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Analysis for Policy



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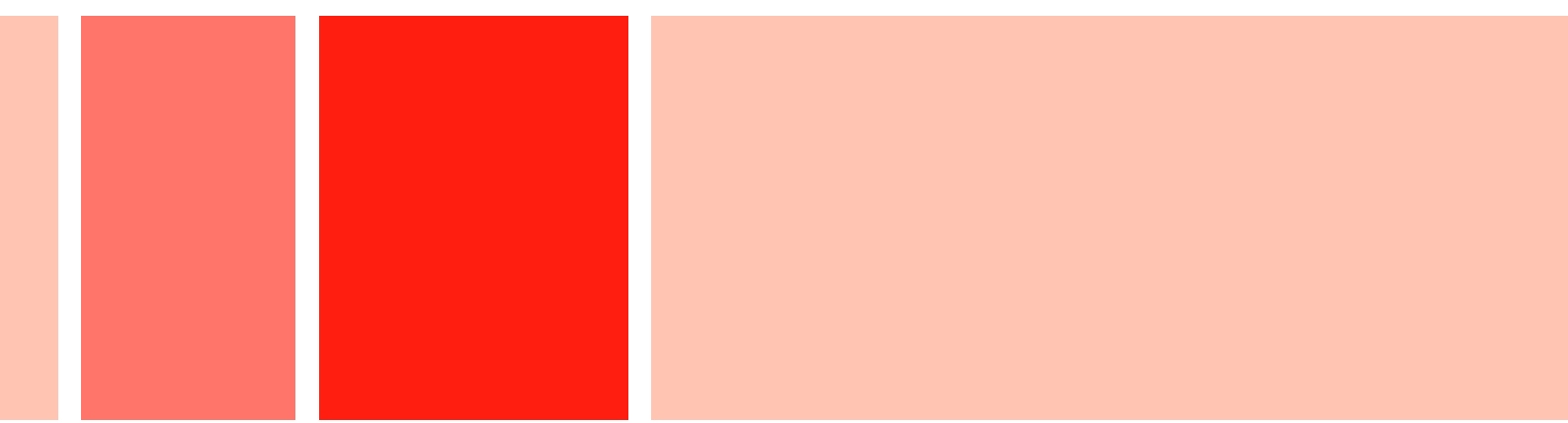
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Evaluation of the Arson Prevention Programme



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Glossary

ACRONYM/TERM	MEANING
ART	Arson Reduction Team
BANG	Be A Nice Guy
BAWSO	Black and Asian Women's Support Organisation
CFOA	Chief Fire Officers Association
CFS	Community Fire Safety
CLG	Communities and Local Government
Correlation	A correlation is a statistical test that indicates the strength and direction of a linear relationship between two random variables, where '1' indicates the strongest relationship and '0' indicates no relationship. The direction can be negative (as one variable increases the other declines), or positive (both variables increase or decrease together).
CYP	Children and Young People
DCLG	Department for Communities and Local Government
EA	Environment Agency
FACE	Fire Awareness Child Education
FDR1	Fire Damage Report 1
FIRES	Fire Initiative Regarding Education Safety
FRS	Fire and Rescue Service
HFSCs	Home Fire Safety Checks – also referred to as Home Fire Risk Checks
Independent variable	The term 'independent variable' is used for those variables that have an influence on another variable. For example, the type of household and the presence of smoke alarms may be independent variables that influence the rate of fire (a dependent variable).
JAG	Joint Arson Group
LA	Local Authority
LEA	Local Education Authority
LSP	Local Strategic Partnership
N	N – number of data points used in an analysis or survey
MAPPA	Multi Agency Public Protection Arrangements
MARAC	Multi Agency Risk Assessment Conference
MES	Motor Education Scheme

ACRONYM/TERM	MEANING
MWW	Mid and West Wales
Multiple regression	Multiple regression analysis tests the relationship between a set of independent variables and a dependent variable.
P values	The 'p value' indicates whether the probability that the difference between two or more variables, or the correlation between variables is due to chance. A relationship that is unlikely to be due to chance is usually indicated by a probability of less than 5% (written as 0.05), although 10% or 1% can also be used as criteria.
PACT	Partners and Communities Together
PCSO	Police Community Safety Officer
PMP	Per million population
PPU	Public Protection Unit
R ²	R ² is the measure of the amount of variance explained by the model and is termed the correlation co-efficient.
R values	The correlation coefficient, denoted by the 'r value', is a measure of the strength of the straight-line or linear relationship between two variables. The correlation coefficient takes on values ranging between +1 and -1.
RAFT	Rural and Forestry Team
SARA	Scan Analyse Response Assessment
Significance	The probability that a difference is not due to chance. It does not mean that the amount of difference is large.
SPOC	Single Point of Contact
WG	Welsh Assembly Government
WARS	Wales Arson Reduction Strategy
YOT	Youth Offending Team

Executive summary

The Welsh Government (WG) commissioned Greenstreet Berman in 2009-10 to evaluate the arson prevention programme work conducted in Wales between 2005 and 2009. The three main schemes were the Arson Reduction Teams, Arson Small Grants programme and Grass Fires Initiative. This evaluation aimed to provide evidence of the benefits of the three schemes and evidence on which to guide future arson prevention work. Specifically, WG wished to assess:

- Evidence of the contribution of the three main strands of arson reduction activity in reducing arson;
- Evidence of the relationship with other organisations and barriers to working with them;
- Evidence concerning the links between the existing activities of the 'Wales Arson Reduction Strategy' (WARs) and the work of the Joint Arson Group (JAG);
- Recommendations for future arson prevention work;
- Recommendations on an effective reduction strategy and on future partnership working.

Arson Reduction Teams (ARTs)

Overall, the ARTs appeared to be conducting a large amount of arson reduction activity that was in line with good practice. The methods that the ARTs used were also of a high standard. All work was targeted and all teams worked in partnership with appropriate outside agencies, as well as having close working relationships with the FRS and the Police. Good working relationships with the Police were primarily facilitated via a seconded Police Officer in each team.

Although the work was of a high standard and in line with good practice, there is limited statistical evidence that the ARTs helped to accelerate the reduction in deliberate fires. The number of deliberate fires was falling before the ARTs were introduced in 2005. Since that time, although deliberate fires in Wales continued to fall, there was no acceleration in this decline with the exception

of education building fires. Indeed, in some cases the rate of decline in arson incidents began to slow after the ARTs were introduced.

It is not possible to say with certainty why the rate of decline did not accelerate. However it may be that other factors strongly influenced the rate of deliberate fires, namely the rate of job seekers allowance claimants – as a representation of unemployment, mean summer temperature and the price of scrap metal. There were strong correlations between the latter factors, such as price of scrap metal, which left little variance for an impact on deliberate fires from arson reduction work.

It was not possible to ascertain whether the amount of arson reduction activity increased or decreased after the launch of the ARTs, because there is very limited activity data available for the period before the launch of the teams with which to compare activity levels after their launch. In addition to this, there were no targets or benchmarks in place to define what was required of the ARTs, against which to later measure their work.

Grassland fire initiatives

Mid and West Wales FRS, South Wales FRS and North Wales ART undertook a range of work to reduce deliberate grassland fires. Mid and West Wales FRS used specific funding to target its work by areas of high incidence, types of offender and time of year, as well as carrying out various interventions and raising public awareness using a range of media. North Wales ART was also involved in a number of interventions aimed at reducing grassland fires using specified funding.

It was unclear how South Wales FRS had used this funding at the time of the evaluation.

Limited activity data made it difficult to link deliberate grassland fire reduction activity with the impact on deliberate grassland fires. Analysis of deliberate grassland fire data identified no real trend in the number of fires.

Arson Small Grants programme

A total of 134 arson small grants were awarded from 2004-05 onwards to 2009, with a total of nearly £1m spent on arson small grants at the time of evaluation. The projects appeared to involve a range of individuals and carried out different types of arson activity that seemed to align with good practice. All the projects that responded to the questionnaire reported working with other organisations and were able to list the types of partners. The majority of projects also stated that they would not be able to continue working on the arson activities without the funding.

There was no statistical impact assessment carried out on the arson small grants, therefore it was not possible to quantify their impact on deliberate fires. It is possible that the continuation of these projects could prompt innovative work in the area of arson reduction; however, a greater focus would need to be placed on related outcomes.

Partnership work

While very few formal working agreements were in place with the partner agencies interviewed it was noted that:

- Partner organisations reported that they helped to reduce arson;
- A majority of partners stated that they undertook youth engagement;
- All teams reported liaison with the local community to reduce arson;
- All teams reported acting as a link between the FRS and the Police to help reduce arson.

Thus, it could be said that a high level of partnership working was reported.

Link between JAG and WARS

A clear link between the work of the ARTs, JAG and WARS was reported in that:

- All the arson activities coordinated through JAG were driven by the Welsh Arson Reduction Strategy (WARS);

- All work streams were coordinated through the Arson Reduction (AR) Coordinator, who then consulted with the ARTs before a work plan was developed.

Recommendations

Recommendations made include:

- JAG to have a performance management system in place to monitor the link between arson reduction activity, WARS and JAG, including targets or benchmarks for activity levels and standardised reporting systems;
- JAG to critically review the model of the ARTs and in particular to assess if they are associated with an increase or reduction in arson prevention work within FRSs;
- ARTs to:
 - Consider the balance of their role in centrally managing arson reduction work within their FRS as opposed to delivering activities themselves;
 - Consider whether they should conduct more joint detection work with the Police;
 - Continue working with partners and ensure they have effective partnerships with a full range of agencies;
 - Monitor and record activity carried out by partners (particularly North Wales ART);
 - Consider setting up formal partnerships that utilise a Memorandum of Understanding and Service Level Agreements (SLAs); and
 - Encourage partner agencies to attend ART monthly meetings;
- WG/JAG to:
 - Raise more awareness of ARTs within the Police; and
 - Consider setting up national partnerships with key organisations such as Waste Management Departments.

No recommendations were identified for the Small Fire Grants strand of work.

1. Introduction

This document

- 1.1 The Welsh Government (WG) commissioned Greenstreet Berman in 2009-10 to evaluate the arson prevention programme work conducted in Wales. The three main initiatives were the Arson Reduction Teams, Arson Small Grants and Grass Fires Initiative. This evaluation aimed to provide evidence of the benefits of the three schemes; and evidence on which to guide future arson prevention work. Specifically, WG wished to assess:
- Evidence of the contribution of the three main strands of arson reduction activity in reducing arson;
 - Recommendations for future arson prevention work;
 - Evidence on the links between the existing activities of the 'Wales Arson Reduction Strategy' (WARs) and the work of the Joint Arson Group (JAG);
 - Recommendations on an effective reduction strategy and on the future of partnership working.
 - Evidence on the relationships with other organisations and the barriers to working with them.
- 1.2 This document presents the main findings from the evaluation together with an overview of the methodology, discussion and recommendations for WG.

Background

- 1.3 Arson was recognised as a key issue in Wales in 2003 as per the 2003 'Up in Flames report' of the Community Fire Safety Working Group. Therefore, it was suggested to the Welsh Government (WG) that a national strategy was required to combat arson effectively in Wales.

- 1.4 Consequently, the all-Wales Joint Arson Group (JAG) was established under the auspices of the Welsh Government's Community Safety Committee, and was tasked with producing an arson reduction strategy.¹ The JAG is a multi-agency group formed with the support and backing of the Welsh Government's Community Safety Committee. Organisations involved in the committee include the Police, local authorities, Fire and Rescue Services, businesses and community groups among others.² The JAG works very closely with Community Safety Partnerships (CSPs).
- 1.5 Some of the main initiatives to tackle arson and deliberate fire setting that WG has funded include the Arson Reduction Teams (ARTs), the Arson Small Grants (ASG) programme and the Grass Fire Initiative.

Arson Reduction Teams

- 1.6 In 2005 pilot ARTs were established. These ARTs were multi-skilled teams located within each of Wales's Fire and Rescue areas, and were made up of Police and Fire personnel. The teams were allocated areas of different sizes to operate within. North Wales ART worked across the whole of the North Wales FRS area, Mid and West Wales ART worked across Swansea, and Neath and Port Talbot, and South Wales ART initially worked within Ely (part of Cardiff).
- 1.7 Funded by the Welsh Government, each ART focused on 'hot spot' areas in an attempt to reduce the incidence of arson through education

¹<http://wales.gov.uk/dsjlg/publications/fire/arsonstrategy/walesarsonreductionstrategye.jsessionid=Qw64KfkVXpQ1QTMSy5nWpN4PyQnn8K5Q17yrD7FT11BWY1khBhGR!1086412222?lang=en>

²<http://wales.gov.uk/topics/housingandcommunity/safety/partnerships/;jsessionid=m7n6KmQXn5mBYyLThx5mnQtx4nKXpq7NtHqgdDRwr87LrQKRKwhn!514291769?lang=en>

and crime prevention measures, as well as through detecting and investigating incidents where fires had been started deliberately.³

1.8 The teams were tasked with:

- Production, development and evaluation of projects aimed at reducing arson;
- Assisting the FRSs in addressing local arson issues;
- Working in partnership with a Police Sergeant seconded from the Police Service to deliver the service arson reduction policies and procedures;
- Working collaboratively with other ARTs in Wales.

1.9 Initial funding of £500,000 was subsequently boosted with an investment of a further £2.5m in the ARTs.⁴ Additionally, a specific fund of £3.3m was awarded for the provision of sprinklers in schools deemed to be at high risk of arson. This was following over 19,400 arson/deliberate fires recorded in Wales during 2006-07, of which 37 were attacks on schools.

Arson Small Grants (ASG) programme

1.10 In 2004 the ASG was established to put into action the recommendations of the 'Up in Flames' report. The ASG's aim was to provide support for small local area projects seeking up to £10,000 to fund arson reduction projects. This funding was provided on a competitive bidding basis for those projects that fit with the Wales Arson Reduction Strategy. The programme was introduced in 2004. By

³

<http://newydd.cymru.gov.uk/news/archivepress/socialpress/socialpress2005/709822/?cr=7&lang=en>

⁴ £2.5m to target arson hotspots across Wales (2007) Welsh Assembly Government

2006 the Welsh Government reported that over 80 small local anti-arson projects had been funded, totalling over £700,000.⁵

1.11 Some of the projects funded through the programme included:

- Youth education workshops;
- Youth diversionary projects;
- Arson awareness seminars;
- Advertising campaigns (leaflets, posters, bus advertising);
- Vehicle arson;
- Grass and forest fires;
- Target hardening of high-risk schools; and
- Business arson.

Grass Fires Initiative

1.12 WG also provided funding to the FRSs and the Police to help address the issue of grass and mountain fires in hot-spot areas across Wales. £600,000 was used by this initiative since 2007 to fund their work. The primary focus of this work was to educate and advise young people of the dangers of arson and deliberate fires, as well as the serious implications of deliberate fire setting. This work was targeted towards children in the school environment, and usually took the form of talks, DVDs and workshops.

5

<http://www.adjudicationpanelwales.com/dsjlg/publications/commmunitysafety/comsafetywales/16/issue16e.jsessionid=HxrQKXLNn49QLfLG328xghV1Xkn8ZjBhNZ9h7bhQkdvXmJhyJ6Vv!-692465818?cr=7&lang=en&ts=3>

2. Method

Contribution of arson reduction activity in reducing arson

- 2.1 A key part of the evaluation comprised a statistical analysis of the trends in the rate of deliberate fires. The aim was to ascertain whether a decline in the rate of deliberate fires in Wales could be attributed to the schemes. An element of this assessment comprised comparing rates of incidents before and after the launch of the schemes.
- 2.2 In assessing the contribution of the three main initiatives it was necessary to take account of a number of phenomena, including:
- Any trends in arson prior to the launch of the three initiatives; and
 - The identification of other coincidental factors and their influence.
- 2.3 The three initiatives were launched in the period 2005 to 2007. Rather than assume that any decline in incidents after the launch of these was due to the schemes, we compared the rate of change before the start of the schemes to the rate of change after the launch of the schemes. The question was whether the rate of change (decline in arson) was greater after the launch of the schemes than before. The results indicated that the number of deliberate fires was already showing a decrease from 2000, prior to WG funding the arson reduction programme in 2005.
- 2.4 Research⁶ for the Department for Communities and Local Government explored the relationship between vehicle fires and a series of 37 socio-economic, weather and crime variables. The research found a very strong relationship ($r = 0.981$) between the price of scrap metal,

6

DSO 6.1, 6.2 and PSA 3 fire trajectories to March 2011. Greenstreet Berman Ltd report for Department for Communities and Local Government.

<http://www.communities.gov.uk/documents/fire/pdf/1497219.pdf>

the number of abandoned vehicles and the number of deliberate car fires. The number of abandoned cars and the number of deliberate vehicle car fires rose rapidly in the 1990s and then fell equally rapidly when the price of scrap metal rose. This was assumed to be due to owners selling their vehicles for scrap rather than abandoning them, with the potential for them being subject to arson, as well as local authorities retrieving abandoned vehicles for the same reasons. More recently the end of vehicle life regulations have led to car manufacturers offering free car collection and scrapping of unwanted cars, or even paying owners for their old vehicles.

- 2.5 The evaluation reported here used data on the price of scrap metal to provide a predicted rate of deliberate vehicle fires, against which to compare the actual reported number of deliberate vehicle fires. The aim was to assess whether the actual number of fires was lower or higher than would be predicted by the price of scrap metal. If the actual rate was lower than predicted this would suggest that the schemes had an effect over and above the effect of the price of scrap metal.
- 2.6 The same research study for the Department for Communities and Local Government (DCLG) also found that, historically, a greater number of outdoor fires (particularly deliberate outdoor fires) occur in years with hotter summers. Therefore, it was important to take account of the summer temperatures in the years before and during the Grass Fires Initiative. For example were the summers cooler than normal during the period of the scheme? Again, the current evaluation predicted the number of outdoor fires based on the reported summer temperatures and compared the actual number against this prediction. If the actual rate of outdoor fire was lower than predicted by the summer temperature this would suggest that the schemes had an effect over and above the effect of the weather.

