Joint Partnership Strategic Assessment 2010/11

Melton CSP Appendices

Melton CSP Risk Assessment Matrix

		Crime/Disorder Type	No. crimes/incidents last 12 months	% of overall crime/incident	Level of Control	Probability Score	Harm Score	Threat (Probability x Harm)	Classification	Include with Strategic Assessment?	Rate per 1000 Population	Year on Year Percentage Change
SPI categories	Serious Acquisitive Crime	Burglary Dwelling	145	5.5	C	8	14	112	Med		2.941	-36.7
		Vehicle Crime	257	9.8	C	14	10	140	Med		5.214	-33.1
		Robbery	7	0.3	C	1	9	9	Low		0.142	-41.7
	Serious Sexual Crime	Sexual Offences Against Adults (18 & Over)	9	0.3	C	1	10	10	Low		0.183	6.7
		Sexual Offences Against Children (Under 18)	23	0.9	C	2	12	24	Low		0.467	
	Serious Violent Crime	Murder	2	0.1	C	1	14	14	Low		0.041	100.0
		Manslaughter	0	0.0	C	1	14	14	Low		0.000	0.0
		GBH sec. 18	8	0.3	C	1	16	16	Low		0.162	-25.0
		GBH sec. 20	3	0.1	C	1	17	17	Low		0.061	0.0
	Criminal Assault LSI	ABH s 47	231	8.8	C	14	16	224	High	Y	4.686	-16.0
	Damage	Arson	17	0.6	C	2	7	14	Low		0.345	30.8
		Damage	547	20.9	C	17	17	289	High	Y	11.096	-26.8
NSIR categories	Anti-Social Behaviour	Animal Problems	21	1.2	C	3	9	27	Low		0.426	-52.3
		Begging & Vagrancy	4	0.2	C	1	6	6	Low		0.081	-42.9
		Street Drinking	2	0.1	C	1	19	19	Low	Y	0.041	-83.3
		Malicious Communications	39	2.2	C	5	6	30	Low		0.791	5.4
		Noise	23	1.3	C	3	13	39	Low		0.467	64.3
		Prostitution Related Activity	0	0.0	C	1	6	6	Low		0.000	
		Inappropriate sale / use / possession of fireworks	12	0.7	C	2	6	12	Low		0.243	0.0
		Hoax Calls to Emergency Services	79	4.4	C	8	6	48	Low		1.603	16.2
		Littering/Drugs Paraphernalia	18	1.0	C	2	12	24	Low		0.365	
		R & N Neighbour Disputes	132	7.3	C	11	14	154	High	N	2.678	26.9
		R & N Rowdy or Inconsiderate Behaviour	1131	62.6	C	17	15	255	High	Y	22.944	-19.6
		Trespass	12	0.7	C	2	6	12	Low		0.243	20.0
		Abandoned Vehicles (not stolen nor obstruction)	100	5.5	C	8	11	88	Med		2.029	-12.3
		Vehicle nuisance & inappropriate use (not obstruction)	234	12.9	C	17	9	153	High	N	4.747	23.2
Other categories		Domestic Abuse	250	9.5	C	14	19	266	High	Y	5.072	7.3
		Business Crime (Local Objective Burglary OTD >£1000)	26	1.0	C	2	11	22	Low		0.527	-33.3
		Business Crime	482	18.4	C	17	11	187	High	Y	9.778	-18.7
		Hate Crime	10	0.4	C	1	10	10	Low		0.203	-56.5
		Burglary OTD	209	8.0	C	14	12	168	High	Y	4.240	-35.9
		Theft	601	23.0	C	17	13	221	High	Y	12.192	-5.5
		Gun Crime	1	0.0	C	1	7	7	Low		0.020	200.0
		Knife Crime	6	0.2	C	1	9	9	Low		0.122	-40.0
		Speeding					13					
		Killed or Seriously Injured Road Traffic Collisions					21					

