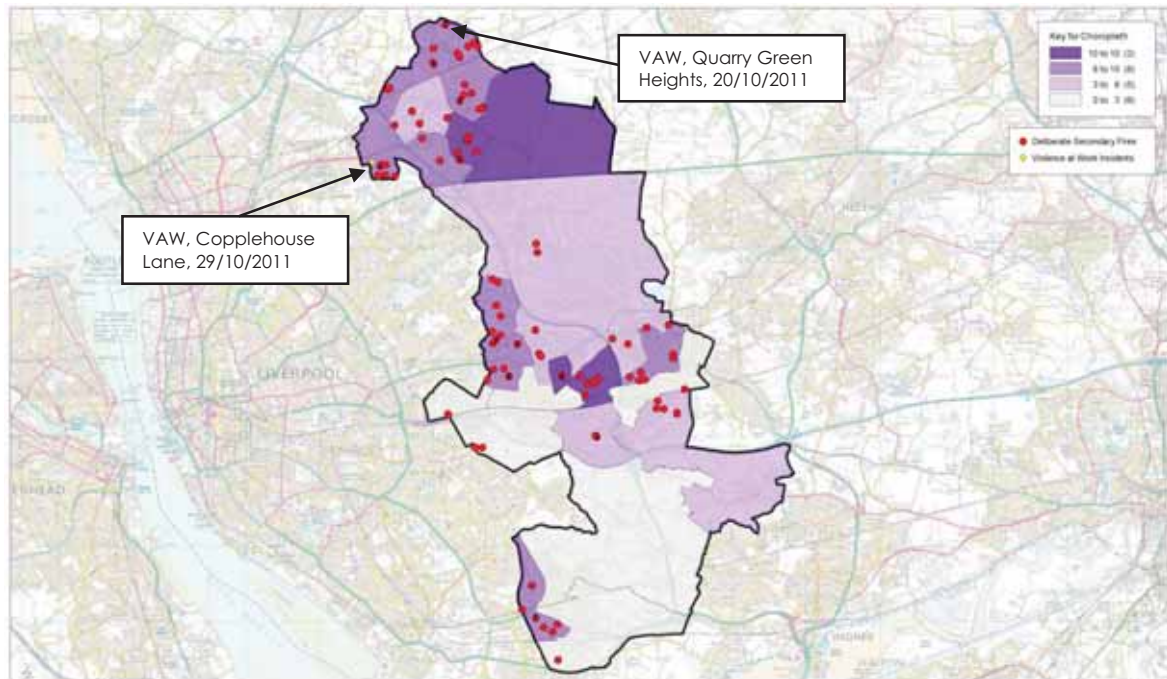
Ward	2009	2010	Difference	% Change
Kirkby Central	15	10	-5	-33.3%
St Michaels Knowsley	5	10	5	100.0%
Stockbridge	9	9	0	0.0%
Shevington	4	9	5	125.0%
Cherryfield	3	9	6	200.0%
Page Moss	3	9	6	200.0%
Halewood West	4	8	4	100.0%
Prescot East	2	7	5	250.0%
Northwood	11	7	-4	-36.4%
Park Knowsley	6	6	0	0.0%
Prescot West	1	5	4	400.0%
St Gabriels	1	4	3	300.0%
Whiston South	10	4	-6	-60.0%
Longview	3	3	0	0.0%
Whitefield	10	3	-7	-70.0%
Roby	1	2	1	100.0%
Whiston North	6	1	-5	-83.3%
Swanside	0	1	1	N/A
Halewood South	8	1	-7	-87.5%
St Bartholomews	3	0	-3	-100.0%
Halewood North	2	0	-2	-100.0%
Grand Total	107	108	1	0.9%

Table 2 provides a breakdown of where incidents occurred in Knowsley and how they compared to the previous period. The table identifies "Kirkby Central" witnessed the greatest number of incidents for both periods. Along with "Kirkby Central", "St Michaels" (Prescot Area) also witnessed 10 incidents which is an increase of 5 incidents or 100%.

When analysed by ward, Knowsley shows an interesting pattern which is paradoxical in nature. The general trend is that in wards where there was previously little activity there were increases, for example "Prescot West" witnessed 1 incident during 2009 and 5 during 2010. On the other hand the opposite is also true; "Halewood South" witnessed 8 incidents during 2009 and yet only witnessed 1 incident during 2010.

