



Nottinghamshire Fire and Rescue Service (NFRS) Community Safety Assessment: Part 1

Impact Assessment



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1. Introduction

- 1.1. Nottinghamshire Fire and Rescue Service (NFRS) have implemented a wide range of community safety initiatives which aim to achieve safer (1) homes, (2) roads and (3) neighbourhoods within the communities of Nottinghamshire. To an extent the impact of specific community safety initiatives can be analysed through identifying a specific type of incident they aim to reduce and assessing the changes in the occurrence of such incidents. This impact assessment aims to assess the community safety initiatives of NFRS.
- 1.2. It is important to emphasise that when assessing the impact an initiative may have had upon the number of a certain incident type, one can never fully establish cause and effect, due to the wide range of external variables which could also impact the outcome. However through taking into consideration a number of external variables, such as demographic and national trends and incident data from other public services, a much stronger argument can be formed to support the suggestion that an initiative is likely to have impacted upon a specific incident type. It could be the case that initiatives are having the same positive effect nationally, which is an argument that could be formed if incidents were increasing and decreasing at similar rates across the UK. However, if reductions in a local area are greater than regional and national figures then it increases the likelihood of an initiative being responsible for a proportion of the reduction, and provides stronger evidence to support the likelihood of impact. Consequently NFRS incident data between 01/04/2006 and 31/03/2011 is analysed, in conjunction with relevant additional external variables, in order to assess the impact of NFRS community safety initiatives in terms of contributing to any reductions in the number of incidents which NFRS attend.
- 1.3. This is primarily a non-monetary impact assessment, due to the problematic nature of applying values to life and injury. However financial impacts are included where relevant, specifically regarding the costs for NFRS mobilising appliances to incidents. NFRS is aware that the cost of dispatching resources to incidents and emergencies is far in excess of what it spends on community safety initiatives. Consequently by establishing effective community safety initiatives the service has the potential to reduce the cost of response. It is difficult to place a specific cost upon the mobilisation of a fire engine to an incident, illustrated by the differing estimates which can be found. An article from *The Times* in 2008 stated that the government estimated the cost of sending a fire engine to an emergency call as being approximately £500,¹ while another estimate (BBC, 2011) stated that the cost of sending a fire engine to an average fire is approximately £330.² Therefore taking into account these two different estimates this impact assessment will use the average estimate of a fire engine mobilisation to an incident of £415. This estimate will be referenced where appropriate in order to illustrate financial

¹ 'How many millions of pounds do hoax calls cost the fire brigade?' *The Times*. 19th March 2008.

² BBC (2011). 'West Midlands fire service trials smaller response cars'. Available at: www.bbc.co.uk/news/uk-england-coventry-warwickshire. 29th December 2011.

impacts, as for each incident NFRS attends there is a record of the number of appliances which were mobilised.

- 1.4. There are wider financial implications in addition to the direct costs to the fire service including the mobilisation of a vehicle. These wider financial implications are estimated through using the February 2011 report produced by the Department for Communities and Local Government (DCLG) into the economic cost of fires in 2008.³ The costs associated with the consequences of a fire incident could include the total costs of casualties in terms of their impact upon other public services, the costs in the loss of business, the costs in property damage and costs to victims, the police, the prison service and the criminal justice system. Additionally, for a fire and rescue service the cost of responding to a fire related incident can be calculated through taking into consideration not only the resources required but also the capital costs incurred. The DCLG report states that during 2008 the average cost in consequences per fire in the East Midlands was £6400 and the average cost in response was £2988.
- 1.5. Following this introduction this impact assessment summarises the range of incident types NFRS attend, trends in incident occurrence and outcomes, relevant regional and national comparison, and possible impacts associated with NFRS community safety initiatives. An overall assessment of the impact of these community safety initiatives, and discussion of limitations of the impact assessment, is provided in conclusion.

2. NFRS All Incidents: 01/04/2007 – 31/03/2011

2.1. All False Alarm Incidents

Relevant NFRS Community Safety Initiatives:

- 2.1.1. Substantial reductions have been observed in the number of false alarm incidents which NFRS has attended (*see table 2.1.1.*). However, it is more likely that external variables, which are having a greater impact within Nottinghamshire and the East Midlands, have accounted for the decrease. This is a logical explanation to put forward, considering that NFRS deliver relatively few initiatives which could be directly linked to reducing apparatus related and good intent related false alarm incidents, which account for the vast majority of false alarm incidents. The content of many of their initiatives do focus upon reducing malicious false alarms, although malicious false alarms only account for a very small percentage of false alarm calls and consequently won't have a significant impact upon overall false alarm incidents. It could be argued, however, that through delivering community safety initiatives the fire service are raising awareness about the detrimental effects which false alarms of any kind have upon the fire service, in terms of the cost of administering an appliance and potentially deviating fire-fighters away from more high risk situations. Subsequently people may be more likely

³ The economic costs of fire: Estimates for 2008. Fire Research Report 3/2011. Department for Communities and Local Government (February 2011): London.

to ensure smoke alarms are functioning effectively. This is a very loose link to argue though and would not constitute a significant impact in isolation.