2.7 In addition, the current evaluation aimed to check whether the rate of deliberate fire was also influenced by socio-economic changes. The aforementioned work (by DCLG) identified factors drawn from the 2001 census, such as the number of lone parents and unemployed. Data on jobseekers claimant counts was available for each year and for each of the three FRS areas. This data was used as an indicator of socio-economic trends, in a comparison of trends in deliberate fires versus claimant count.

2.8 The impact assessment was limited by the data supplied by the three ARTs⁷ and WG. The data were incomplete in respect of the following.

- Deliberate fire data supplied by ARTs only dated back to 2002. Therefore, analysis was conducted using deliberate fire data published by the Department for Communities and Local Government for 2000 to 2009, which we acquired directly from DCLG publications.
- Deliberate fire data provided by the ARTs and the FRSs used different timeframes i.e. ARTs recorded data by financial year, while FRSs recorded data by calendar year.
- North Wales ART did not provide data on their arson reduction activities at all.
- Mid and West Wales provided data for arson reduction activities.
- Data on the number of schools that FRSs implemented target hardening (such as better security) provided by WG only covered two years (2007 to 2009). It is difficult to observe a definite impact using only a few years worth of data.

⁷ It should be noted that the size of areas covered by the three teams differed in the first three years. North Wales ART covered the whole of the North Wales area, Mid and West Wales ART covered Swansea and Neath Port Talbot, and South Wales ART initially covered Ely.

Comparison against good practice

- 2.9 There is a wide range of guidance on good practice in arson prevention. The guidance provides many examples of good practice for Arson Task forces. A literature review was used to produce a summary of good practice. The review focused on guidance issued by the UK Arson Control Forum. This review provided a basis to develop the questions posed to FRSs and other organisations, and criteria for evaluating their processes, as elaborated in Appendix B of this report.
- 2.10 The good practice criteria covered issues such as planning and management, as well as assessing the extent to which arson reduction work was delivered.
- 2.11 The following series of fieldwork exercises were completed to profile FRS work, as well as seek their feedback on areas for further development.

Workshops with ARTs

- 2.12 Three workshops were conducted with ART members, with one workshop per ART. The workshops aimed to seek the views and opinions of the ARTs on a range of issues such as targeting arson reduction work, interventions carried out and monitoring performance. The topics covered in the proforma were developed to align with the evaluation criteria developed from the literature review.

Telephone interviews with FRS

- 2.13 One telephone interview was conducted with South Wales FRS and one with Mid and West Wales FRS regarding the Grassland Fires Initiative. As North Wales ART was provided with Grassland Initiative

funding directly, this information was collected through the workshop with North Wales ART.

- 2.14 For the South and Mid and West Wales FRS interviews, one FRS staff member was interviewed from each FRS. The main points of contact at each FRS were sent a copy of the proforma. They were then asked to provide contact details of individuals within the FRS who would be able to answer the questions. These individuals were asked to participate in the evaluations and sent a copy of the proforma in advance of the interview.
- 2.15 The interview aimed to gain the opinions of the FRS on the deliberate grassland fires work that they had conducted.

A verbal summary was provided by the interviewer at the end of each interview to ensure that the responses had been captured accurately. A summary was produced for each telephone interview, which was used in subsequent thematic analysis.

Arson Small Grants programme – survey of projects

- 2.16 A short questionnaire was developed and sent to a sample of the Arson Small Grants project leads. The questionnaire aimed to explore:
- Which groups their arson reduction activity was aimed at;
 - To what extent they had worked with other organisations to deliver their work;
 - Whether they had spent the funding that was provided by WG;
 - The types of arson reduction activities they had carried out;
 - Whether the arson reduction activities could have been carried out without the funding; and
 - Future plans for the project.

2.17 Forty-one projects were asked to participate in the survey. Ten projects leads responded. It is, therefore very difficult to draw firm conclusions on the Arson Small Grants programme. However, 31 application forms (submitted by groups bidding for Arson Small Grants and provided to us by the WG) were reviewed to establish (among respondents) the target groups for arson activities, which activities were undertaken, which partners these projects engaged with and whether the use to which these grants were applied aligned with the WARS strategy. As the Arson Small Grants programme was limited to supporting small local initiatives, it was not envisaged that their impact on fires would be detected by a review of fire data. The evaluation was limited to reviewing the use of these grants.

Partnership working

2.18 One of the aims of this evaluation project was:

- To examine the relationships with other organisations and barriers to working with them.

2.19 This was achieved by interviews with FRS partners, as well as acquiring feedback from the ARTs and FRSs during the aforementioned FRS workshops and interviews.

Telephone interviews with partners

2.20 Eight telephone interviews were conducted with organisations that worked in partnership with the ARTs as part of their arson reduction work. The ARTs were asked to provide contact details of partner organisations they had worked with. The partner organisations were contacted and asked to participate in the evaluation and sent a copy of the proforma in advance of the interview.

2.21 One verbal summary was provided to each partner at the end of the interview. One overall written summary was produced for the interviews

as a whole and was used as part of the overall thematic analysis. The findings were compared against the evaluation criteria as detailed in Appendix B.

Theory of change

2.22 WG asked that the conduct of arson prevention in Wales be assessed against the theory of change. The Theory of Change is defined⁸ as “*all building blocks required to bring about a given long-term goal*”. The theory also asserts that:

- It is important to describe types of interventions in the form of a map, showing all interactions within what is usually a complex web of activity;
- It is important to articulate the assumptions that stakeholders use to explain the change process;
- Stakeholders value theories of change because they create a commonly understood vision of the long-term goals, how they will be reached, and what will be used to measure progress along the way.

2.23 The theory of change in this instance describes the three main strands of arson reduction activity and the rationale behind the interventions that took place.

2.24 We drew on the theory of change to generate evaluation questions regarding how the selection of partners was intended to relate to specific outcomes.

⁸ <http://www.theoryofchange.org/background/basics.html>

Assessing links between FRS activities, WARs and JAG

2.25 This was achieved by:

- Interviewing members of the Wales Joint Arson Group (JAG) in order to map out their activities;
- Applying the theory of change mapping process to the links between JAG and the WARs; and
- Comparing the WARs against how JAG prioritised elements of the WARs.

2.26 Five members of JAG were contacted to take part in a series of telephone interviews. The telephone interviews aimed to access the opinions of the JAG members on the role of JAG and in arson reduction work.

2.27 A verbal summary was provided at the end of each interview to ensure that the researcher had captured the information correctly. One summary was produced from all telephone interviews and this was used in thematic analysis.

Recommendations

2.28 As noted previously a key aim of this project was to make recommendations for more effective arson reduction. This was achieved by synthesis of the results from the statistical impact assessment, the comparison against good practice and feedback from FRSs.

3. Main Findings

Overview

Good practice: overview

- 3.1 Overall, it was found that the ARTs delivered a wide range of arson reduction activities, which were carried out in line with identified good practices. For example, all teams were found to regularly review the number, location and type of incidents to target their work; and to target their activities by area, type of offender and time of year. They were all found to work with other teams in Wales and to liaise with the local community as part of their planning for arson reduction activities. However, at the time of writing this report none of the teams had any targets in place by which to reduce arson (for example “*by 10% over three years*”) or to achieve a specified amount of activity (such as “*to target harden 1,000 businesses*”). The lack of performance targets impacted their ability to evaluate and monitor performance.

Statistical impact: overview

Trend in deliberate fires

- 3.2 Deliberate fire data, dating back to 2000, was analysed for each ART. It was found that there was a continual decrease in deliberate fires (at the time of writing this report). However, the declining trend in deliberate fires did *not* accelerate after the ARTs were introduced in 2005. In some cases, the rate of decline began to slow. It could be argued that the scope for reducing deliberate fires had been exhausted, to some degree, by the time the ARTs were introduced and therefore a slowing down in the rate of decline is not indicative of the impact of the ARTs. On the other hand, the ARTs were introduced to help further reduce the rate of deliberate fires. A comparison of trends before and after their

introduction would ideally show a faster rather than a slower rate of decline in deliberate fires which was not the case for the period considered in this study.

Contributing factors

3.3 Other factors were found to have a major impact on the reduction in deliberate fires in each ART. These included:

- Mean summer temperature;
- Number of jobseekers claimants (representing unemployment levels); and
- A rising price of scrap metal.

3.4 These factors were found to be strong predictors of deliberate grassland, dwelling and vehicle fires, suggesting that the declining trend of deliberate fires may have been *less* due to factors such as arson reduction work.

Impact of arson reduction activities: within ART analysis

3.5 Overall the impact of interventions on deliberate fires was unclear. Mixed relationships were found for the impact of activities on deliberate fires for Mid and West Wales and South Wales. In some cases a greater number of arson reduction activities resulted in a greater reduction in deliberate fires, as expected. However, in some cases a greater number of arson reduction activities resulted in a smaller reduction in deliberate fires, suggesting that the activities were not effective in reducing arson, despite a higher level of arson reducing activity taking place. In many cases, very weak relationships were found between the number of interventions and the reduction in deliberate fires, limiting the conclusions that can be made.

Impact versus practices

Is there an association between the methods applied by the ARTs and impact on deliberate fires?

- 3.6 Feedback from the workshops suggests that the ARTs delivered a wide range of arson reduction interventions that were in line with good practice. Their methods and processes were also in line with good practice. However, since 2005, when the ARTs were introduced, there has not been acceleration in the reduction of deliberate fires.
- 3.7 All ARTs reported targeting their work by areas of high incidence, type of offender and time of year. However, from analysis associating activity level and deliberate fires, in some cases those counties with a greater level of arson reduction activity experienced smaller reductions in deliberate fires. Therefore, it was not possible to associate arson reduction practice with a reduction in deliberate fires.

Delivery of arson reduction work

To what extent has arson reduction work been delivered?

- 3.8 All ARTs were involved in organising and delivering a range of arson reduction interventions using WG funding. These included initiatives focusing on vehicle arson, derelict buildings, grassland fires, fuel removal and multi agency work among others.
- 3.9 Some data was available on the number of, for example, school visits by the ARTs. However, there were no targets or benchmarks against which to assess if the level of activity was low or high. Activity was limited by available funding, as well as the ability of the Local Education Authorities (LEAs) to complete required work and to use the funds within the financial year.

3.10 It was possible to assess the proportion of schools that were target hardened. It was not possible to assess the levels of all types of arson reduction activity, as data was not supplied by arson reduction teams.

3.11 Table 1 and

3.12 Table 2 show the amount of work delivered by Mid and West Wales ART and South Wales ART. This was taken from the data provided by the ARTs. The amount of activity conducted since the teams began work in 2005 was divided by the number of team members to give an indication of the capacity of the teams. This is also shown in the tables below. The tables differ from one another as each ART provided different activity data. North Wales ART was unable to provide any activity data, as they did not record specific activities. It should also be noted that the ARTs each covered areas of different sizes when initially launched. For example North Wales ART covered the whole of North Wales; South Wales ART initially covered Ely; and Mid and West Wales covered Swansea and Neath Port Talbot. ARTs now cover all of their respective FRS areas. Mid and West Wales ART also had a Business Arson Warden (focusing on gas cylinder removal) and a Vehicle Arson Warden, both of whom were integrated into the work of Mid and West Wales ART in 2008.

Table 1: Activity data for Mid and West Wales ART

Financial year	Number of School visits providing Crime Prevention Advice	Number of derelict / open building referrals received	Number of gas cylinders removed
2004-05	1	4	356
2005-06	22	28	465
2006-07	14	57	463
2007-08	20	38	363
2008-09	17	36	907
2009-10 (so far)	16	34	702
Overall activity per team member	18	39.4	651.2

Table 2: Activity data for South Wales ART

Financial year	Number of dwelling arson projects	Number of vehicle arson projects	Number of other building arson projects	Number of grass fires projects	Number of waste removal projects
2005-06	4	18	15	24	23
2006-07	8	5	7	4	8
2007-08	8	3	13	8	11
2008-09	21	4	32	16	41
Activity per team member	8.2	6	13.4	10.4	16.6

3.13 The above tables show examples of the types of work the ARTs were involved in delivering, and an indication of the level of work each team member was involved with.

3.14 Schools' target hardening work was also part of the ARTs' activities. Table 5 shows the number of schools targeting projects⁹ carried out by each ART between 2007-08 and 2008-09 (data provided by WG).

3.15 It can be seen that all the teams carried out a low level of target hardening for schools in their area. Although there were many schools in each area yet to be target hardened (at the time of writing this report), the ARTs asserted that they had focused on targeting the most vulnerable schools.

⁹ Predominantly one project per school, however, on some occasions, some schools undertook to engage in two projects. Mid and West Wales ART also carried out work on a behaviour support unit and a teacher training unit.

Table 3: Total amount of schools target hardening work per ART during 2007/08-2008/09

ART	Number of schools with target hardening measures	Number of schools in area (primary, secondary, independent, special schools) ¹⁰	Percentage of schools targeted
Mid and West Wales ART	27	592	4.6%
South Wales ART	40	715	5.6%
North Wales ART	32	482	6.6%

- 3.16 Activity data for North Wales ART was not provided. As such information on the interventions that the ART was involved with, was gained from feedback during the workshop.
- 3.17 North Wales ART reported that it worked strategically, managing and organising arson reduction activities that were mainly carried out by partner agencies. This was cited as one reason why the team struggled to record data on arson reduction activity. The team ran a daily review of the previous day's events using FRS and Police systems, in order to prioritise their work on a day-to-day basis.
- 3.18 The youth work carried out by the ARTs varied. For example, South Wales ART was involved with carrying out one-day workshops for young people displaying fire setting behaviour. In 2007-08 it ran 11 youth diversion projects. North Wales was involved with funding a number of projects for young people, and sometimes helped to deliver these projects. Mid and West Wales ART did not run initiatives for young people, but supported the work carried out by their partner FRS, by providing funding and supplying equipment. Therefore, although youth work was included in the work of the ARTs, the actual level of activity that they were directly involved with, was limited.

¹⁰ <http://wales.gov.uk/topics/statistics/about/reference/schooladdress/?lang=en>

3.19 The teams developed to full capacity using WG funding. Each team consisted of five members including a seconded Police Officer.

Impact of arson reduction work

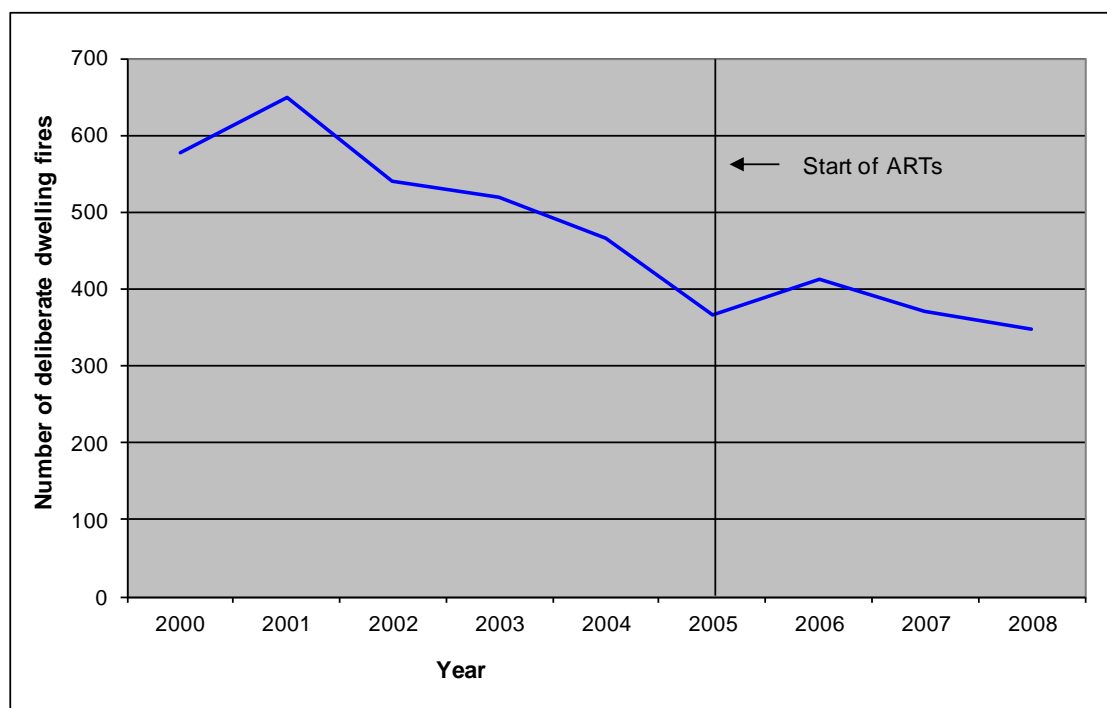
Summary of impact assessment results

3.20 The following provides a summary of the results of the statistical impact assessment of the ARTs and arson reduction work.

What statistical evidence is there that deliberate fires have decreased?

3.21 Overall there was mixed evidence regarding the impact of the ARTs on deliberate fires. A continued downward trend in deliberate fires across Wales was apparent, however, this decline did not accelerate after the ARTs were in place. For example, deliberate dwelling fires have declined since 2000, while after 2005 the rate of this decline began to slow down. Therefore, it is unclear if the ARTs had a significant impact on deliberate fires. This is shown in Figure 1 below.

Figure 1: Number of deliberate dwelling fires in Wales



Have deliberate fires reduced more than predicted?