HIGH = score > 151	
MEDIUM = score 76 - 150	
LOW = score 0 - 75	

Figure 1. Scanning Matrix for Melton CSP

ABH

| 2007/08 | 2008/09 | 2009/10 |

GI* Statistic

- ■ p < 0.01
- ■ p >= 0.01
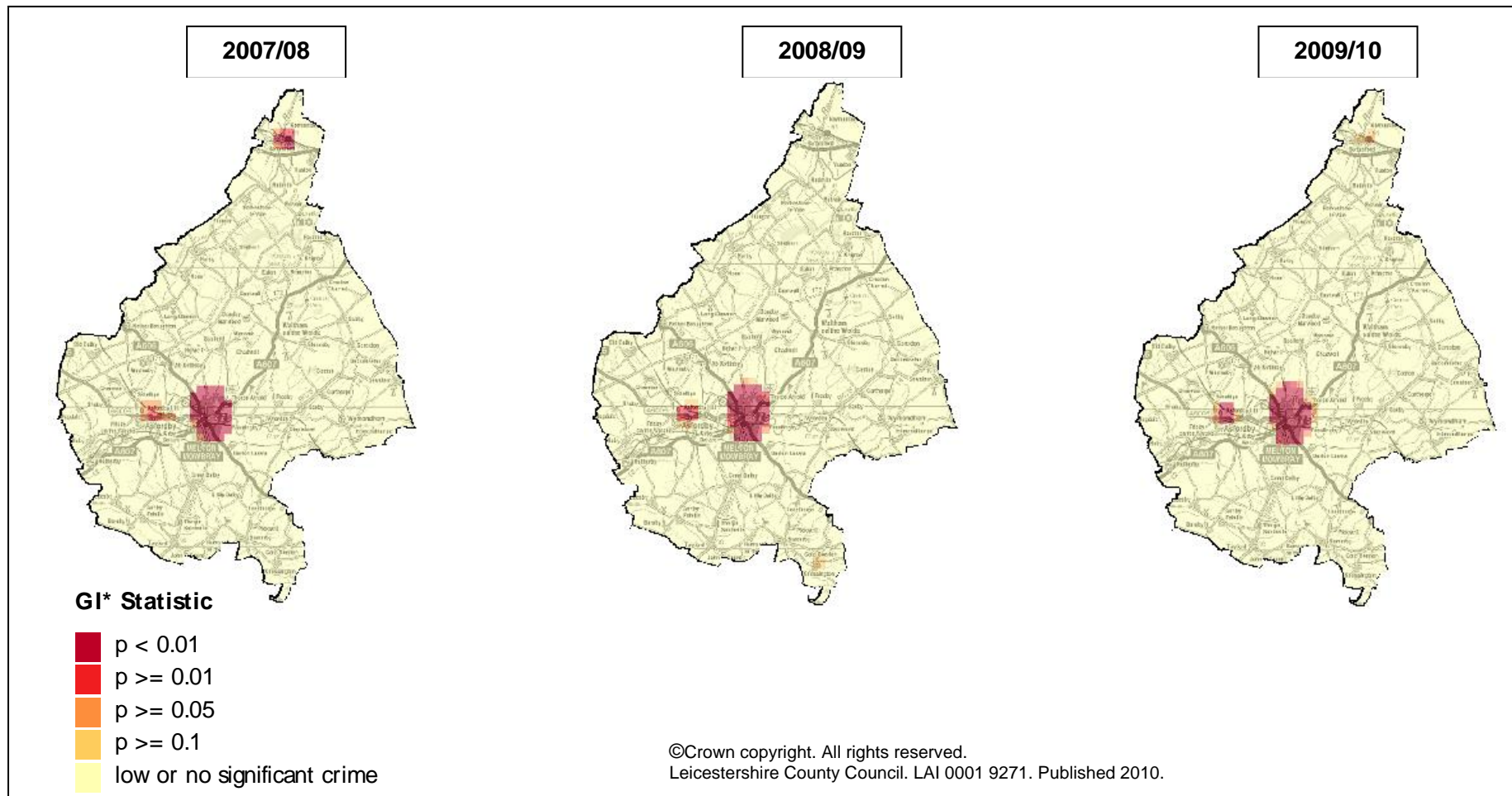- ■ p >= 0.05
- ■ p >= 0.1
- □ low or no significant crime

Figure 2. ABH Hot Spots in Melton CSP

The main hot spot for ABH in Melton CSP is focused on Melton Mowbray town, with the size and intensity of the hot spot remaining constant over time between 2007/08 and 2009/10. The area of highest incidence within Melton Mowbray town in 2009/10 is restricted to the area around King's Road and across the railway line to the North West. Elsewhere in the borough there is a smaller, less intense hot spot covering Asfordby, although the incidence of ABH in this area is significantly lower than in Melton Mowbray. The only other noticeable hot spot in the borough is the one covering Bottesford in 2007/08, but this has since reduced considerably in intensity.