Incident Data/Relevant External Variables:

Table 2.1.1:

Location⁴	All False Alarm Incidents	Population⁵
Nottinghamshire	24.42% decrease	2.35% increase
East Midlands	25.34% decrease	1.92% increase
FRS Family Group 4	18.91% decrease	
England (non met)	18.64% decrease	
England	18.05% decrease	2.09% increase (for Great Britain)

2.2. All Fire Incidents

Relevant NFRS Community Safety Initiatives:

2.2.1. The majority of NFRS community safety initiatives place focus upon general fire safety; including the educational initiatives delivered, the targeted initiatives delivered to vulnerable people in the community, and the partnership work carried out at county and district levels.⁶

Incident Data/Relevant External Variables:

Table 2.2.1:

Location	All Fire Incidents	Population
Nottinghamshire	27.05% decrease	2.35% increase
East Midlands	23.44% decrease	1.92% increase
FRS Family Group 4	23.39% decrease	
England (non met)	21.20% decrease	

⁴For data identifying the number of incidents each years within specific districts please refer to the ‘NFRS Incidents (01/04-2006 – 31/03/2011)’ document.

⁵Rates of population changes included in order to place any changes in the number of incidents into context, as a change in population could account for a proportion of a change in the number of incidents.

⁶ NFRS Incidents (01/04/2006 – 31/03/2011): Section 2.

England	22.68% decrease	2.09% increase (for Great Britain)
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2.2.2. The large reduction in the number of fire incidents is the reduction recorded within the three broad incident categories in which NFRS can most strongly and convincingly argue their impact. Within the context of an increasing population, fire incidents have decreased at a rate far in excess of those observed either regionally or nationally and NFRS are the organisation within the area which is predominantly responsible for delivering fire safety messages and initiatives.

Estimated financial impact:

- During 2007/2008 NFRS attended 7,693 fire incidents, while during 2010/11 NFRS attended 5,612 fire incidents, demonstrating a reduction of 2,081 incidents.
- The 7,693 incidents during 2007/08 involved 11,291 mobilisations, while the 5,612 incidents in 2010/11 involved 7,632 mobilisations, demonstrating a reduction of 3,659 mobilisations to fire incidents. On the basis of the direct costs to the fire service budget associated with a mobilisation (such as salary, fuel consumption, wear and tear) this equates to a saving of approximately **£1,518,485**. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.
- According to the DCLG report into the economic cost of fires in 2008, the estimated wider economic savings likely to be made as a result of the reduction in the number of fire incidents are **£13,318,400** in the consequences associated with the incidents and **£6,218,028** in costs associated with responding to the incidents. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.

2.3. All Special Service Incidents

Relevant NFRS Community Safety Initiatives:

2.3.1. With regards to Special Service incidents attended by NFRS, road traffic collisions account for the vast majority. NFRS community safety team deliver one major initiative regarding road safety, which is received by school children aged between 14 and 15.⁷ NFRS is part of the road safety partnership alongside the police, the ambulance service and the highways agency and has involvement in various forms of partnership work aiming to increase road safety. However, considering that other public services, such as the council and the police, deliver various initiatives focused upon increasing road safety, and that the individuals involved in such incidents may not even live in the Nottinghamshire area and have been subject to Nottinghamshire community safety initiatives, it is very difficult to argue the impact of NFRS in reducing special service incidents. The fact that they have decreased at a greater rate

⁷ NFRS Incidents (01/04/2006 – 31/03/2011): Paragraph 2.7.

within Nottinghamshire could be due to a wide range of variables specific to Nottinghamshire, of which NFRS' initiative is likely to be one.