3.22 The rates for deliberate grassland and vehicle fires per million population (pmp) were predicted for 2005 onwards using regression formula and indicating the influence of mean summer temperature and the price of scrap metal. This was compared with the actual rates of these deliberate fires.

3.23 Overall, for Wales, the actual rate of deliberate grassland fires was lower than the predicted rate for 2005 and 2006. During 2007, the rate rose slightly above the predicted rate. Similar patterns were found for all areas in Wales. This suggests that the ARTs may have resulted in fewer grassland fires occurring after 2005 than predicted, based on 2000 to 2004 fire data.

3.24 Overall, for Wales, the actual rate of deliberate vehicle fires was similar to the predicted rate for 2005 to 2007, when taking the rising price of scrap metal into account. During 2008 the actual rate was well above the predicted rate. It may be that this was due to the dramatic increase in the price of scrap metal during this year, which led to a prediction of a very large fall in the number of deliberate vehicle fires. The actual rate of deliberate vehicle fires for Mid and West Wales and North Wales were slightly higher than the predicted rate. However, for South Wales the actual rate was lower than the predicted rate.

Have other factors contributed to the trend in deliberate fires?

3.25 The association of the trend in deliberate fires and other factors was also analysed. This was conducted to assess if, for example, the price of scrap metal increased at the same time that arson prevention improved, which would suggest that the reduction in deliberate (vehicle) fires was influenced by a rise in scrap metal prices. It was found that:

- The rate of claimants, as a representation of unemployment, was strongly associated with the rate of deliberate dwelling fires in Wales. Therefore, a large proportion of the reduction in deliberate dwelling fires in Wales over the years may be explained statistically by a reduction in the rate of claimants, rather than factors such as arson prevention work. This was the case for Mid and West Wales and North Wales. However, for South Wales only a small proportion of the reduction in deliberate dwelling fires can be explained by the reduction in claimants, leaving room for other factors such as arson prevention work resulting in the reduction in fires in this area.
- During 2007 and 2008 the rate of deliberate dwelling fires continued to decrease when the rate of job seekers allowance claimants decreased. This suggests that the number of claimants may not have been the sole important correlate of the rate of deliberate dwelling fires and the decline could have been due to other factors such as arson reduction work.
- The price of scrap metal was strongly associated with the rate of deliberate vehicle fires in Wales. Therefore, it could be that a large proportion of the reduction in deliberate vehicle fires in Wales over the years may be explained by an increase in the price of scrap metal, rather than factors such as arson prevention work. This is the case for all areas of Wales.

Has the level of ART arson reduction work resulted in fewer deliberate fires?

3.26 The reduction in deliberate fires since the ARTs commenced work was calculated for each county. This was plotted against the number of interventions carried out in each county, in order to identify if counties that carried out a greater number of interventions experienced a greater reduction in deliberate fires. This was conducted for Mid and West Wales and South Wales. Data intervention data was unavailable for North Wales.

- 3.27 Overall the impact of interventions on deliberate fires was unclear. Arson activity data that were provided by FRSs were limited. North Wales ART did not provide any activity data.
- 3.28 Overall for Mid and West Wales mixed results were found. Limited data was available and there was a limited ability to match the interventions with corresponding types of deliberate fires. This restricted the conclusions that could be made on the impact of interventions on the rate of deliberate fires. However, the results did indicate that:
- The increase in the rate of school visits did not result in a greater reduction in deliberate education fires. However, a very weak negative correlation (-0.11) was found between these school visits and education building fires. Indeed, the negative correlation represents a smaller fall in the rate of deliberate fires for higher rates of school visits. However, as the correlation was very weak, this limited the conclusions that could be made.
 - An increase in deliberate building referrals received (all of which are acted upon), resulted in a greater reduction in other building fires. These variables were strongly correlated (-0.87).
 - There was no relationship between the rate of gas cylinder removal and the rate of deliberate rubbish fires. Therefore, the impact of gas cylinder removal on rubbish fires is unclear. However, it is noted that this intervention may be poorly matched to this type of deliberate fire and as such did not have a direct impact.
- 3.29 Overall, for South Wales weak to moderate relationships were found between interventions and the rate of deliberate fires. However, limited data restricts the conclusions that could be made on the impact of these interventions on the rates of deliberate fires.
- Areas where a greater number of dwelling arson prevention projects were carried out, experienced a smaller reduction in the rate of deliberate dwelling fires.

- Areas where a greater number of vehicle arson prevention projects were carried out, experienced a greater reduction in the rate of deliberate vehicle fires. However, only two data points were available, limiting the conclusions that could be made.
- Areas where a greater number of 'arson prevention projects' for other buildings (such as hotels) were carried out, experienced a greater reduction in the rate of deliberate other building fires. However, there was a very weak correlation between these variables (-0.27), limiting the conclusion that could be made on the impact of these interventions.
- Areas where a greater number of grassland arson prevention projects were carried out, experienced a greater reduction in the rate of deliberate grassland fires;
- Areas where greater number of rubbish removal projects were carried out, experienced a greater reduction in the rate of deliberate rubbish fires.

Schools target hardening

3.30 Descriptive statistics were carried out to identify the level of schools target hardening activity that took place. Data on funding used by each ART was provided by WG and was limited to two years (2007/08 to 2008/09). Overall, since funding became available in 2007:

- North Wales ART spent the most funding on schools target hardening; and
- Mid and West Wales ART spent the least funding on schools target hardening.

3.31 Published FRS deliberate schools fire data showed that overall for Wales, deliberate school fires were increasing before the ARTs were introduced in 2005 and began to decrease after this point. It is possible that this decline is due to the work of the ARTs. However, the published

data is available only until 2007, so it is not possible to attribute the decline to the schools target hardening work.

3.32 It is difficult to identify if appropriate levels of activity were carried out by the ARTs, without having targets or benchmarks in place to identify how many schools each ART should have been working with in relation to target hardening.

Arson Small Grants Programme

3.33 WG provided details of the arson small grants that had been awarded since 2004-05. The data suggest that in total 206 projects were awarded by WG. These projects aligned with good practice and also met the aims of the WARS strategy. The projects included the following types of arson reduction activity:

- Youth engagement;
- Crime and anti-social behaviour (ASB) reduction;
- Provision of equipment;
- Environment;
- Awareness raising;
- Grassland initiatives; and
- Target hardening.

3.34 Table 4 presents the total number of projects that were awarded funding each year since 2004-05. This shows that in 2007-08 WG awarded funding to significantly fewer projects when compared with other years.

Table 4: Number of Arson Small Grants Projects per year

Year	Number of projects
2004-05	27
2005-06	41
2006-07	42
2007-08	14

Year	Number of projects
2008-09	41
2009-10	41
Total for all years	206

3.35 In total the amount of funding that WG awarded to Arson Small Grants since 2004-05 was £1,505,207 which is 84% of the total budget available. There appeared to be a high demand for funding with WG awarding funding to 54% of those that applied. WG reported applying a selection process to award funding to those projects most appropriate. The WG selection process sought information such as partner aims and objectives, fit with the Wales Arson Reduction Strategy, prevalence of arson 'signal crimes', such as anti-social behaviour and car crime within the target area, and how the project would be evaluated.

Consistent with good practice – ARTs

3.36 The following shows how the work carried out by the ARTs in Wales is consistent with good practice arson reduction work.

Planning and management

To what extent did the ARTs plan and manage their arson reduction work?

3.37 All ARTs were originally provided with the target to reduce arson by 30% over three years. However, at the time of writing this report no specific targets were set for arson reduction. The ARTs did report monitoring the rate of deliberate fires and that they aimed to reduce these year on year.

3.38 The ARTs did also not set specific targets to achieve levels of arson reduction work. However, South Wales ART stated that as part of its work, all teams had to produce one toolkit per year to highlight a process to tackle arson issues and make these available to partner

agencies, as well as conducting one training day per year for the team and partners.

- 3.39 All ARTs also had performance indicators set by the JAG to help measure their work. Teams worked to performance indicators set by the service and WG, relating to such issues as burnt out car removal, income generation, response to reports on derelict buildings and partner training days.
- 3.40 The teams reported no formal schedule in place for their work. For example, North Wales ART had to be very flexible with its work and to take a proactive approach as well as a reactive approach. South Wales ART also planned its work based on demand. However, it did run pre-planned activities such as six vehicle crime awareness schemes per year and one arson awareness scheme per quarter. North Wales ART and South Wales ART also ran projects using a SARA system (Scanning, Analysis, Response and Assessment), where projects were led by statistical analysis and evaluation. The outcome of this system was that if a problem was still occurring after an intervention had taken place, work continued in this area.
- 3.41 After receiving referrals, Mid and West Wales ART aimed to respond to priority cases within two working days. However, some cases were reportedly “too complex to put time limits on”.
- 3.42 All teams planned their work throughout the year based on seasonal activities. For example, activities ran before Halloween and Bonfire night, as well as before school holidays.
- 3.43 All ARTs had a seconded Police Officer as part of their teams and worked with a wide range of staff in order to carry out arson reduction work. These included FRS staff, Police, Local Authorities, youth services, Environment Agency and community groups.

Working with other ARTs in Wales

To what extent do teams work with other ARTs in Wales for their arson reduction work?

- 3.44 All the teams in Wales worked to the same guidelines and worked on the same themes. However, the delivery of their work differed due to the demographic constitution and varying sizes of the areas they covered. For example, South and Mid and West Wales ART were both involved in planning and delivering their arson reduction work. However, North Wales ART worked strategically to plan, co-ordinate and refer work to appropriate organisations.
- 3.45 The teams are all involved with developing and sharing materials such as toolkits, standard letters, merchandising, templates to report to JAG, and schools target hardening templates to submit a bid. They also share good practice advice based on their experience. For example, North Wales ART provided the Mid and West Wales team with information on the multi-agency action days that their team organised. The teams get together for quarterly meetings to update on progress with work and to share good practice. Each team was also involved with running a training day during the year for other teams, which could involve inviting guest speakers to provide specialist information. All joint working was overseen and co-ordinated by the Arson Reduction Coordinator.
- 3.46 Geography seemed to impact the ability of teams to work together. For example, North Wales ART was situated a great distance from the other teams, which could prevent them from attending certain events.

Scanning

To what extent do the ARTs conduct scanning of arson incidents?

- 3.47 Scanning was conducted on a daily basis by all ARTs. For example, Mid and West Wales ART carried out scanning on a daily basis using the South Wales Police system (NICHE) and the Fire Service system (BOSS). The police scanning covered incidents on education premises, such as:
- Criminal damage;
 - Burglary;
 - Theft; and
 - Anti-social behaviour.
- 3.48 North Wales ART also used incident data from the Police and Fire Service to conduct daily scanning; and South Wales ART conducted daily checks of the Vision System (from the Fire Service control room) to identify calls received and incidents occurring. South Wales ART also reported conducting weekly checks of FRS incident statistics for each area of Cardiff.
- 3.49 Monthly scanning activity was also carried out by the ARTs. For example, Mid and West Wales ART received crime data on a monthly basis from Dyfed Powys Police relating to Comprehensive, Primary and Specialist Teaching Facilities. This information was entered into a data system to enable the team to monitor each location. North Wales ART also scanned monthly reports to monitor trends on issues such as school incidents, crimes and fires. These were then analysed to give data for smaller areas within each FRS. South Wales ART attended joint task and briefing meetings on a monthly basis with the fire crime unit. Here, fire trends were examined and the ART was tasked with various pieces of work to achieve reductions in deliberate fire setting.
- 3.50 All ARTs also received ad-hoc referrals through other services and organisations such as Police Community Support Officers (PCSOs) and FRS staff. North Wales ART reported working with agencies such as Communities First and local schools to encourage reporting of

incidents. They also worked with Neighbourhood Policing Teams to increase referrals. Mid and West Wales ART reported working with one Local Education Authority who reported all crimes and anti-social behaviour to the Property Management Department, where the information was automatically forwarded to the ART. South Wales reported attending Multi-Agency Risk Assessment Conferences (MARAC) to identify those most at risk of arson following domestic abuse. These conferences were usually attended by agencies such as:

- Police;
- Social Services;
- Education Department; and
- Women's Aid etc.

3.51 The ARTs reported working closely with their FRS and referring appropriate work to them. For example, Mid and West Wales ART referred Home Fire Safety Checks to the Community Fire Safety Department as well as working with them to fit specialist equipment such as letterbox guards. They also liaised with the FRS Child Protection Officer in relation to referrals of young people and adults involved in fire setting or displaying fire setting behaviour. Fire crews helped the ART with letter drops. South Wales ART referred youths to the FRS for the fire setter intervention scheme as well as providing the FRS and crews with safety information for dealing with derelict buildings.

Monitoring performance

To what extent do the ARTs monitor their performance?

3.52 At the time of writing this report the teams did not have targets set for the amount of work they needed to achieve. Therefore, it was not possible for them to compare the amount of work achieved against targets at a local or central level.

- 3.53 The ARTs did, however, track the work that they conducted. For example, Mid and West Wales ART recorded the work that they had carried out on the internal performance management system (CORVU). Each project sat within a command file and all tracking was conducted by command and station area. All referrals received were also recorded and evidenced, and where further action was required, a detailed project was commenced. South Wales ART recorded all projects conducted, including dates. Their data could be filtered by area to identify all work conducted per area.
- 3.54 It was more difficult for North Wales ART to track work conducted as many partner agencies carried out the work. The team primarily looked at reductions in the rate of arson rather than the number of activities they were involved with. They did track whether the FRS had conducted HFSCs on target properties and whether standard crime reduction site surveys were completed for every site visit. These were recorded by geographical area. The team formally managed long-term projects. Where they had exited projects they remained on the project management board to ensure that links remained.
- 3.55 Mid and West Wales ART and South Wales ART both reported conducting quality checks on work such as target hardening measures in schools. For example, Mid and West Wales ART reported visiting locations after work was carried out and any unacceptable work was highlighted for remedial action.
- 3.56 Opportunities to gain feedback on the work conducted was taken by all ARTs. For example, South Wales ART provided feedback sheets to all those that attended courses and workshops held by the ART. Other organisations that the team worked with, also sent information to the team showing reductions in incidents. Mid and West Wales recently circulated questionnaires to partners to establish what impact the ART had on the partner agency. Feedback included a positive impact within

the community and benefits of sharing information, building safer communities and partnership working. North Wales ART also sent feedback forms to their partners to determine what methods were successful and gain comments on the team.

- 3.57 Direct evaluation of the work carried out by the ARTs in relation to deliberate fires is limited. However, the teams did carry out some activities to evaluate their work. Mid and West Wales reported conducting an evaluation on derelict building fires, showing that during an 18-month period, derelict building fires significantly reduced.
- 3.58 It was difficult for North Wales ART to evaluate the work carried out as the majority of their work was conducted by partner agencies. However, North Wales ART did report evaluating the schools target hardening work that they conducted. They also provided reports to WG.
- 3.59 South Wales compared baseline figures of deliberate fires with current figures to gain an idea of the impact of the ART's work. Reductions in crimes were also identified from the Police as a result of ART work.

Targeting

To what extent has arson reduction work been targeted?

- 3.60 All ARTs used incident data to identify where to target their activities, as well as working to areas themed within the WARS. For example, North Wales targeted their work mainly according to geographic area, looking at county statistics and then breaking them down to station areas. South Wales ART identified and then targeted the predominant types of fires occurring and the station areas with the highest number of problems. Mid and West Wales ART also focused their work in the areas identified as hotspots for high levels of incidents. They identified these areas through the scanning process.

- 3.61 Other forms of prioritisation or targeting were also utilised by the teams. For example, the type of arson activity was one way of prioritising activities. South Wales prioritised MARAC work, because this had the potential to save the lives of people at high risk. They also prioritised gas cylinder removal, as this kind of work had the potential to be very dangerous. Mid and West Wales ART and North Wales ART also both targeted types of incidents, such as vehicle and school fires.
- 3.62 All teams targeted by type of offenders and time of year. For example, all teams worked with schools to target young people before school holidays. North Wales mainly targeted young offenders aged 10 to 14 years and young children. These were then referred to schemes such as Phoenix and FACE. Specific interventions were carried out by all teams during high risk periods, such as bonfire night and Halloween. These types of intervention were conducted on a yearly basis.
- 3.63 All teams targeted their work using information gained through scanning activities. This included FRS and Police incident data . North Wales ART reported working with Policing teams to run case conferences between offenders and victims based on the restorative justice approach. Mid and West Wales ART also reported working with the Police to identify persons responsible for arson. This included a joint campaign using Community Safety Alert Boards and encouraging the public to contact Crimestoppers with information.

Interventions

To what extent were partnerships used for interventions?

- 3.64 All teams worked with partner agencies to carry out their arson reduction interventions. Mid and West Wales ART and South Wales ART both managed and referred work to partner agencies to conduct interventions as well as carrying out the intervention themselves, often in collaboration with partner agencies. North Wales ART primarily

worked strategically by managing the arson reduction work that they referred to partner agencies.

To what extent did the ARTs carry out the following interventions?

Awareness raising

- 3.65 All teams conducted visits to a range of locations to provide advice on arson.
- 3.66 For example, all teams visited schools to provide advice. In 2008/09 Mid and West Wales ART visited 43 schools to provide crime prevention advice. They also ran a Deputy Sheriff Scheme that encouraged primary school children to look after their school out of normal hours. Local Police Officers and PCSOs would normally visit a school a week before the end of term to speak to the children about becoming a Deputy Sheriff. The pupils took an 'oath' to help look after the school during the holidays. Each child was presented with a Deputy Sheriff cap and badge. The process was designed to allow children to take ownership of their school. They were asked to look after the school and to report any persons seen on the premises to an adult or other appropriate person and at no time to approach them. A similar scheme called 'Safety Squad' was also run.
- 3.67 Mid and West Wales ART reported working to raise awareness of the effects of arson on businesses. The team carries out site surveys; and provides advice on housekeeping, waste management and combustible stock etc. The aims are to target harden premises by restricting access and improving natural surveillance by cutting back trees. Leaflets are provided in Welsh and English on arson prevention advice for businesses and shop owners. Safer Swansea's Business Crime Reduction Partnership also organised a one-day event to reach a wide business community in order to provide information on crime

reduction and safety, where the ART manned an informative display stand during the day.