Anti Social Behaviour

| 2007/08 | 2008/09 | 2009/10 |

p < 0.01
p >= 0.01
p >= 0.05
p >= 0.1
low or no significant crime

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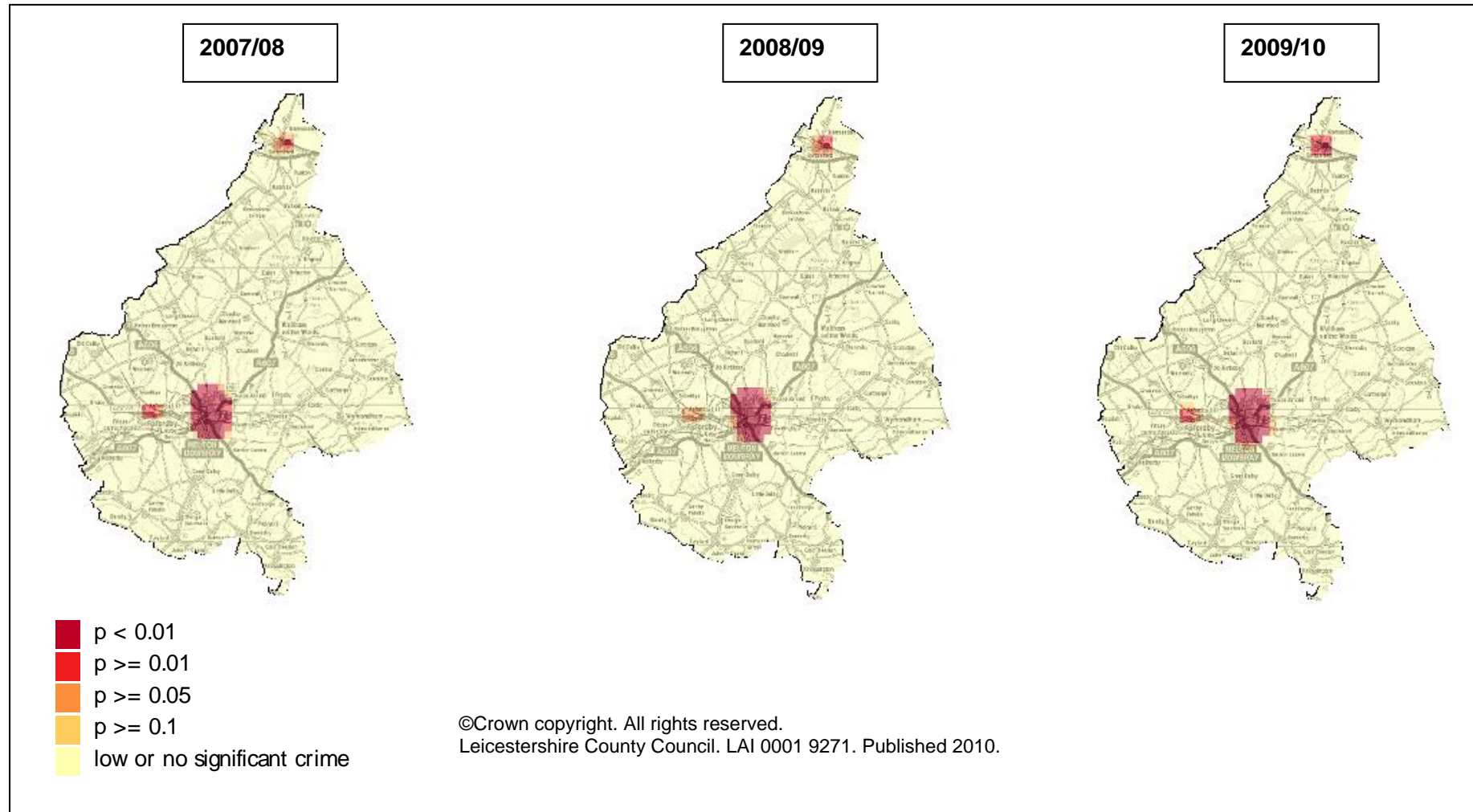Leicestershire County Council. LAI 0001 9271. Published 2010.

Figure 3. Anti Social Behaviour Hot Spots in Melton CSP

In 2009/10 there are three hot spots for ASB across Melton CSP: Melton Mowbray, Asfordby and Bottesford. These areas have remained constant hot spots since 2007/8. However, for Asfordby and Bottesford it is possible to see a slight increase in the intensity of the hot spot in the current year.

Burglary Dwelling

| 2007/08 | 2008/09 | 2009/10 |

GI* Statistic

- ◼ p < 0.01
- ◼ p >= 0.01
- ◼ p >= 0.05
- ◼ p >= 0.1
- ☐ low or no significant crime