Incident Data/Relevant External Variables:

Table 2.3.1

Location	All Special Service Incidents	Population
Nottinghamshire	27.05% decrease	2.35% increase
East Midlands	23.44% decrease	1.92% increase
FRS Family Group 4	23.39% decrease	
England (non met)	21.20% decrease	
England	22.68% decrease	2.09% increase (for Great Britain)

3. NFRS Incident Sub-Types: 01/04/2006 – 31/03/2011

- 3.1. National and regional trends data indicates that NFRS community safety initiatives are likely to have contributed to a proportion of the reductions observed in the number of fire incidents. Primary and secondary fires account for the vast majority of fire related incidents. Dwelling fires and road vehicles fires account for the vast majority of primary fire incidents. Therefore the impact of NFRS' community safety initiatives upon the following incident sub-types will be assessed; (1) accidental secondary fires, (2) deliberate secondary fires, (3) accidental dwelling fires (including casualties), (4) deliberate dwelling fires, (5) accidental road vehicle fires, and; (6) deliberate road vehicle fires.
- 3.2. With regards to false alarm and special service incidents it is more difficult to develop strong arguments to support the likelihood of the impact of NFRS' community safety initiatives due to the large number of external variables involved. Therefore the incident sub-types within these categories will not be assessed further, with the exception of (7) malicious false alarm incidents. NFRS do produce initiatives which aim to decrease these types of incidents and the trends observed for all false alarm incidents within the above table would not have been reflective of malicious false alarms.

3.1. Accidental Secondary Fires

Relevant NFRS Community Safety Initiatives:

3.1.1. NFRS community safety initiatives do broadly aim to reduce the occurrence of such incidences through educating the public in terms of the precautions they should adhere to. This is achieved through various forms of community engagement, safety campaigns and schools education.

Incident Data/Relevant External Variables:

Table 3.1.1:

Location	Accidental Secondary Fires	Population
Nottinghamshire	4.87% increase	2.84% increase

3.1.2. As national and regional data is unavailable for the incidences of accidental secondary fires it is not possible to reasonably assess the impact of NFRS community safety initiatives upon the incidences of accidental secondary fires, as any changes can't be placed into context. Unlike deliberate secondary fire incidents there are limited external variables which can be taken into consideration to provide further understanding of the likelihood of impact. A broad variable to take into account is population increases in Nottinghamshire, particularly within the City. Consequently this could have attributed to a proportion of the overall increase which has been observed.

3.2. Deliberate Secondary Fires

Relevant NFRS Community Safety Initiatives:

3.2.1. NFRS deliver Risk Watch 3, Fire-Setters, Fire-Safe, Bendigo and carry out partnership working (at county and districts specific levels) in order to reduce the occurrence of deliberate secondary fires. The age group which these forms of initiatives are predominantly aimed towards are the adolescent groups, as this is the age group considered most likely to be involved in such forms of anti-social behaviour.⁸

Incident Data/Relevant External Variables:

3.2.2. Substantial reductions have been observed in the number of deliberate secondary fires across Nottinghamshire (46.8% reduction) and within all districts. This has taken place during a period in which an increase in population has been observed within nearly all districts amongst the 15-24 age group; the age group arguably most likely to be at risk of being involved in such incidents. This is supported by the fact that research has suggested that

⁸NFRS Incidents (01/04/2006 – 31/03/2011): Paragraphs 2.6, 2.11, 2.12, 2.15 and 6.2.

there is an increased risk of anti-social behaviour,⁹ including deliberate fire setting,¹⁰ at this age, especially if it coincides with falling out of mainstream education and subsequent disaffection with society.¹¹ Particularly high increase rates have been observed within Ashfield, Bassetlaw and Newark. Within specific districts there is evidence that community safety initiatives are likely to have contributed to a proportion of the decrease in deliberate secondary fires as in a number of districts the rate of the decrease in deliberate secondary fires has been in excess of those observed regionally and nationally (Broxtowe, City, Newark and Rushcliffe) and in excess of the decrease rate of other criminal behaviour (Ashfield, City, Newark and Rushcliffe).¹²

Table 3.2.1:

Location	Deliberate Secondary Fires	Age Group 15-24	Offences recorded by the police ¹³
Nottinghamshire	46.79% decrease	2.28% increase	42.30% decrease
East Midlands	51.66% decrease	2.67% increase	30.72% decrease
FRS Family Group 4	45.30% decrease		
England (non met)	46.00% decrease		
England	45.07% decrease	2.58% increase (for Great Britain)	28.19% decrease (for England and Wales)

Table 3.2.2:

Nottinghamshire District	Deliberate Secondary Fires	Age Group 15-24	Offences recorded by the police
Ashfield	35.66% decrease	4.38% increase	29.78% decrease
Bassetlaw	23.14% decrease	4.80% increase	42.79% decrease
Broxtowe	52.31% decrease	0.70% increase	49.31% decrease

⁹Smithson, H; & Flint, J. (2006). Responding to young people's involvement in anti-social behaviour: a study of local initiatives in Manchester and Glasgow. *Youth and policy*, 93: 21.