- 3.68 North Wales ART reported working with the Joint Fire and Police Press Office to deliver verbal presentations and handouts aimed at increasing the understanding of the role of the ART. Press articles are also published following fire incidents or specific initiatives, and direct contact is made via telephone or email to establish links. All teams reported having articles printed in local newspapers to raise awareness of their work.
- 3.69 All teams provided information at relevant times. For example, schools were visited for advice before school holiday periods and interventions were run before and during Hallowe'en and Bonfire Night periods.
- 3.70 The ARTs engaged with key members of the community in order to reach specific groups, particularly young people. These groups included teachers, PCSOs and youth workers. In one case Mid and West Wales ART worked with the Reverend of a church that was the subject of a serious arson attack, in order to reach the local community for help in identifying who had committed the crime.
- 3.71 All teams reported using a range of materials to raise awareness. These included posters and leaflets providing arson prevention advice and contact information for incident reporting. North Wales ART reported developing handouts for countryside fires, school fires, business arson, which it suggested could be tailored for use across all Welsh regions.
- 5.1 Arson alerts for hazards such as derelict buildings were provided to fire crews and Police. Arson boards were also used after an incident had occurred to encourage members of the public to report information.

Removal of fuel

- 3.72 All ARTs were involved in running fuel removal activities. One of the main activities the teams were involved with were the multi-agency action days. For example, North Wales ART conducted Environmental Action Days to remove fuel and to improve fire safety practices and procedures in targeted areas. These days were delivered in partnership with agencies such as local authorities, Community First, Police, Environment Agency, Fly Tipping Group and DVLA.
- 3.73 South Wales ART ran Operation BANG, a multi-agency approach to combating anti-social behaviour and vandalism over the Hallowe'en and Bonfire Night periods. The ART worked with the Police, fire crews, the Waste Management Enforcement Officer and 'Bin' lorry crews to respond to referral of issues such as vandalism, bonfires and gas cylinders (in order to remove the gas cylinders). South Wales ART also organised a 'clean-up' of a skate park located near a derelict building. The team worked with other agencies to run this day such as the Police, Community First (who provided equipment such as gloves) and Waste Management (who collected the rubbish). The team engaged with the youths by encouraging their participation in a skate competition, for which they provided prizes and a barbeque. This proved to be very successful and facilitated a process by which the youths took ownership of the park they were using.
- 3.74 Mid and West Wales ART were also heavily involved in coordinating and attending multi-agency action days. For example, the team worked with the Environment Agency and a local authority to remove tyres that had been dumped in an enterprise park, and then developed and adopted a protocol to prevent further fly tipping. The team also worked with local gas cylinder companies and the local authorities to remove any unwanted or abandoned gas cylinders. At the time of writing this report, over 3,000 gas cylinders had been removed. The ART also sent out Arson Alerts to the FRS and to Police personnel for identified sites to inform them of potential dangers.

3.75 Mid and West Wales ART worked in partnership to remove unwanted, untaxed and abandoned vehicles. For example, the ART had been made aware of a number of car fires in the area of Penlan Common, that had been caused by a single group of people. A meeting took place between the ART, Police and Safer Swansea Partnership. As a result, boulders were placed at the entrances to the area to prevent cars accessing the site. The team also worked with countryside wardens to place posters in park notice boards with instructions and contact details for the public to report fires.

Boarding up empty premises

3.76 All ARTs were involved with boarding up empty premises.

3.77 North Wales ART were not able to visit all properties across North Wales. As such they worked with Neighbourhood Policing Teams, FRS staff and local authorities to visit and survey sites. They received referrals from the local Police and FRS; initiated surveys; and coordinated responses, having researched Police and Fire systems for histories.

3.78 Mid and West Wales ART assisted in securing vacant sites. They also received referrals from the Police and fire crews and then conducted site surveys. Arson Alerts were circulated to Fire stations, Police stations and local authorities to outline hazards found around the buildings, as identified via the surveys. They also produced a toolkit that outlined how to deal with derelict buildings.

3.79 South Wales ART received referrals from the Police, FRS and the public for derelict buildings. The team were involved with conducting site surveys and reporting findings to relevant departments and Neighbourhood Management Teams. They also completed the FRS

arson vulnerability forms, and worked with relevant partners to resolve concerns relating to derelict buildings.

- 3.80 All ARTs were also involved with taking action for buildings that were in danger of becoming derelict. For example, the online reporting form used by South Wales ART was used to develop a list of all vulnerable buildings that had the potential to become a risk. This was then used to alert control staff and crews where necessary.
- 3.81 The ARTs engaged with local authorities and building owners in order to secure sites. For example, all ARTs had links with local authorities responsible for securing unsafe properties. In North Wales, the ART sent advisory letters to the owners and worked with the local authority to serve enforcement notices on identified owners. Where the notices results in non-compliance from owners, the ART arranged for the boarding-up of premises. Mid and West Wales ART assisted with tracing the owner of the property and consulting with the Local Authority Environmental Health Department, who used their enforcement powers to ensure that owners secured their properties. The ART also sent letters to owners of the properties, outlining the hazards. Finally, the team visited a property auction to provide crime prevention advise to potential buyers of derelict buildings.
- 3.82 Derelict buildings were regularly monitored by the teams. For example, North Wales ART monitored sites and provided feedback to the referrers, also reviewing activity in the area through reported events. Risks were reassessed depending on the activity at the site. Mid and West Wales ART regularly sent Arson Updates to fire crews, Police and local authorities to inform them of any risks that had been removed or increased, or when a building had been secured or demolished.

Assisting owners to prevent arson or mitigate its impact

- 3.83 All ARTs were involved with assisting owners in preventing arson on or in their premises or to mitigate its impact. For example, Mid and West Wales ART worked to raise awareness of the effects of arson on businesses. They conducted site surveys; and provided advice on housekeeping, waste management and combustible stock etc. They worked to target harden premises by restricting access and improving natural surveillance by cutting back trees. Leaflets were provided in Welsh and English on arson prevention advice for businesses and shop owners. The ART engaged with a number of partners to conduct this work, including the local authority, Environment Agency, Police, PCSOs, Business Crime Reduction Partnership and Legislative Fire Safety Officers.
- 3.84 Mid and West Wales ART also worked closely with Crime Prevention Officers and Hate Crime Officers to help protect vulnerable people in the community. Where an address had been identified as being a target of a possible arson attack, a Home Fire Safety Check (HFSC) was carried out by the FRS Community Safety Department. Where necessary during these checks an Intumescent Letter box Bag or a Letter box Plate were fitted by the ART. All ARTs reported funding and fitting these letter box protectors.
- 3.85 The MARAC process is the main way in which South Wales ART assisted owners in preventing arson on their premises. This process also sought to protect the victims of domestic violence, where arson was a common threat. The team provided a strategic focus on the issue of arson within their brigade area and formed an effective link between the FRS and other partners such as Police, Social Services etc. The team was able to provide a range of services to protect and reassure the victims of domestic violence.

3.86 A targeted approach was used by North Wales ART for work in this area, as the team recognised that they were not able to work with everyone in North Wales. The focus was based on a daily analysis of Police and Fire events to determine which properties and types of individual were most at risk. This led to the development of actions plans based on person or property; contact being made with relevant partners; and interventions and referrals made as necessary. The partners were able to identify high-risk individuals or properties and to provide interventions in a focused manner relevant to the identified risk.

Fire patrols

3.87 Mid and West Wales and North Wales ART reported being involved in fire patrols. For example, Mid and West Wales ART supported the Rural and Forestry Team (RAFT) who were responsible for conducting fire patrols in rural areas. The team used off-road motorcycles, four-wheel drive (4WD) vehicles, command vans and cars for their patrols. During patrols potential risks would be identified such as abandoned cars, dumped asbestos products, dumped tyres, builders' waste, dumped domestic appliances and youths on motorcycles. The ART supported this team by providing ancillary equipment including GPS navigators, cameras, hydration systems and binoculars. The team aimed to continue to patrol hotspot areas in the future.

3.88 North Wales ART worked with a number of partners in order to encourage early reporting of fires and anti-social behaviour to the Police and FRS. The interventions patrol included School Watch, Park Watch and fire patrols in rural and coastal areas by a dedicated fire fighter. The ART identified relevant partners for each intervention, usually a partner who was already responsible for these sites and areas, and sought to increase the collaboration and communication between the partners involved. The ART also introduced partners to each other from across North Wales.

3.89 A range of materials were produced for these interventions by North Wales ART such as advertising leaflets and posters, as well as merchandise. A mountain bike was also purchased for the fire fighter patrol. To support the partners the Police and Fire Service non-emergency numbers were circulated and their use encouraged among members of the public. As the North Wales ART had access to both systems, any damage reported could be viewed by the team. The same partners were involved with several projects, which meant that they were in regular contact with the ART and were able to review actions and discuss performance and feedback. Patrols by fire fighters could not be shown to be effective as:

- They were costly to buy and maintain equipment.
- It was difficult to ensure that patrols were in the right place at the right time with the restrictions of personnel working hours and the geography of the area.
- Risk assessments and lone working policies also restricted the scheme.
- Fire patrols were additionally restricted as staff had no powers to arrest anyone seen to be starting a fire.

3.90 The ART is now directed more towards educating and informing.

Educating young people

3.91 Work to educate young people was limited, as this tended to be delivered by other FRS staff. Only South Wales ART reported delivering a scheme for young people. Other teams reported instead delivering specific sessions within schemes run by partners or having a team member being involved separately with such schemes. All teams visited schools to provide advice on arson in addition to being involved in other schemes.

3.92 North Wales ART was involved with a range of education schemes such as Empowering Pedals, FIRES (Fire Initiative Re Education

Safety) and MES (Motor Education Scheme). The teams either helped to develop the schemes, delivered sessions as part of the schemes or helped with funding.

- 3.93 South Wales ART conducted one-day Arson Reduction Workshops that provided education for young people, youth diversionary approaches and learning on engaging in alternative positive activities. The workshop was aimed at young people already known to the youth offending teams and with a history of fire setting. The programme was delivered primarily by the ART, with assistance where appropriate from Fire Control, Duty Watches and Paramedics.
- 3.94 South Wales ART is not directly responsible for carrying out work with children and young people. However, the team supported the work of the FRSs. Two members of the team were young fire fighter instructors and one was a FACE case worker. The ART also supplied the schemes with funding for equipment, transport and various activity programmes.
- 3.95 None of the ARTs reported delivering advice to parents or families and neither did they report conducting home visits.

Youth diversion/positive activities

- 3.96 The teams had little involvement in youth diversion activities, because they were primarily managed by the FRSs and/or other agencies.
- 3.97 As previously stated South Wales ART included youth diversion as an element of its one-day workshops. At the time of writing this report, Mid and West Wales ART was not involved in delivering youth diversion activities, but instead offered support to existing FRS schemes.
- 3.98 North Wales ART had some involvement in youth diversion schemes such as Flamestoppers, and BANG (Be A Nice Guy). This was through

funding the schemes and assisting with the development of materials such as DVDs.

- 5.2 All schemes were targeted at appropriate groups of young people, such as those displaying fire setting behaviours. The young people that attended the workshops run by South Wales ART were referred by youth offending teams.

Psychosocial interventions

- 3.99 South Wales ART and Mid and West Wales ART did not have any direct involvement in psychosocial activities, as these were delivered by FRS staff. However, Mid and West Wales ART employed one team member who was also a case worker on the FACE scheme (Fire Awareness Child Education). This was a one-to-one programme delivered by the Fire and Rescue Service to children and their carers, dealing particularly with fire safety in the home and the consequences of deliberate fire setting.

- 3.100 North Wales ART reported identifying and referring cases to FACE via daily scanning on shared electronic systems. They also identified and referred cases to FIRESAFE, a cognitive behavioural programme for more problematic fire setters or those with more complex needs. North Wales ART also provided funding to train FRS community safety staff in the restorative justice approach.

Arson detection and investigation

- 3.101 All ARTs reported sharing data with the Police to detect arson incidents. However, joint/shared training sessions for the FRS and Police on arson-related issues was limited. Each team employed a seconded Police Officer who enabled information exchange between the ART and the Police. For example, the Police Officer in South Wales ART acted as the single point of contact between the ART and the

Police, who were able to contact this Officer in his or her post within the ART with any enquiries and concerns regarding deliberate fires. The Officer possessed a full understanding of police investigation requirements to obtaining a successful prosecution, such as the type of evidence required, identification of offenders, interview techniques, court procedures and so on. He or she also possessed vital knowledge of the FRS such as Control Systems, intervention schemes and youth fire setter intervention programmes.

3.102 North Wales ART reported logging incidents through analysis of Police and Fire data and attending multi-agency meetings to devise an action plan to resolve these problems. At the time of writing this report, the ART was currently working with the Police and their FRS to encourage communication and a joint approach. The ART also sponsored two Police CSI officers to attend the Fire Investigation Module at the Fire Service College in order that they may become familiar with the terminology used by the Fire and Rescue Service. The ART facilitated an agreement that all deliberate fires reported to the Fire and Rescue Service should be passed to the Police Control Room. This enabled the embedding of fire service data into the Police system and ensured that Neighbourhood Policing Teams could be made aware of fire setting behaviour within their area.

3.103 The North Wales ART also worked with the Police Air Support, who agreed to patrol hotspots for the ART if or when they were in the area. As part of this agreement, the Air Support also checked farms during their rural patrols to identify signs of illegal burns and storage of waste. The ART received monthly breakdowns of areas patrolled, including length and timing of patrol, which was then compared with Police and Fire incident data. Hotspot areas, dates and times were passed to the Air Base by the ART for consideration when they were responding to other events.

3.104 Mid and West Wales reported installing target hardening measures to help detect arson. For example, they worked with the Police to target an area that had been experiencing high numbers of car fires. New CCTV cameras were put in place as well as portable cameras. No calls concerning car fires were received since this work took place.

3.105 All teams used arson information boards after an incident had taken place and encouraged the public to report incidents to Crimestoppers.

Did the methods of these schemes align with good practice?

3.106 All teams used methods for arson reduction interventions that aligned with good practice.

Was the work conducted by partners on behalf of the ARTs monitored?

3.107 It is unclear whether the work conducted by partners on behalf of the ARTs was monitored. Mid and West Wales ART and South Wales ART reported monitoring schools target hardening work. If work was deemed unacceptable it was identified for remedial action.

Partnership work

To what extent were partnerships successful?

3.108 Respondents from the Police noted that they dealt with similar issues to the ARTs, which included reducing crime and ensuring safety. The ARTs helped to encourage trust within communities, as well as between communities and law enforcement personnel, through education in schools and communities. as well as through arson reduction activities. The Police reported that that the work of the ARTS helped them to achieve their aims and that both ART and the Police shared the objective of lowering anti-social crime rates.

3.109 An FRS partner reported that the ARTs helped achieve the protection of vulnerable people and their lives, which was an objective in line with their own aims, as well as helping to facilitate community cohesion. An obvious goal cited by this partner was to drive down the number of fires, which (the partner reported) the ARTs enabled or contributed to, because there was a 70% reduction in car fires in South Wales.

3.110 A local authority partner organisation reported that the ARTs helped to achieve their aims by educating the public on waste storage and removal. Working with ARTs also helped to ensure community and neighbourhood safety.

Did partner agencies help the ARTs to reduce arson?

3.111 Partner organisations reported that they did help the ARTs to reduce arson incidents. Local authority partners reported that ARTs identified fly tips (for example) and removed the waste to ensure that it could not be set alight, thus reducing potential for arson.

3.112 Furthermore, a majority of partners reported undertaking youth engagement, whereby a range of activities were focused on preventing participants starting fires – activities which often took place during school holidays.

3.113 In addition it was noted that the ARTs helped to protect vulnerable people and their lives, dealt with grass fires and contributed to environmental clean ups and to vehicle clearance campaigns.

Was there a formal working agreement in place between the ARTs and partner agencies?

3.114 Very few formal working agreements were in place with the partner agencies interviewed. A number of partners from the Police service and

local authorities reported that no formal memorandum of understanding was in place.

Was the partnership able to be resourced appropriately?

3.115 The majority of partner agencies reported that they were able to resource the demands of the partnership. In particular a local authority stated that the partnership has increased the effectiveness of their work.

3.116 A Police-based partner commented that working with the ARTs had helped to reduce incidents generally and particularly the number of arson fires, which enabled them to focus their resources where they were most needed.

Can the partnerships be improved?

3.117 Partners made the following suggestions on how the partnership could be improved:

- Better understanding from within local authorities for the need for waste enforcement organisations to work with the ARTs;
- That the ARTs be placed in a more centralised position within partner organisations, to improve communication;
- Partner organisations to attend ART monthly meetings;
- Further awareness raising on the role of the ARTs and what roles they could play within the Police service;
- Increase the number of ARTs so that a greater number of geographical areas are covered; and
- Awareness raising of ARTs in general.

Are partnerships being continued in the future?

3.118 All partners interviewed reported that they wished to continue working with ARTs, as they had been successful. In addition, partner organisations also reported that they would like to do more work with ARTs, with specific responses including:

- More awareness raising within the Police service;
- Enhancing work with vulnerable people in the community;
- Greater focus on rural areas;
- More work with youths and young people – potentially exploring job opportunities.