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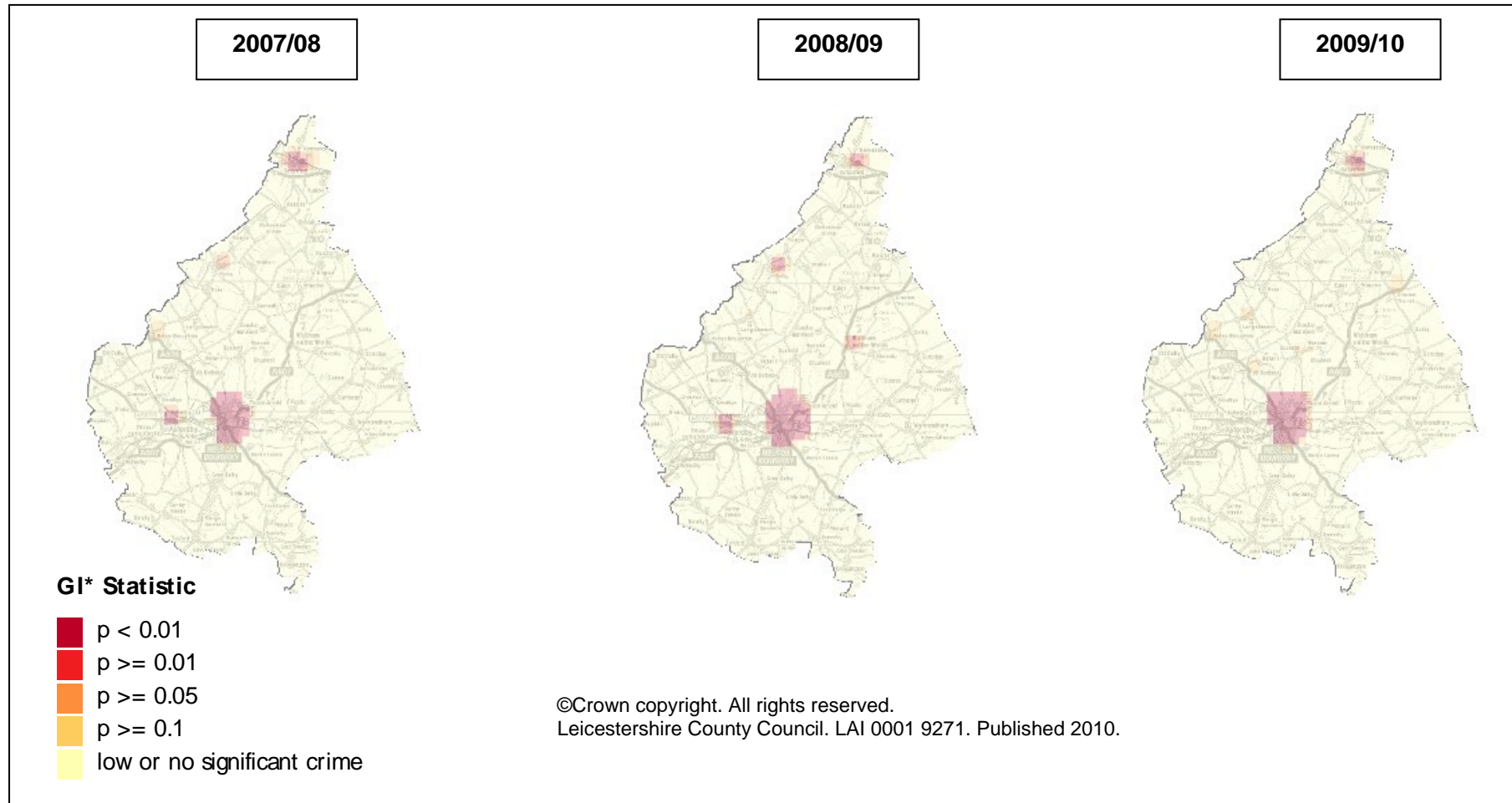Leicestershire County Council. LAI 0001 9271. Published 2010.

Figure 4. Burglary Dwelling Hot Spots in Melton CSP

The only real hot spot in Melton CSP is focused around Melton Mowbray and this has remained stable through time. Bottesford also shows as static hot spot for Melton district but the crime volume here is low in comparison to that of Melton Mowbray. There are no real areas that can be considered as emerging problems for domestic burglary but Asfordby and Waltham on the Wolds have seen and improvement and no longer represent hot spots on the 2009/10 map.