¹⁰Lambie; I & Randell, I. (2011). Creating a firestorm: A review of children who deliberately light fires. *Clinical Psychology Review*, 31 (3): 327.

¹¹McCrystal, P; Percy, A, & Higgins, K. (2007). School exclusion drug use and antisocial behaviour at 15/16 years: Implications for youth transitions. *Vulnerable Children and Youth Studies*, 2(3):190.

¹²NFRS Incidents (01/04/2006 – 31/03/2011): Paragraphs 6.13 and 6.14.

¹³ The categories of reported crimes included in the offences recorded by the police are: violence against the person, all wounding act or endangering life, harassment including penalty notices for disorder, common assault, robbery, theft from the person, criminal damage including arson, burglary in a dwelling, burglary other than a dwelling, theft of a motor vehicle and theft from a motor vehicle.

City	57.32% decrease	0.98% increase	43.60% decrease
Gedling	47.66% decrease	3.17% increase	45.49% decrease
Mansfield	31.96% decrease	No Change	38.97% decrease
Newark	57.49% decrease	6.40% increase	43.37% decrease
Rushcliffe	61.63% decrease	3.82% increase	43.10% decrease

Estimated financial impact:

- During 2006/2007 NFRS attended 4,584 deliberate secondary fire incidents while during 2010/11 NFRS attended 2,439 deliberate secondary fire incidents, demonstrating a reduction of 2,145 incidents.
- The 4,584 incidents during 2006/07 involved 5,088 mobilisations, while the 2,439 incidents in 2010/11 involved 2,654 mobilisations, demonstrating a reduction of 2,145 mobilisations to deliberate secondary fire incidents. On the basis of the direct costs to the fire service budget associated with a mobilisation (such as salary, fuel consumption, wear and tear) this equates to a saving of approximately **£890,175**. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.
- The report by DCLG into the economic cost of fires in 2008 estimated that the total costs associated with the consequences of arson in the East Midlands, without including the costs associated with property damage and casualties, which by definition would not be associated with secondary fires, were £29m from a total of 13,605 deliberate fire incidents. Therefore, on average, the consequences associated with each deliberate fire incident, without including costs associated with property damage and casualties, can be estimated at approximately £2,132. On this basis, and on the basis that the average wider economic costs associated with responding to a fire incident are approximately £2,988, the estimates of the wider economic savings likely to be made as a result of the reduction in the number of deliberate secondary fire incidents are **£4,573,140** in the consequences associated with the incidents and **£6,409,260** in costs associated with responding to the incidents. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.

3.3. Accidental Dwelling Fire Incidents/Casualties

Relevant NFRS Community Safety Initiatives:

- 3.3.1. NFRS deliver Home Safety Checks (HSCs) to households within the communities in Nottinghamshire; an initiative which can be directly aligned to aiming to reduce the incidences of accidental dwelling fires and the risk of injury from accidental dwelling fires. In a broader sense, many more of NFRS initiatives place focus upon safety measures which should be adopted in the home in order to reduce the risk of fire and the risk of injury from a fire; from

schools initiatives, district specific safety days in the community, and the community safety schemes for young people.¹⁴

Incident Data/Relevant External Variables:

3.3.2. There is support for the suggestion that NFRS' community safety initiatives have contributed towards the reduction in accidental dwelling fire casualties as although within Nottinghamshire the numbers of accidental dwelling fire incidents have increased, the numbers of accidental dwelling fire casualties, as well as the proportion of casualties occurring from accidental dwelling fire incidents, have decreased. This has occurred at a rate far greater than that observed regionally and nationally, despite an increasing population. In addition, the most consistent increases in population are occurring within the elderly age groups, with the greatest rate of increase occurring within the 80+ age group, which incident data suggests is the age group most at risk of injury from an accidental dwelling fire.

3.3.3. The fact that these trends have all occurred during a period in which NFRS have reduced the overall number of HSCs they have carried out but have increased the number of high risk HSCs they have carried out, suggests that a more targeted approach is likely to have contributed to the reduction in accidental dwelling fire casualties.