Liaising with the local community

Did the ART work with the local community to reduce arson?

3.119 All teams liaised with the local community to reduce arson. All teams worked with Communities First, which provided the teams with an effective means of consulting with communities and young people. Some teams had greater involvement with the community than others – for example North Wales ART did not usually work with the community directly, but primarily via partner agencies.

3.120 South Wales ART had greater involvement with the community. The ART reported being part of Neighbourhood Management Teams, and attending PACT (Partners and Communities Together) meetings. The ART reported supporting and sponsoring community events and being based in a community fire station, which facilitated/enabled visits by the public and local community.

3.121 Mid and West Wales ART coordinated and attended some multi-agency action days, which also provided an opportunity for liaison

with the community. For example, the ART provided arson advice to businesses, encouraged the public to report instances of deliberate fire setting, promoted confidence and ownership within the community, and promoted the positive aspects of multi-agency cooperation within the community.

Did the ARTs assist the FRS in addressing local arson issues?

- 3.122 All ARTs assisted their FRSs in addressing local arson issues. All teams acted as a link between the FRS and Police to help reduce arson.
- 3.123 For example, South Wales ART involved local fire stations in its work where appropriate, which helped to address arson issues local to that station. Mid and West Wales ART conducted their projects in areas experiencing arson issues and worked with the relevant FRS to reduce arson in these areas through specific projects. They also worked to reduce the numbers of unnecessary or inappropriate calls to the FRS.
- 3.124 North Wales ART assisted their FRS by providing risk information for specific premises, supplying merchandising and funding staff to deliver programmes. They also funded crews to conduct controlled fires.

Consistent with good practice – Grassland Initiative

Level of activity

To what extent has activity been conducted to reduce grassland fires?

- 3.125 The following section identifies if the conduct and management of the Grassland Initiative was consistent with good practice. The Grassland Initiative funding was provided to North Wales ART, South Wales FRS and Mid and West Wales FRS.

- 3.126 North Wales ART and Mid and West Wales FRS reported carrying out activities to reduce deliberate grassland fires using the Grassland Initiative funding.
- 3.127 At the time of writing this report, South Wales FRS was in the process of carrying out a social marketing project to identify where and how to target their work on grassland fires. This project was in development stages at the time of writing and, based on feedback provided, it was unclear how the Grassland Initiative funding had previously been used.
- 3.128 Data on grassland fire activities funded by the Grassland Fire Initiative was not provided by any of the FRSs or ARTs, therefore the level of activity conducted can not be provided statistically.

Targeting

- 3.129 North Wales ART and South Wales FRS and Mid and West Wales FRS all targeted work on grassland fires using the Grassland initiative.

By area

- 3.130 Fire incident data and Police Data were used to target the work. For example, North Wales ART look over historic data on accidental and deliberate fires, as well as other fire data such as controlled burning. The ART assessed the scale of the fires and the areas they occurred in. Police data was also used to identify incidents such as off-road motorcycling. The ART worked with countryside wardens to place posters on park noticeboards, providing instructions and contact details for members of the public to report fires. The ART also developed a number of smaller leaflets incorporating these messages, to raise the profile of early reporting and prevention.
- 3.131 The North Wales ART worked with the Police Air Support by providing locations of hotspot areas and peak times. The helicopter teams were

then able to fly over these areas if they were already in the vicinity. This ensured that the ART paid only for 'hover time' and not whole journeys. To support the work of the ART in reducing of the number of deliberate fires, the Air Support Unit also raised the profile of the ART and promoted their joint working during any of their activities or with visitors to the Air Base.

3.132 Mid and West Wales FRS focused their work in two key target geographic areas. The FRS also worked with the Police in relation to motorbike patrols of forestry areas to prevent grassland fires. Police intelligence was used to identify high risk areas, and the FRS also attended incidents and patrols with the police.

3.133 As part of the social marketing project, South Wales FRS used internal fire statistics to identify the Unitary Authority experiencing the most incidents. This area was then broken down by station area. Two areas that were very similar, accounting for geography, type of station and number of appliances, were then identified. One of these areas was selected for targeting grassland fire initiatives; while the FRS planned to use the other area as a control, where normal level of activity would continue, thus providing a comparison with which to measure the impact of their initiatives. Before this project commenced the FRS were involved in action days with the Police and Forestry Commission to patrol hotspot areas.

By type of offender

3.134 Type of offender was also a category used for targeting activity. For example, one of the main problems North Wales ART experienced was controlled burning left unattended by landowners. To ameliorate this problem, they worked with landowners and also purchased a supply of the Heather and Grass Burning Code for Wales 2008, produced by WG, to distribute at agricultural events such as County shows. The team worked with Police and FRS press offices to coordinate press

releases prior to the burning season, with the aim of encouraging notification and early public reporting. The Code was additionally distributed to Countryside Wardens within local authorities.

- 3.135 The North Wales ART tailored its messages to schools to reduce the number of countryside fires. Team members worked with inclusion officers and Police School Liaison Officers in schools for this work.
- 3.136 Mid and West Wales FRS ran intervention schemes such as 'Fire fighter for a day' which targeted young people at risk of starting grassland fires. They also ran adverts on a radio station whose target audience was 25 to 50 year olds. The aim of this advertising campaign was to target these adverts on grassland fire information to parents, for example, encouraging parents to educate their children on the dangers of starting grassland fires.
- 3.137 South Wales FRS ran a set of focus groups with their main target audience of young people to identify why they set these fires and what diversionary activities they would like to be available. It was intended that the results of these focus groups would be used to guide the work of the FRS. Prior to this project being implemented, visits were made to schools to provide information on grassland fires.

By time of year

- 3.138 The time of year was also included in targeting. For example, North Wales ART aimed to visit schools prior to school holidays and run a scheme on the consequences of grassland fires for young people. The radio adverts by Mid and West Wales FRS ran between March and August and during the school summer holidays at times of hot dry weather. The Mid and West Wales ART also provided funding during 2009 to help keep youth clubs open and to help them run trips for young people. The aim was to keep young people busy during school

holiday periods, to prevent them getting bored and thereby reducing the possibility of them starting fires.

3.139 South Wales FRS planned to run diversionary activities for young people during Easter holiday periods. They identified the key times of day at which incidents occurred and planned to run activities in line with those times.

Monitoring performance

3.140 It was unclear whether national or local targets were set or whether the level of activities were monitored.

3.141 There was no evidence that North Wales ART monitored the work carried out. Mid and West Wales FRS recorded figures such as schools visited, number of pupils attending talks and number of attendees of attending the 'Fire fighter for a day' course. All initiatives were recorded in dedicated project files, including type and level of activity, and money spent. The geographic areas in which projects were carried out were also recorded. Before the social marketing project was started, South Wales additionally recorded data on education visits.

Arson Small Grants Programme

3.142 Due to the very limited response from the questionnaire issued to project leads it is hard to establish many conclusions regarding the Arson Small Grants programme. However, additional analysis of 31 application forms does provide some evidence on the activities carried out by projects funded by the Arson Small Grants Programme.

Was funding applied for to carry out arson projects?

3.143 In total the amount of funding that WG awarded to Arson Small Grants from 2004-05 to 2009/10 was £1,505,207, which was 84% of the total

budget available. There appeared to be a high demand for funding with WG awarding funding to 54% of those that applied. WG reported applying a selection process to award funding to those projects most appropriate.

3.144 Findings from the short questionnaire to project leads showed that the grant sizes varied from £4,000 to £10,000, with the average being £7,946. The project lengths varied from one month to 18 months.

3.145 In general the projects reported spending the funding on marketing, advertising, prizes, organising events and equipment.

To what extent were arson projects aimed at a range of groups?

3.146 The findings revealed that the Small Grants Projects predominantly targeted children and young people. The age of the children varied, as did their backgrounds (i.e. whether they were fire setters or young offenders).

3.147 Findings from both data provided by WG and the responses from the questionnaire indicated that the projects focused on:

- Youth engagement;
- Community engagement;
- Crime and anti-social behaviour reduction;
- Provision of equipment;
- Environmental initiatives;
- Grassland initiatives; and
- Target hardening.

3.148 The findings from this review revealed that:

- The majority of the projects were aimed at working with children and young people, especially those at risk of fire setting and young offenders;

- Many of the projects incorporated at least some youth engagement work, including raising awareness of arson and the implications of arson;
- Many projects provided training for children and young people on leadership and other life skills;
- A range of partners were involved, including:
 - Fire and Rescue Services;
 - Local Police;
 - Arson Reduction Teams;
 - Youth offending teams;
 - Schools;
 - Communities First;
 - Community Safety Partnerships; and
 - Local community clubs;
- A small minority of projects were involved with making particular areas safe and secure from arson attacks e.g. monitoring high-risk areas through CCTV.

To what extent were outside organisations worked with to deliver arson projects?

3.149 Responses from the questionnaire and the applications forms indicated that all the arson projects were working with other organisations to deliver their work. Partners included:

- Police'
- Fire and Rescue Services;
- Schools;
- Anti-Social Behaviour Teams;
- Communities First;
- Arson Reduction Teams;
- Community groups and clubs;
- Forestry Commission; and
- Food Standards Agency.

To what extent was the budget spent on projects?

3.150 Out of the ten projects that responded to the questionnaire, eight stated that they had spent all the funding. Of the remaining two projects, one had returned its remaining funding to WG; while the other was engaged in on-going work and had ring-fenced the funding for this purpose. From this small sample it appears that the funding is being spent.

To what extent were projects evaluated to identify impact?

3.151 All projects were required to specify in their application forms how they planned to evaluate their projects and what the intended outcomes were. The mini questionnaire sent by the researchers explored what the projects thought had been the main outcomes of their projects to date. These included:

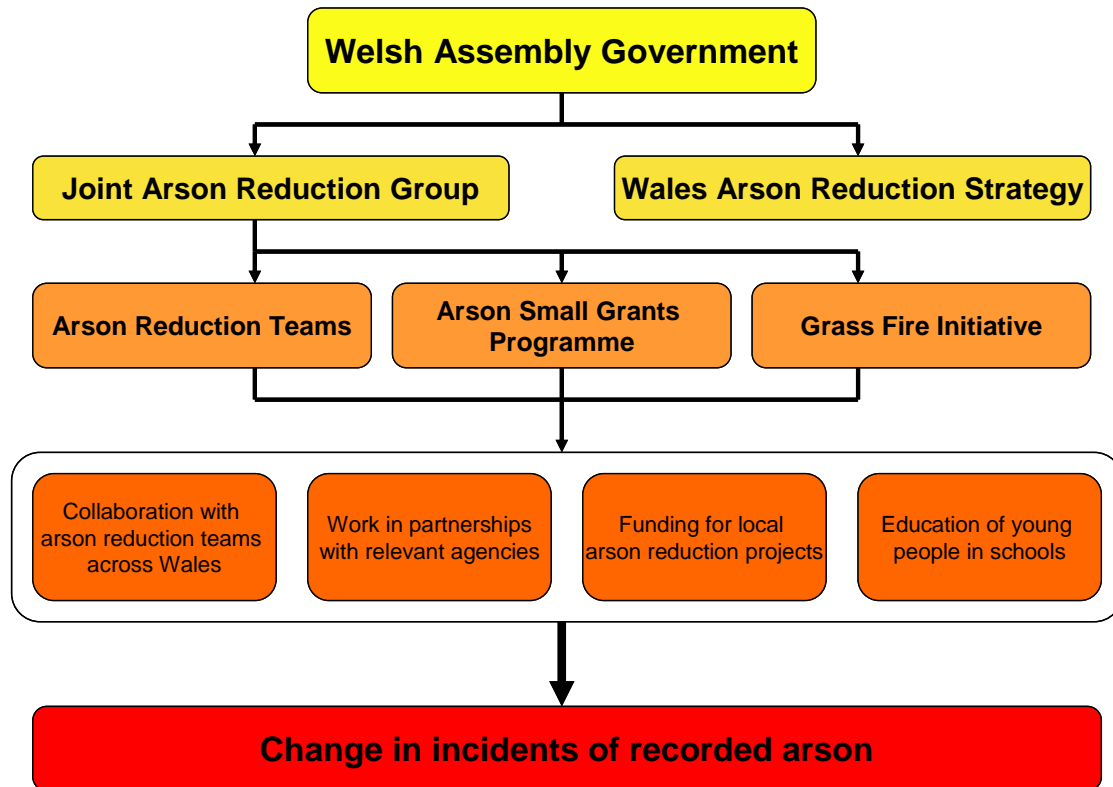
- A reduction in criminal damage or crime;
- A reduction in deliberate fire setting;
- Awareness raising;
- Safer and cleaner communities; and
- A reduction in grass fires.

Theory of Change

3.152 The Theory of Change is defined as “*all building blocks required to bring about a given long-term goal.*”¹¹ The theory of change in this instance describes the three main strands of arson reduction activity and their associated interventions.

¹¹ <http://www.theoryofchange.org/background/basics.html>

Figure 2: Theory of Change in relation to reduction of arson and deliberate fires in Wales



3.153 Figure 2 displays an illustration of the Theory of Change as applied to the reduction of arson and deliberate fire setting in Wales. This representation was developed to highlight the pathway from WG and the WARS strategy through the JAG to the three strands of the arson reduction activities led by JAG. It provides examples of some of the interventions and activities that could be run to help reduce the number of arson incidents in Wales.

Pathway of change

3.154 The research team initially intended to produce a Pathway of Change. However, as highlighted previously in this report, due to the lack of intervention data provided by ARTs only a very limited impact analysis as possible. Therefore the outcomes of the three strands of arson reduction activity are unclear. However, it is possible to draw on anecdotal findings from the process review (focus groups with ARTs,

telephone interviews with JAG and other organisations). These anecdotal findings suggest the following outcomes were present:

- A reduction in deliberate fires;
- A reduction in anti-social behaviour and crime;
- Reductions in fire deaths and injuries from fire;
- Safer and cleaner communities;
- Communities taking ownership of their areas;
- Increased reporting of arson incidents; and
- Increased communication and greater levels of collaboration between the FRS and Police Force.

3.155 These outcomes together with the interventions that were carried out by the ARTs, Arson Small Grants Programme and Grass Fire Initiative, are in line with the aims of the WARS strategy.

Link between JAG and WARS

3.156 All the arson activities coordinated through JAG were driven by WARS. All work streams were coordinated by the JAG ART Coordinator, who consulted with the ARTs before a work plan was developed.

3.157 All projects run by the ARTs related to the WARS document as they were all linked to:

- The scope of the arson problem;
- The environment;
- Children and young people;
- Public protection; and
- Sprinklers.

4. Discussion

Contribution

- 4.1 There is limited evidence regarding the impact of the three strands of arson reduction work on deliberate fires in Wales. It is difficult to link activity to impact regarding incidents of arson, due to a lack of activity data before and after the three strands of arson reduction work began. Only the schools target hardening work appeared to show evidence of an impact on the reduction of arson.

Arson Reduction Teams

- 4.2 Limited activity data made it difficult to identify whether the amount of arson reduction activity had increased since the ARTs were created. There is also mixed evidence regarding the impact of the arson reduction work on deliberate fires by the WG-funded ARTs. Limited data on arson reduction activities, as well as 'noisy' fire data (where the number of fires fluctuates a lot from one year to the next) restricts the conclusions that can be made.
- 4.3 However, previous research indicates that other ARTs and situational arson prevention work has been effective. The Welsh ARTs focused on the target hardening and other situational tactics which were supported by previous impact evaluations.
- 4.4 Direct comparisons cannot be made between the ARTs on the level of arson reduction activity conducted. This is due to the fact that Mid and West Wales ART and South Wales ART recorded their activities in different formats. North Wales ART did not supply any data on the level of arson-reduction activity that the team undertook, and therefore it cannot be compared to the other teams. The amount of funding used by each ART for schools target hardening was recorded in a

standardised format. However limited conclusions can be drawn from this, as this work began in 2007 and therefore only two years of data were available at the time of conducting this research.

- 4.5 Overall, the ARTs appeared to be carrying out a high level of arson reduction activity and their work seemed to be in line with good practice. The methods that the ARTs utilised were also of a high standard. All work was targeted and all teams worked in partnership with appropriate outside agencies, as well as having close working relationships with the FRS and the Police (primarily due to the seconded Police Officer in each team).
- 4.6 Grassland fire initiatives were also run by all ARTs as part of their arson reduction work. North Wales ART and Mid and West Wales FRS also used the Grassland Fire Initiative funding for a range of initiatives. It is unclear how South Wales FRS used this funding. Although the South Wales FRS was running a Social Marketing project to direct their grassland fire work (at the time of writing this report), it is not known how the funding was used for grassland fire activities prior to this project.
- 4.7 There is limited statistical evidence that the ARTs helped to accelerate the reduction in deliberate fires. A reduction in deliberate fires has been continual, dating back to the period before the ARTs were in place. Since the ARTs were introduced in 2005, although deliberate fires in Wales continued to fall, there was no acceleration in this decline to end of our study period, i.e. the end of 2009. This was the case for deliberate dwelling fires, deliberate vehicle fires, deliberate other building fires and deliberate rubbish/refuse fires. However, a greater decline in education building fires did occur after the ARTs were introduced.

- 4.8 Data for deliberate grassland fires is relatively volatile, making the impact of the ARTs on these fires unclear.
- 4.9 There are a number of potential explanations for the lack of acceleration in the decline of deliberate fires. These explanations cannot be proven due to limited data. Firstly, it is possible that the ARTs replaced previous arson reduction work. The decline in arson prior to the ARTs may have been due to previous arson reduction work. As data was not available on the arson reduction work prior to the ARTs, it has not been possible to test this hypothesis.
- 4.10 Secondly, this evaluation examined the impact of other influencing factors of deliberate fires. These included:
- Rate of job seekers allowance claimants – as a representation of unemployment;
 - Mean summer temperature; and
 - The price of scrap metal.
- 4.11 These factors demonstrated strong correlations with the rate of deliberate fires, such that:
- The rate of claimants was strongly associated with deliberate dwelling fires;
 - Mean summer temperature were strongly associated with deliberate grassland fires; and
 - The rising price of scrap metal was strongly associated with deliberate vehicle fires.