Criminal Damage

2007/08   **2008/09**   **2009/10**

GI* Statistic

- p < 0.01
- p >= 0.01
- p >= 0.05
- p >= 0.1
- low or no significant crime

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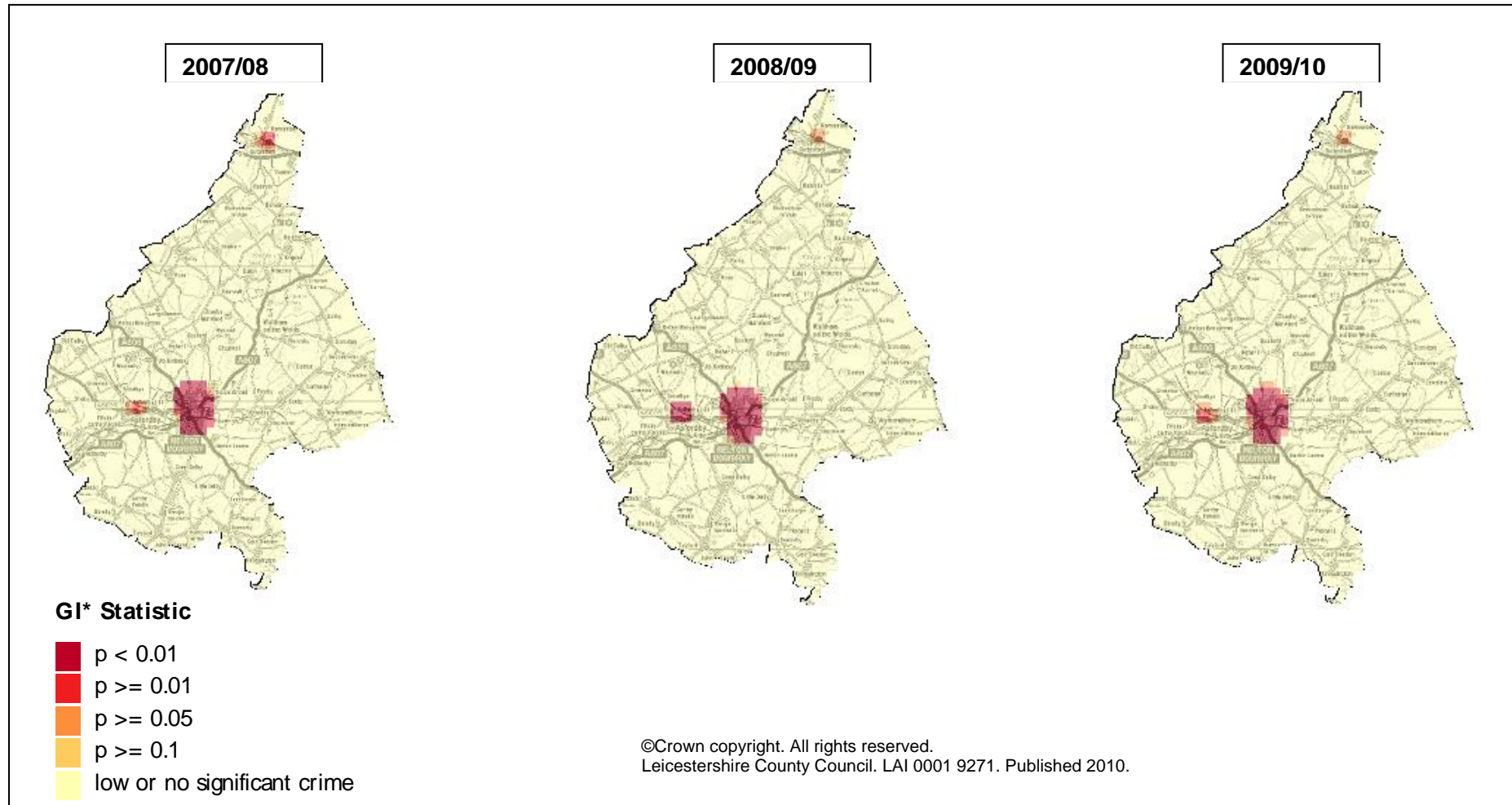
Figure 5. Criminal Damage Hot Spots in Melton CSP

Main hot spot is centred on Melton Mowbray town. This has remained stable from 2007/08 to 2009/10 in terms of both shape and intensity. A smaller hot spot exists around Asfordby which intensified in 2008/09, due to a large increase in the number of incidents, but has since receded. Elsewhere, a less intense, localised hot spot exists in Bottesford.