Table 3.3.1:

Location¹⁵	Accidental dwelling fire incidents	Accidental dwelling fire casualties (rate of change from 06/07)	Accidental dwelling fire casualties (rate of change from 07/08)	Population
Nottinghamshire	4.55% increase	20.00% decrease	33.70% decrease	2.84% increase
East Midlands	2.79% increase	3.02% increase	1.65% decrease	2.72% increase
FRS Family Group 4	9.36% decrease	0.36% increase	2.91% decrease	
England (non met)	11.40% decrease	9.74% decrease	12.92% decrease	
England	14.14% decrease	11.36% decrease	8.29% decrease	2.75% increase (for Great Britain)

¹⁴NFRS Incidents (01/04/2006 – 31/03/2011): Paragraphs 2.4, 2.5 and 9.1.

¹⁵Changes at district level are not investigated due to the small numbers of accidental dwelling fire casualties within many of the districts outside of the City of Nottingham.

Table 3.3.2:

Location	Change in the proportion of casualties occurring from incidents (from 06/07)	Change in the proportion of casualties occurring from incidents (from 07/08)
Nottinghamshire	-5.35%	-10.56%
East Midlands	+0.04%	-0.55%
FRS Family Group 4	+1.97%	+0.69%
England (non met)	+0.33%	-1.05%
England	+0.66%	-0.04%

Table 3.3.3:

Age category of accidental dwelling fire casualties in Nottinghamshire	Weighted percentage	Population
00-09	6.87%	5.04% increase
10-19	8.11%	4.82% decrease
20-29	10.80%	10.47% increase
30-39	10.92%	6.65% decrease
40-49	8.13%	5.16% increase
50-59	7.75%	1.01% decrease
60-69	8.12%	12.59% increase
70-79	11.65%	2.83% increase
80+	27.65%	6.32% increase

Table 3.3.4:

Location	Rate of change in the number of low risk HSCs	Rate of change in the number of medium risk HSCs	Rate of change in the number of high risk HSCs	Overall rate of change in the number of HSCs

Nottinghamshire	44.18% decrease	41.41% decrease	52.71% increase	39.57% decrease
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Estimated financial impact:

The report by DCLG into the economic cost of fires in 2008 stated the following general cost assumptions:

- Value of a fatality - £1,648,539.
- Value of a serious injury - £185,241.
- Value of a slight injury - £14,279.

When comparing 2006/07 with 2010/11 NFRS observed no change in the number of fatalities which occurred from accidental dwelling fires. However, they observed a decrease in the number of hospital visits by 38 and an increase in the number of individuals receiving a precautionary check or being treated at the scene of the incident by 8. Overall accidental dwelling fire casualties decreased by 30.

The estimated wider economic savings made as a result of the reduction in the number of accidental dwelling fire casualties is **£6,924,926**, taking into consideration the assumed decrease in serious injuries (on the basis of the classification of needing a hospital visit) and the increase in slight injuries.

However, this financial estimate should be treated with extreme caution due to the problematic nature of applying a financial cost to life and injury which is discussed further within the discussion and limitations section.

3.4. Deliberate Dwelling Fire Incidents

Relevant NFRS Community Safety Initiatives:

3.4.1. NFRS aim to reduce the occurrence of all deliberate fires, which is an aim that can be linked with a wide range of public engagement initiatives and messages NFRS deliver regarding the dangers of fire. It can also be attributed to the work they carry out in conjunction with the police and other partner agencies through the arson task force¹⁶.

Incident Data/Relevant External Variables:

¹⁶NFRS Incidents (01/04/2006 – 31/03/2011): Paragraphs 11.3 and 11.4.

Table 3.4.1:

Location ¹⁷	Deliberate dwelling fire incidents	Offences recorded by the police ¹⁸	Population
Nottinghamshire	46.26% decrease	43.02% decrease	2.84% increase
East Midlands	37.94% decrease	37.93% decrease	2.72% increase
FRS Family Group 4	39.52% decrease		
England (non met)	35.95% decrease		
England	40.92% decrease	40.59% decrease	2.75% increase (for Great Britain)

3.4.2. Overall it is very difficult to assess whether NFRS community safety work is likely to have impacted upon the reduction in deliberate dwelling primary fires. They have decreased at a greater rate than that observed regionally and nationally, suggesting a specific positive impact in Nottinghamshire. However, this impact can't be solely attributed to a fire and rescue service due to the likely impact of the work the police carry out to deter and prevent individuals from committing such crimes. This is supported by the fact that Table 3.4.1 highlights that the reduction rates observed for deliberate dwelling primary fires is very similar to the overall reduction rates for other forms of criminal behaviour, suggesting that overall work carried out to reduce crime is likely to have attributed to a proportion of any decrease.