These strong correlations suggest that the majority of the reduction in deliberate fires may have been due to these factors. This outcome also leaves little variance for an impact on deliberate fires from arson reduction work. However, there is some evidence showing that deliberate dwelling fires continued to reduce in 2007 and 2008, when the rate of claimants increased. This suggests that the number of claimants may not have been the major influence on the rate of

deliberate fires during this period. This allows some room for other factors to have reduced the rate of deliberate fires, such as arson reduction work.

- 4.12 Overall, the rate of decline in arson slowed down after the ARTs were put in place. It is unknown if the ARTs resulted in a higher or lower level of arson reduction activity, as there is very limited activity data available before and after the launch of the teams. In addition, there were no targets or benchmarks put in place, against which to measure their work.

Grassland Fire Initiative

- 4.13 Limited activity data makes it difficult to link deliberate grassland fire reduction activity with the impact on the rate of deliberate grassland fires. This was particularly pertinent for South Wales FRS, as the deliberate grassland fire work had yet to be launched by the FRS (at the time of writing this report).
- 4.14 South Wales FRS had carried out a Social Marketing Project to identify the most appropriate target groups for its work and to identify which activities would be the most effective. However, the activities identified by this project had not been launched at the time of this evaluation and it was unclear how WG funding was used by the FRS prior to the development of this project.
- 4.15 Mid and West Wales FRS, South Wales FRS and North Wales ART were undertaking a range of work to reduce deliberate grassland fires. Mid and West Wales FRS was using funding to target its work by areas of high incidence, types of offender and time of year, as well as carrying out a range of interventions and using different media sources to raise public awareness. North Wales ART was also involved with a number of interventions aimed at reducing grassland fires using specified funding.

4.16 Analysis of deliberate grassland fire data identified no real trend in the number of fires. This suggests that the impact of grassland fire reduction activities was limited.

Small Fire Grants

4.17 There was a total of 165 arson small grants awarded from 2004-05 to 2008/09 with a total of over one million pounds spent on arson small grants. The projects appeared to be working with a range of people and carrying out a variety of different types of arson activity that appeared to align with good practice. All the projects that responded to the questionnaire reported working with other organisations and were able to list the types of partners that they worked with. The majority of projects also stated that they would not be able to continue working on arson reduction activities without the funding.

4.18 The projects reported a reduction in crime, deliberate fires and grassland fires, and improvements in safer cleaner communities. However, a statistical impact assessment was not carried out on the arson small grants and so the impact on deliberate fires could not be quantified. It is possible that the continuation of these projects could prompt innovative work in the area of arson reduction; however, a greater focus should be placed on related outcomes.

Recommendations

4.19 The following provides recommendations for the future work of:

- WG and JAG; and
- The ARTs.

Links between JAG/ WG and activities

- 4.20 At the time of writing there is no performance management system in place to ensure the arson reduction activity was aligned to the WARS. This makes it difficult to identify the specific impact of the three strands of work. The finding that the rate of decline in deliberate fires may have slowed down after the ARTs started might indicate that the work of the ARTs had an unintended impact on aspects of arson prevention work. Due to a paucity of definitive data it is not possible to state with confidence how arson prevention work changed with the creation of the ARTs.
- 4.21 It is uncertain whether the ARTs facilitated an increase in arson prevention work, replaced current work, centralised arson prevention work or led to a reduction in overall amount of arson prevention due to the centralisation of such work. This is due to a lack of data available on the arson reduction work carried out by the ARTs and a lack of baseline activity data before the ARTs were in place.
- 4.22 Therefore, to make the links between JAG and existing activity more effective, it is recommended that:
- JAG has a performance management system in place to monitor the link between arson reduction activity, WARS and JAG. JAG should provide targets or benchmarks to the ARTs on the level of arson reduction that is required and the amount or type of activity expected. This would provide information concerning whether the ARTs were/are cost-effective and whether it is necessary to further engage staff within the FRSs in order to deliver improved arson reduction activity.
 - JAG critically reviews the model of the ARTs. In particular:
 - Is there a need to look at increased involvement of other FRS staff in the delivery of arson prevention activities?

- Is there a need to increase the involvement of station level FRS staff in order to increase the amount of arson prevention activity taking place?

This work could be centrally managed by the ARTs.

- JAG seeks arson prevention activity data from ARTs; regularly monitors the arson reduction work conducted; and monitors how funding is used by the ARTs and the FRSs.
- Provides information on standardised data collection and reporting from the ARTs including stating what format data should be provided (e.g. Word, Excel etc.), what data is required and when it should be reported.

Recommendations for the ARTs

4.23 It is recommended that:

- All ARTs record the amount of arson activity that is carried out in a standardised format. This will allow comparisons to be made between the ARTs and will allow the arson reduction work to be tracked and monitored to a higher standard. North Wales ART should track the arson reduction work carried out and record activity data. The team may need to work with its partners to obtain their monthly figures on the amount of work carried out. North Wales ART should formally state what figures are required from each partner.
- ARTs consider the balance of their role in centrally managing arson reduction work within their FRS, as opposed to delivering activities themselves.
- ARTs consider whether they should conduct more joint detection work with the Police. For example, should more training and education take place to ensure that the Police and ARTs work effectively together on issues such as gathering evidence at the scene of a crime in order to result in more prosecutions?

4.24 Recommendations are not provided for each ART. North Wales ART had a different model for delivering arson reduction activity when compared with Mid and West Wales and South Wales ARTs. North Wales ART demonstrated playing more of a strategic role in coordinating the activities of its partners, rather than delivering the arson reduction activity itself. In comparison, Mid and West Wales and South Wales ARTs delivered some of the arson reduction activity directly, as well as working with partners. However, due to lack of data the authors of this report are not able to conclude whether either model resulted in a greater level of arson reduction activity.

Recommendations for the Grassland Fire Initiative

4.25 It is recommended that:

- JAG/WG set national and local targets for reductions in grassland fires;
- JAG has a performance management system in place to ensure any grassland fire reduction activity is monitored and effective – as part of this JAG should seek grassland fire initiative activity data from Mid and West Wales and South Wales FRS and North Wales ART, regularly monitor the grassland fires reduction work conducted and how funding is being used by the FRSs and North Wales ART; and
- JAG track and compare targets at FRS and national levels.

Recommendations for Small Fire Grants

4.26 No recommendations were identified for the Small Fire Grants strand of work.

Recommendations for partnership working

4.27 It is recommended that:

- ARTs should continue working with partners and ensure they have effective partnerships with a full range of agencies;
- WG/JAG consider setting up national partnerships with key organisations such as Waste Management Departments;
- ARTs, particularly North Wales ART, monitor and record activity carried out by partners,;
- ARTs set up formal partnerships considering a Memorandum of Understanding and SLAs;
- Partner agencies should be encouraged to attend ART monthly meetings; and
- WG/JAG could devote more effort to raising awareness of ARTs among the Police.

5. APPENDIX A: Review of previous research

Overview

Aims and approach to the review

- 5.1 The review aimed to:
- Identify key issues to assess in this study and provide a basis for evaluation criteria;
 - Summarise evidence as to the effectiveness of arson reduction.
- 5.2 This was a rapid review of evidence and relied on publicly available publication.

Sources

- 5.3 The Department for Communities and Local Government (and its predecessors) along with the UK's Arson Control Forum have completed a series of evaluations of arson prevention schemes. Some of these include reviews of previous research. Therefore, as a first step these evaluations were collated and reviewed. In addition, as regards good practice, the Home Office has issued advice on crime prevention.
- 5.4 Next a key word search was completed for other UK and overseas research and evaluations. This used key words such as:
- arson prevention
 - juvenile firesetters
 - arson reduction
 - youth diversion
 - youth engagement.
- 5.5 Along with:
- evaluation

- impact
- research.

5.6 Particular attention was awarded to US and Australian work, with the Australian Institute of Criminology specifically examined.

Rationale per type of arson prevention scheme

Educating, diverting and treating firesetters

5.7 Much literature has been published on the characteristics of arsonists and young firesetters covering issues such as family background, personality and links with anti-social behaviour. Some profiles are summarised below. These categorisations are important as they can feed through to the development of strategies, namely matching strategies to the motivation. These offender profiles have contributed to the development and targeting of young persons interventions.

5.8 Chappell (1994¹²) reported on research into the patterns emerging from studies which have examined the psychological profiles and psychological motivation of adult arsonists and fire setters include the following:

- A substantial number of convicted adult arsonists participated fire-starting activities as a child.
- A substantial number of fire setters motivated by psychological or 'irrational' factors have an intellectual disability and there is a strong association with alcohol abuse.

¹² Australian Institute of Criminology, national workshop: focus on the arsonist and arson, prevention, 25-26 february 1994. opening address, Duncan Chappell, Director, Australian Institute of Criminology

- While female adolescent fire setters are found to have more concrete motives, such as a protest against parental authority or a desire to attract attention, adult women often set fire to property which is invested with emotional meaning, such as their home.
- Attention seeking, followed by revenge have been found to be among the most frequently reported psychological motivations for fire setting among adults.
- Other categories of reported psychological factors encompass uncontrollable urge to light fires for emotional or sexual gratification, fascination with fire, vanity and the need to be seen as heroic, pathological personality traits or needs, psychotic states.
- When the psychological and social profiles of alleged arsonists are compared to pre-trial populations of persons charged with offences other than arson, they (alleged arsonists) are found to be more significantly handicapped in terms of family background, personality, occupational, educational and other social background factors.

5.9 A list of characteristics was presented at the Arson Control Forum Good Practice Conference¹³. These included:

- Majority are male.
- Other externalising and anti-social behaviour such as delinquency, conduct disorder and aggression.
- Alcohol and drug misuse.
- Poor social judgement and social problem solving skills.
- Parental and family functioning factors.
- Mental health issues.
- Personality disorders.
- Exposure to fire materials and fire competence.

¹³ Arson Control Forum, research bulletin no.6. Interventions with arsonists and young firesetters. (2005)

5.10 Most arson is committed by a minority of prolific offenders, many of whom are under 18 and also commit other offences.

Young firesetters

5.11 Arson shares many links with criminal damage more widely. A large number of offences are committed by young people under 18, within their local area, and often in groups. Moreover, the majority of arson is unplanned, arising from opportunity, and perhaps even peer pressure.¹⁴

5.12 Many studies have shown juvenile firesetting to be associated with other types of behaviour problems such as heightened aggression.¹⁵ Drug and alcohol use is also reported to be prevalent among young firesetters.¹⁶

5.13 Parental and family functioning variables have also been associated with firesetting among children. These include poor child rearing practices such as lack of supervision and inconsistent discipline.¹⁷ Adverse childhood experiences such as abuse, neglect and maltreatment has also been found to have an impact on firesetting behaviour.¹⁸ Domestic instability appears commonly experienced by young firesetters as many are found to be raised without mothers or

¹⁴ <http://www.crimereduction.homeoffice.gov.uk/vandalism01f.pdf>

¹⁵ Cole et al (1983) Final report of 1983 fire-related youth project. Rochester, NY: New York State Office of Fire Prevention and Control.

¹⁶ Martin et al (2004) Correlates of firesetting in a community sample of young adolescents. Australian and New Zealand Journal of Psychiatry, 38, 148-154.

¹⁷ Kazdin & Kolko (1986) Parent pathology and family functioning among childhood firesetters. Journal of Abnormal Child Psychology, 14, 315-329.

¹⁸ Epps et al (2000) Understanding and treating adolescent firesetters. In Boswell (Ed) Violent children and adolescents: asking the question why, London: Whurr

those previously residing in an orphanage, foster home or psychiatric facility.¹⁹

- 5.14 The following provides a profile of a young fire setter/ arsonist, as presented at the Arson Control Forum Good Practice Conference (2005):
- poor child-rearing practices
 - lack/ lax/ inconsistent discipline
 - relationship and personal problems
 - high levels of stressful life events
 - problems of sexual functioning
 - rage and revenge fantasies
 - anger towards parents
 - poor social judgement
 - inability to verbalise anger.
- 5.15 The 2000 Canter and Almond study adopted the four broad categories proposed in the Arson Scoping Study for the purposes of policy formulation and planning interventions;
1. 'Youth disorder' encapsulates both young children playing with fire out of curiosity and youths committing malicious acts of vandalism using fire. It was estimated that the 36% of property arson and 39% of vehicle arson, was attributable to youth disorder, making such behaviour by far the most common cause of arson in the United Kingdom.
 2. 'Malicious' refers to the use of fire as a weapon to cause destruction against a person or specific group. Such action is often taken against residential property or specific institutions such as churches and schools. An estimated 25% of property arson was attributed to 'malicious' behaviour, although this was thought to be accountable for a minimal amount of vehicle arson.

¹⁹ Rivto et al (1982) Firesetting and non firesetting delinquents: a comparison of neuropsychiatric, psychoeducational, experimental and behavioural characteristics. Child Psychiatry and Human Development, 13, 259-267.

3. 'Emotional expression' refers to the use of fire as a form of expression and a means of communicating frustration, pain or hostile emotions. This category would include attempted suicide, attention-seeking arson and would-be hero arson. Often individuals within this remit require some form of psychological assessment. Emotional expression was believed to account for 27% of property arson and 13% of vehicle arson.
4. 'Criminal' arson involves the use of fire to prevent detection of another crime, and also for some form of financial gain. Such activities encapsulated within this category would include the destruction of property using fire in an attempt to destroy forensic evidence; the destruction of vehicles following theft; in order to make fraudulent insurance claims. It is perhaps not surprising that criminal arson was believed to be accountable for 45% of vehicle arson.

5.16 This fourfold classification was said to provide the most fruitful starting point for developing a strategy for dealing with arson, since each category can be related to the agency(ies) that have responsibility for dealing with these individuals (Home Office, 1999²⁰), as below. They state that "It is essential to obtain some understanding of why people start fires deliberately if the policies then put in place are to have any significant impact on the problem". For example, youth diversion work may be applied to youth disorder, counselling for people with mental illness, but improved detection and prosecution might be advocated for criminal motivations, although some strategies such as target hardening may cut across all motivations.

²⁰ Safer Communities: Towards Effective Arson Control. The Report of the Arson Scoping Study. <http://www.communities.gov.uk/documents/fire/pdf/381237.pdf>.

Table 5: Arson motivations

Category of arson	Motivation
Youth disorder and nuisance	Vandalism and boredom
Malicious	Revenge Racism Clashes of belief/rivalries Personal animosities
Psychological	Mental illness Suicide
Criminal	Financial gain and fraud Concealment of other crimes (theft, murder etc)

5.17 Canter and Almond (2000²¹) noted that:

- Nearly half of fires in England and Wales take place in the seven Metropolitan brigades.
- There was a strong relationship between arson and other indications of social exclusion.
- Half of all property arsons, and around a third of vehicle fires, are committed by individuals 18 or under.

5.18 Thus, young fire setter and youth diversion schemes have been pursued.

5.19 Indeed, CLG's Fire and Rescue Service Strategy for Children and Young People: 2006-2010²² noted a range of firesetter and youth diversion methods for young people including:

- To work with families and carers, and partner agencies, to deliver firesetter programmes and other interventions for children and young people who are becoming involved in fire crime or firesetting supported by partnership working with other agencies.

²¹ The burning issue: research and strategies for reducing arson, August 2002, Arson Control Forum. Canter D and Almond L.

²² *Strategy for Children and Young People: 2006-2010*, The Fire and Rescue Service, October 2006, Department for Communities and Local Government:

- To work with parents and carers, the Fire Service Youth Training Association, the Fire and Rescue Service Prince's Trust Support Association, and other partners, to offer youth training and other initiatives which improve life skills and divert young people from fire crime and associated anti-social behaviour.

Situational crime prevention

5.20 At the same time, the concept and practice of situational crime prevention has been developed. The techniques of situational crime prevention have been broken into five general categories by Cornish & Clarke (2003²³):

- Increase the effort required to commit the crime (target hardening, controlling access and exits).
- Increase the perceived risks of detection (extend guardianship and surveillance).
- Reduce the rewards of crime (conceal or remove targets).
- Reduce provocation (discourage imitation and reduce peer pressure).
- Remove excuses (set rules, post instructions and assist compliance).

5.21 These tactics do not necessarily align to any one motivation of arson but instead aim to deter or limit opportunity for arson regardless of its motivation.

5.22 Arson Reduction Teams tend to focus on situational arson prevention by adopting tactics such as target hardening and fuel removal as well as working to detect and investigate arson with possible criminal prosecution.

²³ Cornish DB & Clarke RV 2003. Opportunities, precipitators and criminal decisions. *Crime prevention studies* 16: 41–96.

- 5.23 Target hardening is not a new concept. For example, the United Kingdom Arson Prevention Bureau proposed²⁴ in 1998 a 'five-point plan' for reducing arson within schools which included:
- Deter unauthorised entry onto the site, using for instance good lighting.
 - Prevent unauthorised entry into buildings, by for example ensuring that doors and windows are difficult to break.
 - Reduce opportunity for an offender to start a fire, by ensuring that burnable rubbish (such as paper and cardboard) is at least eight metres from buildings.
 - Reduce the scope for potential fire damage, by designing buildings to confine fire to a limited area, as well as automatic fire detection systems and sprinklers.
- 5.24 However, whilst these tactics are not new, the creation of Arson Reduction Teams is a relatively new way of achieving the implementation of target hardening and other arson prevention tactics.
- 5.25 One possible limitation of situational crime prevention (cited in Muller 2009²⁵) is that, because it targets specific behaviour rather than the root causes of crime (although there is little agreement as to what exactly the root causes are), it may not be so much preventing crime as simply moving, or displacing, it. Crime prevention efforts in a particular community may simply result in the crime's relocation to another community.