Vehicle Crime

2007/08

2008/09

2009/10

■	p < 0.01
■	p >= 0.01
■	p >= 0.05
■	p >= 0.1
□	low or no significant crime

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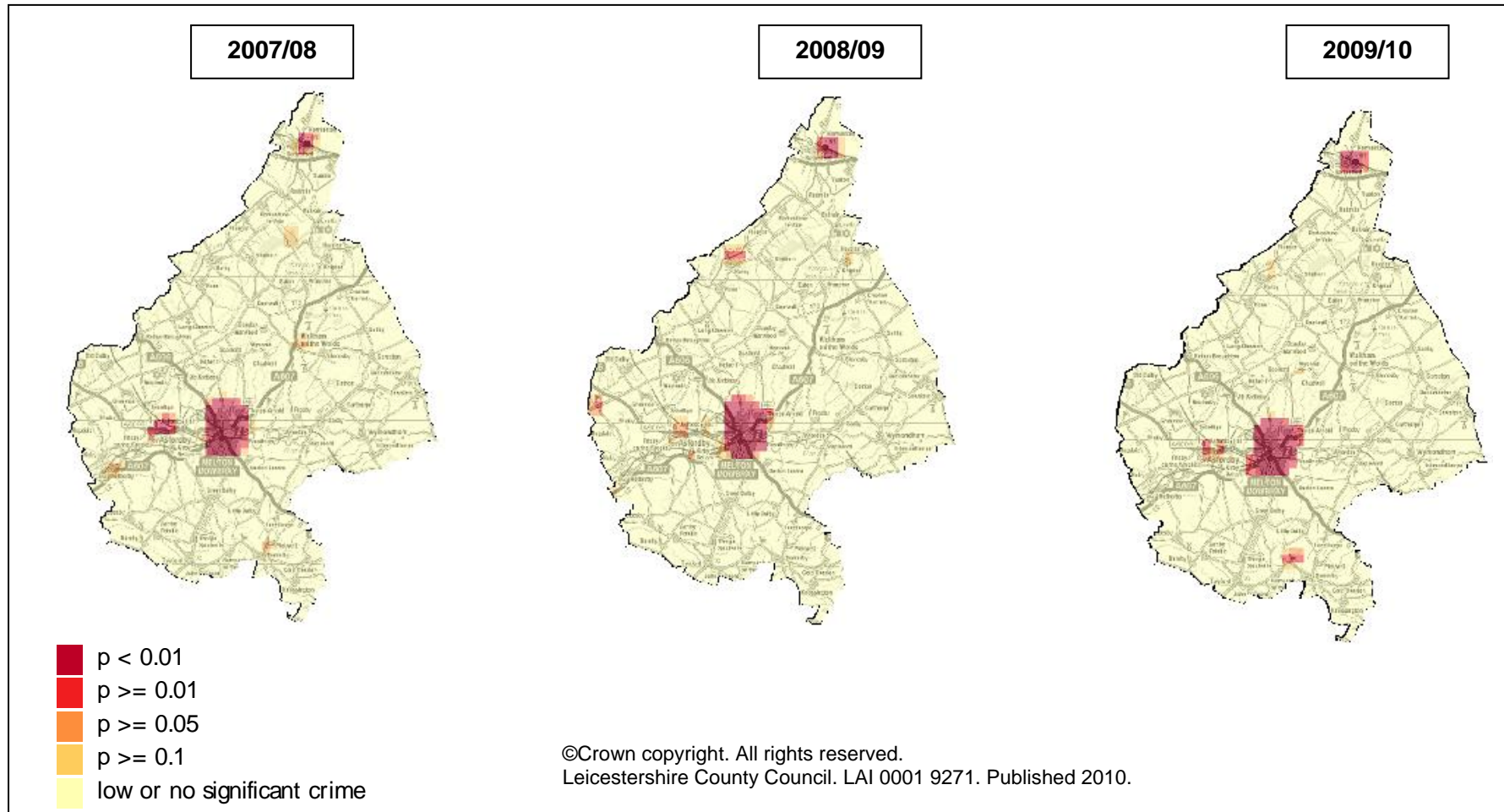Leicestershire County Council. LAI 0001 9271. Published 2010.

Figure 6. Vehicle Crime Hot Spots in Melton CSP

Across Melton CSP the main hot spots are centred on Melton Mowbray and Bottesford. A smaller hot spot existed in Asfordby in 2007/08 but that has since become less intense and isn't visible in 2009/10. There are a number of smaller, less intense areas in more rural locations within the CSP; most noticeably at the Borough Hill Country Park in the south of the CSP in 2008/09. There are also hot spots in 2009/10 in Harby and at the Six Hills golf course in the west of the CSP.

Mapping Methodology

The maps cover five different crime types identified as being of interest to the Partnership Strategic Assessment 2010: Actual Bodily Harm, Anti-Social Behaviour, Vehicle Crime, Criminal Damage and Domestic Burglary. Due to methodology employed it was necessary to provide separate maps at all levels of geography covering the Leicestershire Constabulary Force Area, Leicester City, Leicestershire County, each of the seven districts, and Rutland.

The maps operate on a 500m grid resolution and use a spatial statistic to test for local spatial autocorrelation, or how closely near-by areas resemble each other in terms of the volume of crime. The statistic used is the Getis and Ord (1996) GI* statistic[1] which was run via the Rook's Case[2] add-on for Microsoft Excel. The volume of crime in each individual grid square is compared to the values in the eight squares that immediately surround it. These values are then compared to the global average for the area under consideration. A high positive value for the GI* statistic means that lots of high crime grid-squares are grouped together, whereas very low, negative, GI* values mean that lots of low crime areas are group together. For the purpose of the PSA mapping these low grid squares were classified together with areas of no crime.