3.5. Accidental Road Vehicle Fire Incidents

Relevant NFRS Community Safety Initiatives:

3.5.1. NFRS community safety team produce initiatives which educate and encourage individuals to be cautious and adopt safety strategies in relation to fire across all walks of life.

Incident Data/Relevant External Variables:

Table 3.5.1:

Location	Accidental road vehicle fires	Population

¹⁷ It is not appropriate to investigate changes at district level due to the small numbers of deliberate dwelling fire incidents within districts outside of the City of Nottingham.

¹⁸The categories of reported crimes included in the offences recorded by the police are: violence against the person, all wounding act or endangering life, harassment including penalty notices for disorder, common assault, robbery, theft from the person, criminal damage including arson, burglary in a dwelling, burglary other than a dwelling, theft of a motor vehicle and theft from a motor vehicle.

Nottinghamshire	26.83% decrease	2.84% increase
East Midlands	0.77% decrease	2.72% increase
FRS Family Group 4	14.62% decrease	
England (non met)	9.22% decrease	
England	9.86% decrease	2.75% increase (for Great Britain)

Table 3.5.2:

Nottinghamshire District	Accidental road vehicle fires	Population
Ashfield	40.48% decrease	1.74% increase
Bassetlaw	33.33% decrease	1.08% increase
Broxtowe	50.00% decrease	1.82% increase
City	15.28% decrease	5.90% increase
Gedling	40.63% decrease	1.25% increase
Mansfield	45.00% decrease	0.40% increase
Newark	9.09% increase	2.16% increase
Rushcliffe	No change	3.20% increase

3.5.2. The overall trend observed across Nottinghamshire is that of a greater reduction than that observed elsewhere. However, NFRS don't specifically focus upon messages to educate the community upon car related fire safety and there are a huge number of external factors which could influence the safety of cars. Subsequently it is difficult to form a strong argument to suggest that NFRS' community safety initiatives are likely to have impacted upon a reduction in accidental road vehicle primary fires.

3.6. Deliberate Road Vehicle Fire Incidents

Relevant NFRS Community Safety Initiatives:

3.6.1. There is no obvious link which can be made between a specific initiative and deliberate road vehicle primary fires, as the aim to reduce the occurrence of all deliberate fires can be attributed to a wider range of public engagement initiatives and messages NFRS deliver to the public regarding the dangers of fire, and to the work they carry out in conjunction with the police and other

partner agencies through the arson task force at both county wide and district levels.¹⁹

Incident Data/Relevant External Variables:

3.6.2. There is evidence to suggest that the community safety work of NFRS is likely to have contributed to a proportion of the reduction in deliberate road vehicle fires, as the numbers of these incidents in Nottinghamshire has reduced at a rate in excess of that observed regionally and nationally, and in excess of that observed for other forms of criminal behaviour. There is evidence that there has been a particular impact within Broxtowe, the City and Gedling as the numbers of deliberate road vehicle primary fires have decreased at a rate far in excess of that observed regionally and nationally and far in excess of the rate of decrease observed for other forms of criminal activity.

Table 3.6.1:

Location	Deliberate road vehicle fires	Offences recorded by the police	Population
Nottinghamshire	69.84% decrease	43.02% decrease	2.84% increase
East Midlands	61.81% decrease	37.93% decrease	2.72% increase
FRS Family Group 4	57.97% decrease		
England (non met)	57.11% decrease		
England	56.35% decrease	40.59% decrease	2.75% increase (for Great Britain)

Table 3.6.2:

Nottinghamshire District	Deliberate road vehicle fires	Offences recorded by the police ²⁰	Population
Ashfield	52.04% decrease	29.78% decrease	1.74% increase
Bassetlaw	60.15% decrease	42.79% decrease	1.08% increase
Broxtowe	76.62% decrease	49.31% decrease	1.82% increase
City	76.21% decrease	43.60% decrease	5.90% increase

¹⁹NFRS Incidents (01/04/2006 – 31/03/2011): Paragraphs 13.3 and 13.4.

²⁰The categories of reported crimes included in the offences recorded by the police are: violence against the person, all wounding act or endangering life, harassment including penalty notices for disorder, common assault, robbery, theft from the person, criminal damage including arson, burglary in a dwelling, burglary other than a dwelling, theft of a motor vehicle and theft from a motor vehicle.