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Map 1: Choropleth Map identifying Incident Density by Ward and Incident of violence at work



Choropleth Analysis of Deliberate Secondary Fires in Knowsley during the 2010 Bonfire Period (19th October - 7th November)

Author: James Watson
Date: 18/11/2010
Produced using MapInfo
Knowledge and Information Management

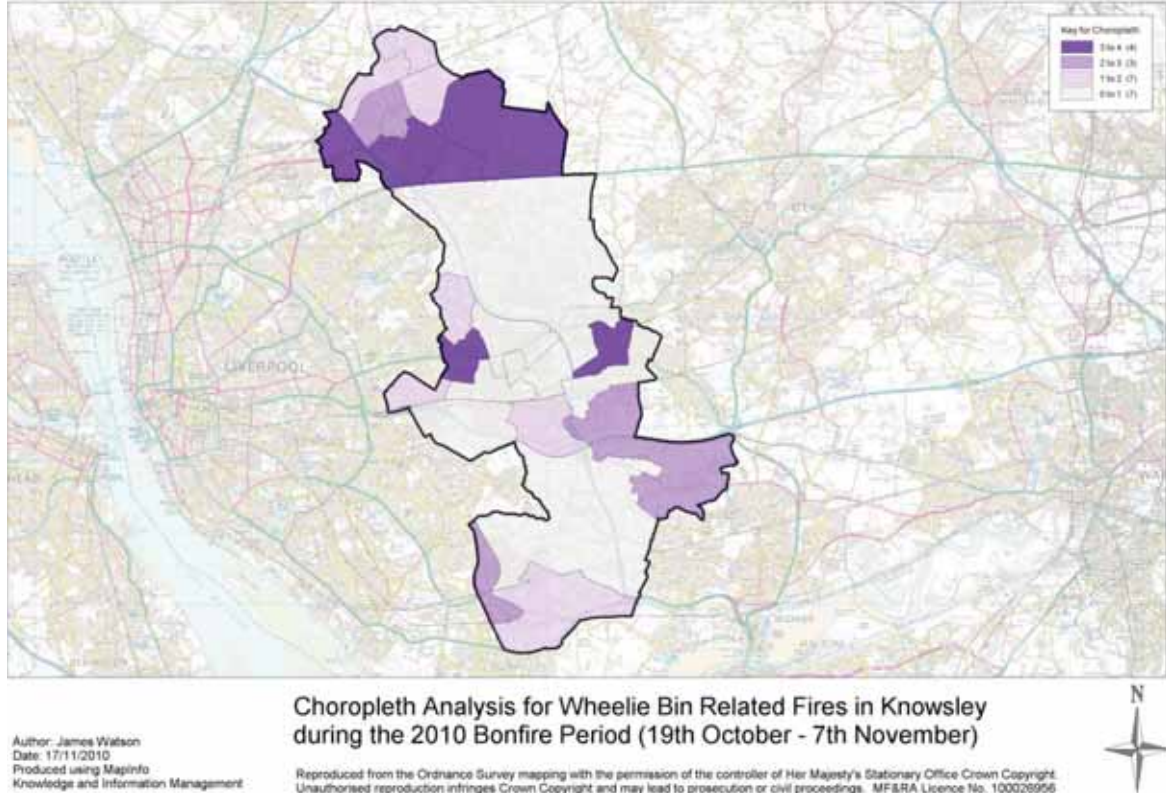
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Map 1 identifies that in general the south of Knowsley was far quieter than the north (Kirkby) and central Knowsley (particularly: Prescott, Whiston and the Stockbridge Village areas). Also clearly identifiable are the wards of "Kirkby Central" and "St Michaels" which witnessed the greatest number of incidents.

Wheelie Bin Incidents

Map 2: Choropleth Map identifying density of Wheelie bin incidents in Knowsley



Map 2 identifies the density of wheelie bin related incidents by ward. The map presents a different picture to that shown in the previous map (map 1) with little to no wheelie bin fire activity occurring within the ward of "St Michaels" (Prescot area). What is consistent is that the Kirkby Central and Cherryfield wards in Kirkby have witnessed the greatest proportion of incidents along with Page Moss and Prescot East.

Violence at Work

Within Knowsley there were two violence at work incidents throughout the 2010 bonfire period; a reduction of 2 incidents compared to the 2009 bonfire period.

Table 3: Details of Incidents of Violence at Work for the 2010 bonfire period.

Incident Number	Date	Location	Station	Incident Type	Details of VAW	Ward	SOA
030279-20102010	20/10/2010 19:55:44	KIRKBY,NORTHWOOD,OLD ROUGH LANE,REAR OF QUARRY GREEN HEIGHTS,KENNELWOOD PARK,	42	Bonfire	Whilst in attendance fire crew were the subject of threatening behaviour by a group of youth approx 30-40aged between 14yrs-18yrs both male and female. Youths were firing rockets at each other and fire crew - no injuries, do damage to appliance.	Northwood	E01006447
031570-29102010	29/10/2010 20:11:00	NR THE /FORD GARAGE,COPPLEHOUSE LANE	18	Information Only	YOUTHS THROWING MISSILES - VAW INCIDENT - NO INJURIES OR DAMAGE TO FS VEHICLE	Cherryfield	E01006510