²⁴ Arson Prevention Bureau (APB) 1998. *How to combat arson in schools*. APB.

<http://www.arsonpreventionbureau.org.uk/Publications/Files/School%20arson.pdf>

²⁵ AIC Reports, Research and Public Policy Series 98, Using crime prevention to reduce deliberate bushfires in Australia, *Damon A Muller*, Australian Institute of Criminology 2009

Detecting, investigating and convicting

5.26 The detection and conviction strategy was highlighted by Chappell (1994²⁶). He noted that the clearance rate for arson offences was low. For example, during the year 1991-1992 the Australia wide clearance rate was 11.7%. Although more than 6,000 suspicious fires were reported in New South Wales in 1991, only 21 adults were convicted of arson and only one person was sentenced to a term of imprisonment (Hick, 1993:63). He argued that arson could be more effectively 'managed' were priority to be given to the following four broad policy initiatives:

1. Increasing the potential loss associated with engaging in the criminal activity of arson,'
2. Increasing the probability of apprehension and successful prosecution,'
3. Reducing the potential gain associated with the crime,' and
4. Altering the offender's perceived probability of apprehension and prosecution, or altering their risk preference.

5.27 Thus, he highlighted strategy of detection and prosecution as a form of arson prevention through deterrence. However, we have been unable to identify any evaluations on the impact of prosecution of the rate of arson.

5.28 A 2003 paper²⁷ by the Arson Prevention Bureau compared the UK record with that of the United States where there is a higher rate of detection. Of the 72,000 incidents recorded in the US, approximately 10,000 resulted in an arrest, which equates to a detection rate of 17%;

²⁶ Australian Institute of Criminology, national workshop: focus on the arsonist and arson, prevention, 25-26 February 1994. opening address, Duncan Chappell, Director, Australian Institute of Criminology

²⁷ April 2003. Detecting and Convicting the Arsonist: Lessons from the United States. Author: Nick Young, Partner, Head of Property and Construction Insurance, Davies Arnold Cooper, Solicitors. Arson prevention bureau. www.arsonpreventionbureau.org.uk

virtually double that of the United Kingdom. However, of the total number of US arson incidents only 2% resulted in a conviction, lower than that achieved in the UK. They note that a key difference between the US and the UK is that the US at local, state and federal level regularly deploys fire marshals. Fire Marshals have the responsibility of trying to identify the guilty party and of putting together a prosecution before handing it over to the appropriate district or federal prosecuting authorities. This again highlights the issue of detection and investigation, a task that some Arson Reduction Teams aim to support.

Conclusion

5.29 Thus, overall a range of arson prevention strategies have been pursued, covering:

- Education for those at risk of committing arson as a form of vandalism – youth training and diverting young persons from engaging in arson due to boredom – youth diversion.
- Treating those with firesetting behavioural conditions – firesetter programmes.
- Catching and convicting persistent offenders and those who commit arson for criminal purposes – often as part of Arson Reduction Teams.
- Limiting opportunity for arson by target hardening etc. – often as part of Arson Reduction Teams or specific initiatives such as removing abandoned vehicles – situational prevention.

Profile of good practice

Key sources of good practice guidance

5.30 A number of good practice guides have already been produced and issued by the Arson Control Forum and the Department for Communities and Local Government. Thus, an authoritative basis for

defining good practice does exist and was used to define evaluation criteria for this study. The key sources were:

- The Home Office arson reduction toolkit²⁸.
- The Arson Control Forum provided guidance on good practice and a series of research bulletins^{29, 30, 31} covering issues such as interventions with arsonists and how to implement arson prevention projects.
- The Arson Control Forum also reported an evaluation of arson prevention interventions³² as well as reports evaluating various arson prevention schemes.
- CLG have issued guidance on the conduct of arson prevention, including setting up arson task forces³³ covering issues such as:
 - Defining objectives.
 - Agreeing protocols with other agencies.
 - Use of geographic information systems and multi agency data sharing.
 - Setting up the team.
 - Typical interventions, such as boarding up, removing derelict vehicles, refuse removal, education, detection and investigation etc.
 - Monitoring and evaluation.
- The Home Office arson reduction toolkit.
- Evaluation of the Arson Control Forum's New Projects Initiative³⁴.
- The Burning Issue: Research and Strategies for Reducing Arson³⁵.

²⁸ <http://www.crimereduction.homeoffice.gov.uk/toolkits/an00.htm>

²⁹ Research Bulletin 4 – Social Exclusion and the Risk of Fire. Arson Control Forum

³⁰ Research Bulletin 2 – Implementing Arson Reduction Projects: Findings from the Arson Control Forum's New Projects Initiative

³¹ Research Bulletin 3 – Tackling Vehicle Arson: Vehicle Removal Scheme. Arson Control Forum

³² <http://www.communities.gov.uk/publications/fire/researchbulletinno>

³³ <http://www.communities.gov.uk/publications/fire/workingtogetherhow>

³⁴ <http://www.communities.gov.uk/publications/fire/evaluationarsoncontrol>

³⁵ <http://www.communities.gov.uk/publications/fire/burningissue>

- Up in Flames: A Report of the Community Fire Safety Working Group into Arson³⁶.
- Evaluation of Arson reduction teams in Wales³⁷.
- Wales Arson Reduction Strategy - Report of the Joint Arson Group August 2007³⁸.
- Arson About³⁹.
- Crime on school premises reduced thanks to Assembly Government grants⁴⁰.
- Evidence Lead Solutions – Evaluation of the Arson Reduction Teams in Wales⁴¹.
- Research into the effectiveness of youth training and diversion schemes⁴².
- Safer communities: towards effective arson control⁴³.
- Arson Control Forum Annual Report (2003)⁴⁴.
- The burning issues: research and strategies for reducing arson⁴⁵.

³⁶ <http://wales.gov.uk/topics/housingandcommunity/safety/publications/upinflames?lang=en>

³⁷ http://www.mawwfire.gov.uk/performance_eng/index.asp

³⁸

<http://wales.gov.uk/topics/housingandcommunity/safety/publications/arsonstrategy1/:jsessionid=D5ngKvdfGZjPGZkgnC9DyXvtThCWjwVpKfQBGYTnwXVQvWfbhVqc!58552806?lang=en>

³⁹ [http://www.wmarsontaskforce.gov.uk/arson-](http://www.wmarsontaskforce.gov.uk/arson-about.jsp)

[about.jsphttp://www.scotland.gov.uk/Publications/2005/12/06151104/11051](http://www.scotland.gov.uk/Publications/2005/12/06151104/11051)

⁴⁰ <http://wales.gov.uk/topics/housingandcommunity/news/crimeschoolprem/?lang=en>

⁴¹ Payne et al (2007) Evaluation of the Arson Reduction Teams in Wales. Evidence Lead Solutions

⁴² Research into the effectiveness of youth training and diversion schemes. A final report to the Office of the Deputy Prime Minister (2006). ODPM: London

⁴³ Safer communities: towards effective arson control. The report of the Arson Scoping Study. Home Office

⁴⁴ Arson Control Forum Annual Report (2003) ODPM

⁴⁵ Canter & Almond (2002) The burning issue: research and strategies for reducing arson. ODPM

5.31 A profile of good practice would include the following:

Scanning

5.32 Scanning identifies types of arson incidents and where they are taking place. This helps to focus the initiatives. When developing a new scheme time should be allowed for design, planning and accessing resources. Some schemes can take six months or more to set up with larger and more complex schemes taking longer. Trial runs of the scheme may need to take place so any adjustments can be made. The scheme can then be launched with confidence.

5.33 Scanning was found to be beneficial when implementing the Arson Control Forum's New Projects Initiative. This aided the bidding process as a problem was able to be identified along with suitable interventions. One partnership within the arson control forum conducted substantial scanning and analysis of data before the commencement of a project. This established what the particular problems were across the country and the locations that could be classified as 'hotspots'.

5.34 When establishing an Arson Task Force is it important that all agencies who would be involved are contacted and informed of the general aims and objectives of the task force. This gives them the opportunity to contribute suggestions regarding the direction of the task force.

Targeting

5.35 Targeting of arson work can be done by area, arson activities and types of offender. Successful implementation of arson projects can depend on having a good understanding of the target audience of the project. For example, understanding the issues surrounding ethnic minorities in an area and helping with any cultural problems that may be encountered.

5.36 Employing people for arson reduction work that have good knowledge of the local area has ensured initiatives have been run more efficiently. For example, these people may include those who have knowledge of how the fire service operates and the personalities involved, people with good contacts in other agencies (this assists with rapid implementation), and people with good geographical knowledge of the area (to help identify 'hotspot' locations).

Analysis

5.37 Many systems have been identified to understand the numbers of deliberate fires that have occurred, the locations of these fires and the types of buildings where the fires occurred. It has been found that identifying key factors that generate problems within local areas can aid current and future implementation.

5.38 Fire service data and police data has been used. Geographical Information Systems have also been useful in identifying 'hotspots'. In some areas, the ability to conduct detailed data analysis was facilitated by data exchange protocols. These help to fill the gap between the police and fire service recording and help to share data between organisations. One data sharing example comes from South Tyneside where a database was introduced to hold information recorded by two organisations in a partnership. Although this involved a lot of re-keying data recorded by the police on the database it provided a more complete picture of the local arson problem.

Strong partnership working

5.39 Partnership working has been regarded as very important for arson reduction work. It has been found that when partnerships work well they achieve a great deal more than FRSs working individually. Working in close partnership with other agencies can provide access to a wide range of professional expertise and support. It is important to

involve other agencies when identifying the need and defining a project. One way to ensure that partnerships work well was to identify individuals from other organisations that work at appropriate levels, with the necessary authority to make decisions, without reference back to the line-management structure.

5.40 Partnerships can be formed on an informal basis by using existing links with outside agencies and personal contacts of fire fighters. However, more formal partnerships can be formed through a range of multi-agency forums and partnerships. These are replicated in all local areas such as Crime and Disorder Reduction Partnerships (CDRPs). These CDRPs often include police, probation, local authorities, health and voluntary sectors and review a three year strategic plan for the local area. Becoming involved in these partnerships will enable FRSs to gain a wider picture of other community safety schemes and local strategic priorities. CDRPs can also help ensure funding for schemes. In Cleveland, Safe in Tees Valley has been a key strategic partner and funding body for a range of schemes that involve the FRS. This has placed the FRS in a good position to link with other local partners working in the field of antisocial behaviour reduction.

5.41 Information and data sharing can ensure that a partnership works effectively. More needs to be done to allow information sharing between agencies on issues such as patterns of arson, techniques of offenders and risk to communities. The creation of a database would allow FRS and police data to be shared and would result in benefits such as collaboration of police and fire services in the targeting of car crime and subsequent car fires. Protocols for sharing information by relevant agencies on a local basis should be encouraged. However, barriers such as data protection issues need to be addressed.

5.42 Partnership working is very useful for youth schemes. For example, working with Youth Offending Teams (YOTs) can help FRSs tailor modules of their youth training schemes around the needs of the young

people. In one area, an FRS seconded a fire fighter to the YOT based at their premises to deliver group work in five locations throughout a local housing estate with young people who have been involve in offences.

Management process

5.43 Formalising partnerships help to ensure that schemes run efficiently and make the best use of available resources. One approach to this is to set up a joint Partnership Management Board. This will enable senior representation from partners to be involved, links can be built at all levels and new opportunities can be created. Service level agreements (SLAs) and a memorandum of understanding can also enable effective partnership working. These can provide a formal basis for identifying who is responsible for what. For example, in the case of youth schemes a SLA could set out that the FRS would provide ten hours of training for young people referred through the YOT per week.

Monitoring and evaluation

5.44 Robust monitoring and evaluation procedures are crucial to shows the effectiveness of an intervention programme and to justify funding and continued support for the programme. This is particularly needed for fire setting interventions for children and young people. For example, formal needs assessments before and after the programme is needed to determine continued fire setting behaviour. Attendance and non-completion should also be monitored in order to highlight any consistent problems.

Types of interventions

5.45 The good practice guidance cites a range arson prevention interventions. These schemes focus on:

- Situational prevention.
- Education and youth diversion.
- Firesetter treatment.
- Detection and investigation.

5.46 The following provides a summary of some of the arson reduction interventions that are taking place, often by or with the support of Arson Reduction Teams:

Situational prevention

Target hardening

5.47 Target hardening of hotspots can improve detection by the installation of measures such as better locks, fences, CCTV, restricting access to areas. Arson boards can also be erected to encourage members of the public to come forward with any information they may have on arson incidents.

5.48 Local Education Authorities recognise that schools are vulnerable to arson, especially those in high risk areas. Target hardening approaches include deterring unauthorised entry to the site; preventing unauthorised entry to the building; reducing the opportunity for an offender to start a fire; reducing the scope for potential fire damage; reducing subsequent losses and disruption resulting from a fire. Given the involvement of pupils and local youths in school arson attacks, training and preventative education in schools about the risk of fire is given high priority.

Removal of fuel

- 5.49 Removal of fuel related interventions are aimed at reducing the risk of arson occurring by removing materials that could be set alight. These include:

Removal of vehicles

- 5.50 Deliberate vehicle fires can count for a large number of fires. In 2001, 79% of car fires in the UK were caused by arson. The types of projects that are included in these schemes are those that aim to prevent vehicles becoming abandoned, projects that remove abandoned vehicles and projects that remove burnt out vehicles. One example of a project lies with the Ely Arson Reduction Team who worked with DVLA to arrange daylong events, where DVLA Enforcement Officers removed untaxed and abandoned vehicles in the area. The ART also worked with the police and encouraged them to report untaxed vehicles to the ART.

Removal of rubbish

- 5.51 Interventions have been in place to clear local areas of rubbish that can be used in fires. Actions included in these schemes have included owners of land being made aware of their legal requirements to clear and secure their site, multi-agency clear up days where local areas are targeted and refuse is removed and researching if fly tipping areas were hotspots for arson.

Derelict buildings

- 5.52 Boarding up void and derelict buildings is a high profile objective and often requires close working with local authorities and private landlords. Many schemes not only identify and board up derelict buildings but also those that are in danger of becoming derelict or abandoned. Temporary boarding with timber is only successful for short term effects; metal mesh style boards are more cost effective for long term derelict properties. Security fencing and site security for demolition is also

essential. This can be linked to diversionary schemes to re-direct young people's attention. Properties are also monitored regularly to ensure any further problems are dealt with.

Awareness raising

- 5.53 The main purpose of these schemes is to raise awareness regarding the risk associated with arson, which in turn is intended to increase the likelihood that those at risk would take action to address the problem. Awareness raising has taken the form of leaflets, posters and provision of advice to organisations such as schools, community groups and businesses.

Youth work

Diversionsary schemes

- 3.158 These schemes are intended to steer young people away from behaviour that is likely to place them at 'risk' such as fire setting behaviour, hoax calls and attacks on fire fighters as well as other antisocial and criminal behaviour, educational exclusion, drug and alcohol misuse or family breakdown. Young people are often referred to these schemes by Youth Offending Teams and the Connexions Service might refer young people not in education, employment or training, care leavers or young people with mental health problems.

Education

- 5.54 Fire Awareness Child Education (FACE) aims to educate children ages 4-12 years who play with fire, involving the family unit. It aims to change a child's attitude towards fire and provides advice to parents and carers by phone. Home visits are carried out and a child is then given projects to complete which have been designed to promote awareness of fire safety. The scheme encourages a multi-agency approach. If children persist in fire setting behaviour they will be

referred to more appropriate agencies such as social services or mental health services.

Firesetter counselling

Psychosocial approaches

- 5.55 These interventions are aimed at juvenile firesetters with psychological conditions and have included cognitive-behavioural skills training to encourage appropriate expressions of anger and emotions, behavioural family therapy to restore parental boundaries and help implement effective communication and problem solving skills. They also have included contingency management strategies to discourage involvement with fire and reinforce contact with non-incendiary materials.

Detection and investigation

- 5.56 Close working with the police take place to help detect arson incidents. This can include data sharing, and joint training. Protocols have been put into place to allow quick access to fire scenes, exchange of information, including forensic and physical evidence. Training fire fighters in crime scene management and preservation is also essential as it is possible that vital evidence can be missed during the early stages of an incident.
- 5.57 Training and understanding of partner requirements is a pre-requisite for fire investigation practice. A number of courses are available catering for different levels of need. For example, the Fire Service College offers a two- week course providing theory and practical skills. The access level is aimed at students with a fire service background, but with some preparatory work, Police Officers have also found it very useful.

5.58 'Crimestoppers' is an initiative operated on behalf of police forces in Great Britain. Rewards are offered for information provided by members of the public for information leading to arrests. The initiative is funded by the Community Action Trust and brings together at regional level, local businessmen and other interests. Witnesses are encouraged to phone in on a free phone number.

Review of previous research

Key findings

Level of evidence

5.59 There is a moderate level of evidence regarding the impact of arson prevention schemes. The evidence is constrained by:

- Many schemes relying on subjective self assessment rather than outcome based impact assessments.
- A lack of data to support evaluation.
- In the case of firesetter counselling work, evaluations tend to be limited to case studies rather than statistical comparisons of before and after offending rates for people who have and have not had counselling.

5.60 Indeed, the most recent UK evaluation in 2009⁴⁶ of the Fire Prevention Grant in England was unable to provide any clear results due to a lack of data on the interventions carried out.