Gedling	70.49% decrease	45.49% decrease	1.25% increase
Mansfield	64.86% decrease	38.97% decrease	0.40% increase
Newark	63.16% decrease	43.37% decrease	2.16% increase
Rushcliffe	66.67% decrease	43.10% decrease	3.20% increase

Estimated financial impact:

- During 2006/2007 NFRS attended 1,114 deliberate road vehicle fire incidents. During 2010/11 NFRS attended 336 incidents, a reduction of 778 incidents.
- The 1,114 incidents during 2006/07 involved 1,221 mobilisations, while the 336 incidents in 2010/11 involved 400 mobilisations, demonstrating a reduction of 714 mobilisations to deliberate road vehicle fire incidents. On the basis of the direct costs to the fire service budget associated with a mobilisation (such as salary, fuel consumption, wear and tear) this equates to a saving of approximately **£296,310**. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.
- The report by DCLG into the economic cost of fires in 2008 estimated that the total costs associated with the consequences of arson in the East Midlands were £104m from a total of 13,605 deliberate fire incidents. On average, the consequences associated with each deliberate fire incident can be estimated at approximately £7,644. On this basis, and on the basis that the average wider economic costs associated with responding to a fire incident equate to £2,988, the estimates of the wider economic savings likely to be made as a result of the reduction in the number of deliberate road vehicle fire incidents are **£5,947,032** in consequences associated with incidents and **£2,324,664** in costs associated with responding to incidents. The above data suggests that a proportion of these savings are likely to be due to the community safety initiatives of NFRS.

3.7. Malicious False Alarm Incidents

Relevant NFRS Community Safety Initiatives:

- 3.7.1. NFRS' educational initiatives place focus upon the hugely detrimental effects of hoax calls and subsequently aim to deter young people from making hoax calls to the fire service and any other emergency service.

Incident Data/Relevant External Variables:

Table 3.7.1:

Location	Malicious false alarms	Offences recorded by the police	Population

Nottinghamshire	47.83% decrease	43.02% decrease	2.84% increase
East Midlands	57.25% decrease	37.93% decrease	2.72% increase
FRS Family Group 4	59.62% decrease		
England (non met)	60.06% decrease		
England	57.42% decrease	40.59% decrease	2.75% increase (for Great Britain)

Table 3.7.2:

Nottinghamshire District	Malicious false alarms	Offences recorded by the police²¹	Population
Ashfield	70.59% decrease	29.78% decrease	1.74% increase
Bassetlaw	57.89% decrease	42.79% decrease	1.08% increase
Broxtowe	70.83% decrease	49.31% decrease	1.82% increase
City	47.76% decrease	43.60% decrease	5.90% increase
Gedling	34.78% decrease	45.49% decrease	1.25% increase
Mansfield	18.03% decrease	38.97% decrease	0.40% increase
Newark	45.45% decrease	43.37% decrease	2.16% increase
Rushcliffe	58.33% decrease	43.10% decrease	3.20% increase

3.7.2. The rate at which malicious false alarms have decreased within Nottinghamshire has been smaller than the regional and national rates and is very similar to the rates of decrease observed for other forms of criminal behaviour. In this instance trends at district level need to be analysed with some caution due to the fact that in some cases the numbers of incidents are small. Within Ashfield and Broxtowe the rate at which malicious false alarms have decreased is far greater than the rates observed regionally and nationally, and far greater than the rates observed for other forms of criminal behaviour. The numbers in Broxtowe are relatively small meaning that it is less reliable to draw assumptions regarding impact; however as the numbers within Ashfield are greater a stronger argument can be developed to suggest that it is likely that community safety initiatives are responsible for a proportion of the reduction in malicious false alarms reported in the district.²²

²¹The categories of reported crimes included in the offences recorded by the police are: violence against the person, all wounding act or endangering life, harassment including penalty notices for disorder, common assault, robbery, theft from the person, criminal damage including arson, burglary in a dwelling, burglary other than a dwelling, theft of a motor vehicle and theft from a motor vehicle.

²² NFRS Incident (01/04/2006 – 31/03/2011): Section 15.