As well as comparing local and global averages, a significance test is applied to the result for each grid-square that identifies if the local pattern of crime is significantly different to what is generally observed across the whole study area. The Rook's Case software reports this result as a standardised z-score which can then be converted into a probability. Where the probability is equal to 0.1 it means there is only a 10% chance that the differences observed occurred by chance rather than any real statistical difference in the grid pattern. The probabilities range between 0.1 and 0.01.

Standard thematic maps by grid square are used to display these probabilities in MapInfo and the following analysis is based on these maps. It is important to note that because of the way the statistic works: it considers only the distribution of values at a given point in time for a given area; direct comparison over time is not possible. Where comments have been made about changes over time, it is because either further analysis has been used within the GIS to work with the volume of crime, or the discussion relates to relative changes through time regarding emerging or improving hot spot locations. For the most part, the analysis is based only on the mapping evidence (particularly for the individual districts) and it should be noted that the volume of crime in these areas can be at very low levels, even in the identified hot spots. However, when considered in the context of each district individually, these areas are picked out as being statistically different from others by the mapping statistic.

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[1] Getis, A. and Ord, J.K. (1996) Local Spatial Statistics: An Overview. *In* Longley, P. and Batty, M. (eds.) *Spatial Analysis: Modelling in a GIS Environment.* (pp. 261-277). Cambridge, England: GeoInformation International.
[2] http://www.lpc.uottawa.ca/data/scripts/index.html