4. Impact Summary

4.1. NFRS Incidents

Relevant NFRS Community Safety Initiatives/Incident Data/External Variables:

- 4.1.1. There is evidence to support the suggestion that the community safety initiatives which NFRS carried out between 2006/07 and 2010/11 contributed to a proportion of the decrease observed during the same period in the number of fire related incidents. Evidence indicates that these initiatives are most likely to have had an impact upon the following specific incident types: (1) deliberate secondary fires; (2) accidental dwelling fire casualties, and; (3) deliberate road vehicle fire incidents. A significant proportion of the reduction recorded within these types of incidents cannot be attributed to a regional or national factor, changes in the population, or initiatives administered by other services (e.g. the police service). The process of the elimination of the impact of a number of external variables has led to the conclusion that the specific community safety work administered by NFRS in relation to all three incident types is responsible for a proportion of the decreases observed.
- 4.1.2. There is currently insufficient evidence available to be able to reliably assess whether NFRS community safety initiatives are likely to have contributed to a proportion of the reduction observed in false alarm and special service incidents, as well as the other specific fire related incident types where a reduction in incidents has been observed. However, this does not mean that the community safety initiatives of NFRS have not had a positive impact in these areas; instead the level of impact is unknown.
- 4.1.3. The overall impact of NFRS' community safety initiatives upon the number of incidents NFRS attended between 2006/07 and 2010/11 can be considered positive; suggesting that NFRS community safety initiatives have contributed to the reduction in the overall number of incidents.

4.2. Discussion and Limitations

- 4.2.1. This impact assessment has been carried out with the knowledge of the initiatives which NFRS carry out across the county and the over-arching aims of the community safety work which is undertaken at district level. However, data limitations have reduced the ability of this assessment to accurately measure impact in certain respect. The data concerning exactly when an initiative took place, where it took place, for how long it took place, and who received the initiative, is not consistently recorded across the service for all community safety initiatives. This level of additional detail would enable a more reliable impact assessment to take place and would mean that NFRS would be able to capture positive impacts that they previously could not. For example, accidental road vehicle fires have decreased within Nottinghamshire, and within a number of the districts within Nottinghamshire, at a rate far in excess of that observed regionally or nationally. However, within this impact assessment the likelihood of the initiatives of NFRS' contributing towards a proportion of the decrease was stated as being unknown. This was due to a

lack of information recorded regarding NFRS' initiatives providing messages to educate the community upon car related fire safety (as well as the fact that there are a huge number of external factors which could influence the safety of cars and subsequently whether they are likely to be at risk of fire). As information concerning districts specific initiatives is not consistently recorded in detail it could have been that case that at some point during this period one of the districts administered, or was involved in, an initiative focused upon car fire safety. Consequently, if this initiative occurred within an area before a period in which it experienced a rate of decrease in accidental road vehicle fires there would be additional evidence to support a positive impact of NFRS' community safety initiatives in contributing to any reduction.

- 4.2.2. A second concern relates to placing a financial cost upon a fatality or an injury. It is true to say that implicit judgements are made by policy makers everyday regarding the value of a casualty or an injury, as within the context of the fire service it is the driving force behind the fact that a large proportion of community safety initiatives are focused upon reducing domestic fires, as these are the incidents in which an injury or death is most likely to occur. There are costs associated with injuries which are more straightforward to assign a financial value to; such as the costs of treatment to the NHS, or the loss of output for the economy through time lost in working hours. It is difficult, though, to assign a cost to the emotional and physical suffering associated with an injury. However, past research has focused upon the values which society places upon risk and preventing injury as a means by which to calculate costs associated with life and injury.²³
- 4.2.3. Estimates have been calculated which aim to assign a cost to a life in purely financial terms through calculating the statistical value of a life. Common market techniques used to do this focus on calculating values, for example through taking into consideration higher wage premium for working in riskier jobs. Alternatively, consumer purchase studies examine the value individuals place upon the reduced risk of death through examining 'willingness to pay' for safety devices. There are a number of problems involved with using such approaches as wages are not always representative of risk and people are likely to overestimate or underestimate risk. Additionally, it is morally controversial to begin to view the value of life in financial terms because issues could arise if the cost of a treatment was calculated as being greater than the statistical value of a life.²⁴

Impact Summary

This impact assessment demonstrates that when taking into account the substantial decreases within the number of incidents NFRS have attended in recent years, which have remained significant even when taking into account relevant external variables, there is an argument to suggest that the community safety initiatives they have delivered would have contributed to a proportion of the decrease.

²³Boardman, A., Greenberg, D., Vining, A., Weimer, D. (2001) *Cost-benefit Analysis: Concepts and Practice* (3rd Ed.). New York: Prentice Hall.

²⁴The economic costs of fire: Estimates for 2004. Office of the Deputy Prime Minister (April 2006): London.

However, the collection of additional information concerning community safety initiatives in the future would enable a clearer understanding of exactly where and when the impact was likely to have taken place.