Deliberate Fires in Melton 2009/10

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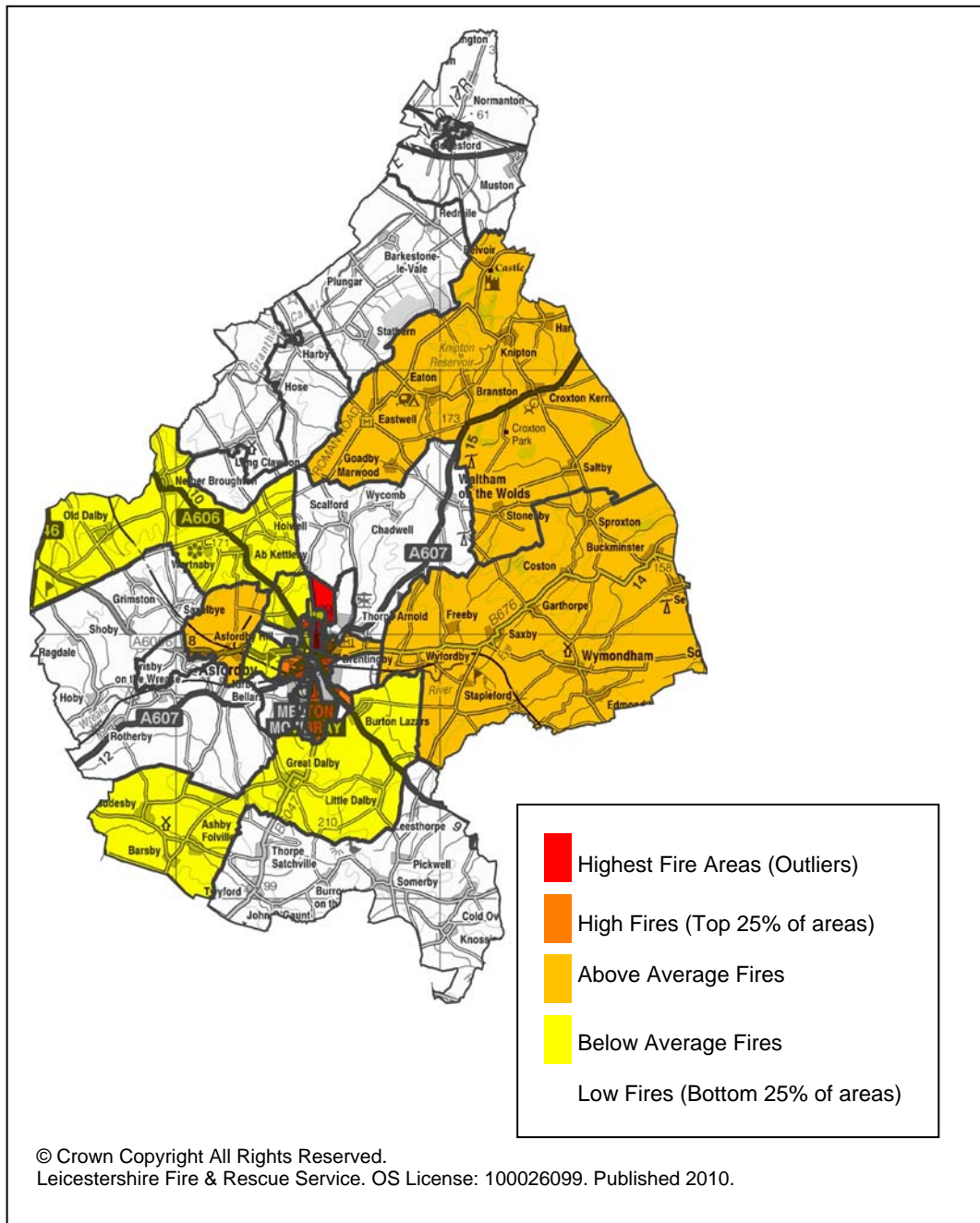
Figure 7. Deliberate Fires in Melton CSP 2009/10
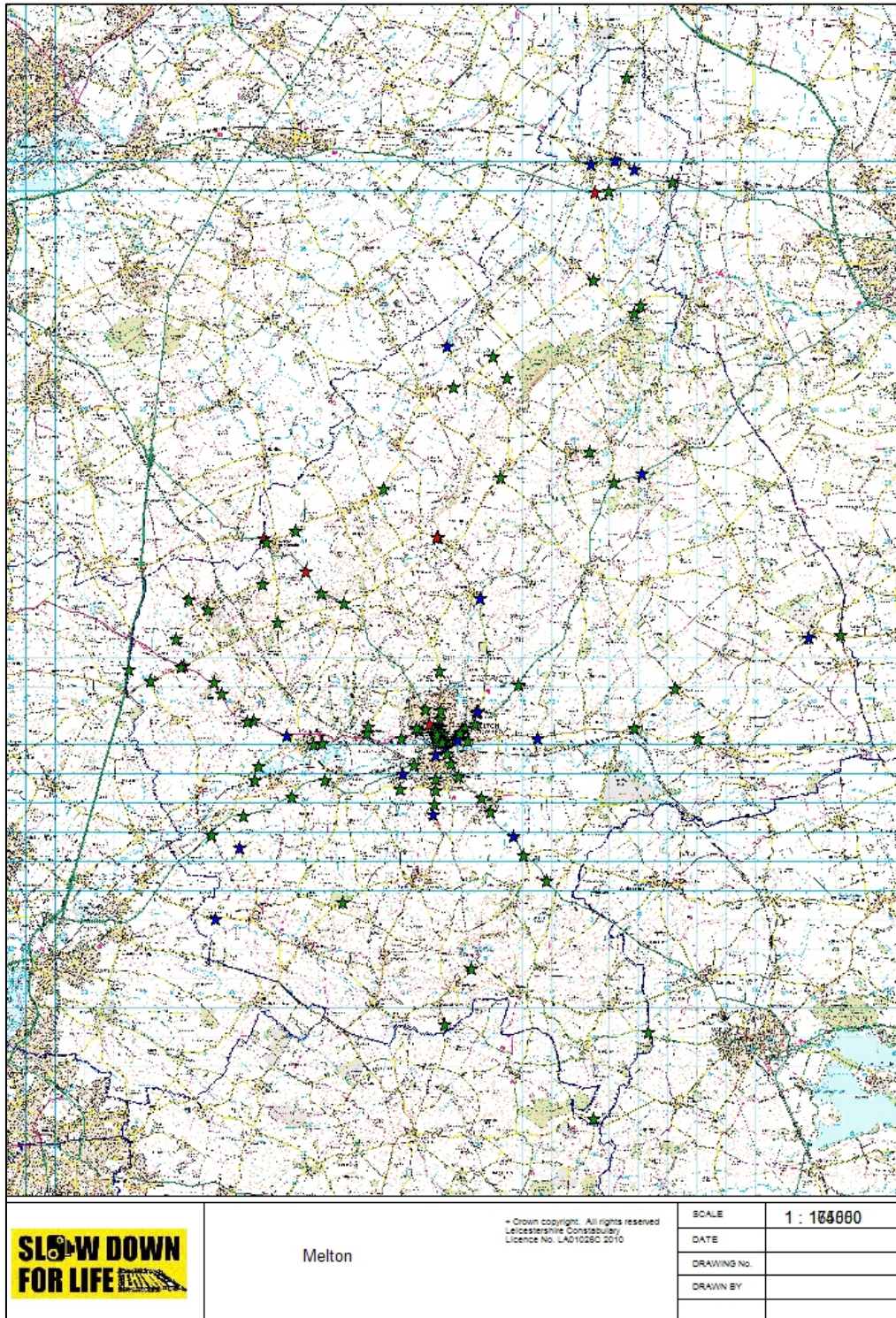
Melton CSP Road Traffic Collisions 2009/10

Figure 8. Road Traffic Collisions in Melton CSP 2009/10