3.159 Overall, conclusions on the impact of arson prevention are as follows:

- **Most evidence – situational prevention (including arson reduction teams).**

⁴⁶ <http://www.communities.gov.uk/documents/fire/pdf/homefireriskcheckgrant.pdf>

There are more impact evaluations of situational prevention schemes, including Arson Reductions Teams than the other strategies.

- **Little evidence – firesetter counselling and youth diversion.**

There is little evidence regarding the impact of firesetter counselling and youth diversion work.

- **No evidence – detection, investigation and conviction.**

We did not identify any evaluation of the impact of increasing arson detection, investigation or convictions.

3.160 We were unable to identify any benchmarks or metrics with which to evaluate the productivity of the ARTs or FRSs.

Reported impacts

5.61 The results can be summarised as follows:

Situational prevention

5.62 The evidence is mixed with some studies reporting clear impacts and others failing to detect impacts. Historically, arson has been related to issues such as rates of unemployment and crime. However, in recent years dramatic rises in crime have not been experienced, resulting in uncertainties that the past relationship remains true. However, car fires have recently coincided with economic boom due to a rise in the price of scrap metal. It can be speculated that socio-economic trends affect the possibility of detecting impacts that the early evaluations of UK arson reduction teams occurred when arson was rising, whilst more recent studies coincided with economic related declines in arson.

5.63 Nonetheless, some studies have reported significant impacts of situational prevention schemes. These studies tend to compare before and after trends in target areas with other comparison areas. This is a reasonably robust method. However, we did not identify any studies that explicitly attempted to check for ‘displacement’ effects, where for

example target hardening displaces arson from one area to another. This does create some uncertainty in the conclusions.

Firesetter counselling

- 5.64 The evaluations of firesetter counselling do report very low re-offending rates. However, the evaluations are few in number, are limited in size and rely on reoffending as an outcome measure rather than area based rates of arson.

Young firesetter interventions

Overseas studies: USA

- 5.65 A number of US studies have reported that young firesetter programmes have been associated with reduced firesetting. These are summarised below.
- 5.66 Franklin et al (2002)⁴⁷ reviewed the USA 1999 multidisciplinary Trauma Burn Outreach Prevention Program (TBOPP), which focused on the medical and societal consequences of firesetting behaviour. The study determined the value of this trauma burn centre prevention programme. Juveniles (ages 4-17 years) were enrolled into a 1-day programme on the basis of referrals from the county court system, fire departments, schools, and parents. The programme emphasised individual accountability and responsibility. The court system and fire departments tracked all episodes of firesetting behaviour within their respective communities. The recidivism rate was determined using fire department and court follow-up records. Follow-up was from 8 months to 2.5 years. A random control group that did not receive TBOPP

⁴⁷ Decreased juvenile arson and firesetting recidivism after implementation of a multidisciplinary prevention programme. Commentary. The Journal of trauma, injury, infection, and critical care. FRANKLIN Glen A. ⁽¹⁾; PUCCI Pamela S. ⁽¹⁾; ARBABI Saman ⁽¹⁾; BRANDT Mary-Margaret ⁽¹⁾; WAHL Wendy L. ⁽¹⁾; TAHERI Paul A. ⁽¹⁾. 2002, vol. 53, n^o2, pp. 260-266

education (noTBOPP group) with identical entry criteria was used for comparison. There were 132 juveniles in the TBOPP group (66 arsonists and 66 firesetters) and 102 juveniles in the noTBOPP group (33 arsonists and 66 firesetters). The recidivism rate was 1 of 32 (<1%) for the TBOPP group and 37 of 102 (36%) for the noTBOPP group (adjusted odds ratio, 0.02; $p < 0.001$). Thus, when compared with the noTBOPP group, TBOPP participants had essentially no recidivism. The implementation of a juvenile firesetting prevention program has demonstrable benefits to the participants and to society.

5.67 US research from Rochester and Portland found that programmes designed for children living in difficult family situations have reported some success. For example, for the five-year period in Rochester (1983-87) during which every family judged to be in need of services was referred to either a social service or mental health agency, repeat firesetting was reduced 74%. Once this program ended, recidivism increased again (Cole et al., 1999)⁴⁸.

5.68 One study in the United States has evaluated fire-setting interventions up to a year after the intervention occurred (Kolko 2001⁴⁹). Forty-six boys aged five to 13 years, who had set fires that had damaged property in the past three months, were assigned randomly to either a cognitive-behavioural treatment (CBT) or fire safety education (FSE) group, or selected for a brief home visit from a fire fighter (HVF). There was a large decrease between pre and post measurements, from an

⁴⁸ Cole, R., Grolnick, W. & Schwartzman, P. (1999). Firesetting. In Ammerman, R., Hersen, M. & Last, C. (Eds). *Prescriptive Treatment for Children and Adolescents* (pp. 293-307). Boston: Allyn and Bacon. Rochester Fire Investigation Report (1988). Eyewitness account. Juvenile Firesetter Intervention Research Project. Final Report,, 03/30/2001, National Association of State Fire Marshals.

<http://www.firemarshals.org/data/File/docs/NASFM%20Final%20Report-Rev101b.pdf>

⁴⁹ Kolko DJ 2001. Efficacy of cognitive-behavioural treatment and fire safety education for children who set fires: initial and follow-up outcomes. *Journal of child psychology and psychiatry* 42(3): 359–369

average of 4.4 fires per boy per six months to less than 0.5 fires per boy per six months over the three treatments. These decreases were statistically significant at the 99 percent confidence level, indicating that all three interventions were effective in reducing the children's fire-setting activities. The longer-term effectiveness of the interventions was indicated by the continuing low numbers of fires set between six and 12 months after intervention during the follow-up period. This pattern of results was duplicated in the data of playing with matches.

UK reviews

5.69 Cognitive-behavioural treatments are one form of intervention for young and adult firesetters, with treatment on an individual basis. Palmer et al (2005⁵⁰) noted that whilst these interventions have been evaluated the evaluations tend to be case study based, tracking any reoffending of participants. Palmer et al (2005) reported that:

- The literature on interventions with adult arsonists is sparse.
- There is little information about their outcomes and effectiveness.
- Few long-term evaluations of the effectiveness of interventions with young firesetters exist, making it difficult to draw firm conclusions as to 'what works' in reducing their firesetting behaviours.
- The evidence is predominately North American in origin, and the results may not generalise to other countries.
- Research into interventions with adults tends to be case-studies, making it hard to generalise results to the wider population.
- It is not clear 'what works' with young firesetters and arsonists meaning that the development of new programmes starts from a limited knowledge base.

5.70 Palmer et al also reviewed the UK fire setter schemes in the 2005 report. The review identified 47 interventions, 33 educational, 11

⁵⁰ Evaluation of interventions with arsonists and young firesetters. March 2005. Emma J. Palmer, Laura S. Caulfield & Clive R. Hollin. University of Leicester. ODPM.

educational and cognitive behaviour, 4 other educational. These were mostly partnership based. They noted that there was a lack of good practice in monitoring and evaluating UK firesetter interventions. They did note that a key element of good practice is to do a fire setter interview to assess threat, risk of recidivism and treatment needs and that schemes did engage and motivate firesetters, as measured by a low drop-out rate.

5.71 This finding was also quoted in the 2005 Arson Control Forum bulletin⁵¹, namely that:

“There is a lack of large scale-evaluation studies of intervention programmes with both young firesetter and adult arsonist populations”. (p1)

Youth diversion and training schemes

5.72 The 2006 review⁵² of UK youth training and diversion schemes noted that there was no statistical impact assessment, just self reported feedback. The review covered 332 schemes in England, a 70% response rate from 33 FRSs. It did quote one study in Tyne and Wear of the Phoenix project that was evaluated by Newcastle University using both qualitative and quantitative methods. The project was reported to be achieving its aim of reducing offending and antisocial behaviour, citing evidence that 44% of participants did not re-offend. The review also found that the majority of the scheme participants returned to school or other forms of training upon completion. However, no other evaluation was cited in this report. They noted that:

⁵¹ Interventions with arsonists and young firesetters, Arson Control Forum Research Bulletin 6, May 2005.

⁵² Research into the effectiveness of youth training and diversion schemes. ODPM, March 2006

- Around a third of schemes did not undertake any performance monitoring, and two thirds reported no arrangements for evaluating effectiveness of schemes.
- The absence of data, which would provide evidence of the success of individual schemes, was likely to have hindered the progress of the Service in other areas (such as accessing funding).
- No consistent information was available to assess the impact of schemes.

5.73 A similar conclusion has been reported in Australia. Muller & Stebbins (2007⁵³) reported that “*At present there is little that can be said about the effectiveness of Australian juvenile-arson intervention programmes as a form of secondary crime prevention, as few of them have been subject to any formal evaluation, particularly in regard to reoffending*”. Whilst the programmes appear to be consistent with the international literature, the extent to which they prevent future arson and are a cost-effective solution is not yet known.

Situational fire prevention

5.74 A series of studies are presented in an approximate chronological sequence. These studies cover situational fire prevention. However, some of the interventions included elements of interventions that do not fall neatly into any one category.

⁵³ Muller DA & Stebbins A 2007. Juvenile arson intervention programmes in Australia. *Trends & issues in crime and criminal justice* no. 335.

<http://www.aic.gov.au/publications/tandi2/tandi335.html>

Australian study circa 1987

- 5.75 Allsopp⁵⁴ reports on a target hardening scheme in Australia in schools. Breaches of security rose from 1542 in 1971/72 to 4515 in 1986/87, with many schools fires 156 in 1985/86. Seventy one schools were connected to the Department of Education's electronic surveillance system, employment of security guards, there was better security and burglar alarms will to be installed in 100 'high risk' country schools. They also report the introduction in some schools of a Community School Watch Scheme where members of a Parents and Citizens Association patrol schools voluntarily. As a result of the electronic surveillance program, over 120 offenders have been apprehended. Major reduction in incidents were reported, with a drop in the number of fires in the July-October figure of 1987 (35 fires) compared with the same period in 1986 (45 fires).

1997 Northumbria review

- 5.76 The first report identified in this review regarding Arson Reduction Teams in the UK cites Northumbria. The Northumbria Arson Task Force was set up in 1997. In addition to a multiagency approach to investigation, detection and prevention, it worked on target hardening, securing premises, removal of refuse and derelict vehicles. A Home Office report⁵⁵ states that arson had fallen from being 73% of all primary fires to being 53%. However, the report did not compare this trend to other areas where arson task forces had not operated nor did it state what the trend was before the task force started. The report also noted that juvenile fire setter schemes quote a low rate of recidivism but that there was little statistical evaluation of these schemes.

⁵⁴ Preventing criminal damage to schools, John Allsopp, Director, Properties, Department of Education, New South Wales

⁵⁵ Safer Communities: Towards Effective Arson Control. The report of the arson scoping study. Home Office.

2000 Newcastle review

- 5.77 Next, Marsh (Marsh 2000⁵⁶) reports an evaluation of the effectiveness of the Newcastle Arson Task Force, a two year project funded by the Association of British Insurers, via the Arson Prevention Bureau. The study found that in the task force areas there was a significant reduction in deliberate fires in property and those involving litter, refuse and derelict furniture compared to Tyne and Wear area. The report details the initiatives and incentives achieved by multi-agency /multi-jurisdictional working which have achieved substantial reductions in intentional firesetting and arson, coupled with increased community safety education and general social improvements to the environment of the West gate project area.
- 5.78 The majority of work carried out involved the formation of essential partnerships (Local Authority Refuse, Housing, Education and Environmental Health Departments) required to restrict the amount of fuel available to the opportunist arsonist, such as securing void and derelict properties, the prompt removal of derelict or abandoned vehicles and removal of dangerous LPG cylinders. The study reported that these environmental areas achieved: -
- 22.7% reduction in intentionally set fires in property.
 - 23.7% reduction in intentionally set fires in un-occupied property.
 - 30.7% reduction in intentionally set fires involving refuse, litter and derelict furniture.
 - 62% reduction in malicious hoax calls to the Fire Service.
- 5.79 While there has been no decrease in the number of malicious vehicle fires in the task force area, fires involving vehicles did not increase. However, there has been an increase of 22.2% increase over the whole of the Tyne and Wear Fire Brigade area, indicating that the work

⁵⁶ Marsh S. 2000 the way forward: evaluation of arson prevention strategies in Tyne and Wear.

carried out by the Arson Task Force (ATF) with the project area may be impacting on this crime.

- 5.80 The ATF also pursued immediate questioning of witnesses and preservation of the crime scene. The detection rate increased to 15% compared to the national detection rate for arson of 8.8%.
- 5.81 The Newcastle ATF became a model for similar ATFs funded through Arson Control Forum New Projects Initiative, which led to many ATFs being set up across the UK.
- 5.82 At this time Canter and Almond reported⁵⁷ that “it is noticeable that very few approaches are systematically monitored or evaluated” (p19). They also noted a link between scrap metal and car fires between 1995 and 2000. They noted that the large overall increase in arson fires, 29% between 1996 and 2001, was almost solely due to the rise in arson of road vehicles. These rose by 46% over the period and in 2000 accounted for 64% of all arson fires in England and Wales.

2003 Welsh review

- 5.83 A 2003 Welsh study⁵⁸ reported on projects carried out in Wales in 1999, 2000, and 2001 which focused on car fires, in partnership with the police. They noted that:
- Swansea – They target hardened sites where cars were abandoned. They found that fires fell compared to a rise elsewhere, although it could not say whether the scheme simply led to vehicles being abandoned in other areas. Car fires were rising elsewhere at this time (1999-2001). They could not relate change to hardened sites due to data limitations.

⁵⁷ The burning issue: research and strategies for reducing arson, August 2002, Arson control forum.

⁵⁸ Up in flames. A report of the community fire safety working group into arson. February 2003. Report by Welsh Joint Arson Group.

- Merthyr Tydfil – This involved a vehicle recovery partnership. Whilst there was no baseline, there was no apparent change in arson in the area but it rose elsewhere.
- Wrexham – This scheme involved removal of abandoned cars. It noted that a rising trend may have been “stemmed” but there was very limited time period to assess.

Arson Control Forum funded projects (2001 onwards)

5.84 One of the key findings of the Arson Scoping Study *Safer communities – towards effective arson control* was the need for greater inter-agency working to address the arson problem. The Arson Control Forum was established by the UK government to provide the framework for that inter-agency partnership. In 2001/2 and 2002/3, £2.1 million was allocated to a total of 43 local projects, all of which reflected the multi-agency partnership approach to the arson problem to varying degrees. Indeed in April 2001, the Arson Control Forum’s New Projects Initiative (NPI) was launched in England and Wales. Funded by the Office of the Deputy Prime Minister, the NPI projects were designed to tackle arson using a variety of interventions. Between 2001 and 2003, the NPI funded 45 projects over two rounds of bidding. In addition to this a new round of projects commenced in 2004.

5.85 Under Arson Control Forum funding, ART schemes similar to the Newcastle one were launched in a number of areas from 2001/02 onwards, including Luton and Bedfordshire, London and Mid and West Wales.

2005 Arson Control Forum review

5.86 The 2005 Evaluation of the Arson Control Forum’s New Projects Initiative⁵⁹ included a statistical impact assessment, with before and

⁵⁹ Evaluation of the Arson Control Forum’s New Projects Initiative. January 2005 technical annex. Evaluation by ELS Brown, R, Hopkins M, Cannings A and Raybould S.

Evaluation of the Arson Control Forum’s New Projects Initiative. Summary of findings

after comparison, although there were limited time periods of 1 year in some cases. The review covered:

- 31 evaluated projects in England.
- 18 projects focussed on vehicles, 9 projects focussed on refuse, 8 projects focussed on schools, 6 projects focussed on business, 6 projects focussed on derelict buildings, 5 projects focussed on bonfires, 2 projects focussed on grassland and 1 project focussed on vulnerable populations.

5.87 They involved fuel removal, awareness, diversion, youth work and detection. Some schemes involved ARTs.

5.88 The analysis of impact employed a basic quasi-experimental design in which changes in deliberate fires were observed before and after intervention in the target area/group. The type of deliberate fires selected for analysis was specific to the type of fire being addressed. For example, if a project tackled deliberate vehicle fires, then the analysis focused on deliberate vehicle fires. Analysis in the target area was compared to changes over the same time period in a 'basket' of comparison areas.

5.89 They found that:

- The gap between 19 target areas and comparison areas did widen over the duration of the projects;
- Where local projects have been set up, they had a significant impact on the level of deliberate firesetting with the number of such fires falling by about 2%. In comparable areas where no action had been taken to address deliberate fires, they increased by about 27%. In other words, had the projects not been run, they could have expected nearly 30% more fires.

- In the case of vehicle fires the rate of increase was less in target areas than comparison areas, a 20% increase versus 29% in year 1, and in year 2 a 2% fall in target areas versus a 27% increase in comparison areas.
- 14 out of 19 showed an impact with 7 showing a fall, 4 showed less increase than comparison areas.
- An impact was seen about 8 months after start.

2006 Arson Control Forum review of Implementation Fund

5.90 The Implementation Fund was designed to consolidate findings from the evaluation of the Arson Control Forum's New Projects Initiative, by funding a small number of approaches that had been shown to be cost-effective. The Implementation Fund consequently invested over £9 million in 66 projects that aimed to reduce arson between April 2003 and March 2006. A 2006 evaluation⁶⁰ did not seem to include any evaluation of this fund.

2007 Welsh review

5.91 A 2007 review of the Welsh ARTs⁶¹ noted:

- The rate of deliberate fires in the Ely Art area was declining prior to the ART team (prior to January 2005), then levelled off before rising after March 2006 and falling after July 2006, i.e. there was no clear impact of the ART.
- There was a sudden drop in refuse fires after the Ely ART started;
- None of the changes in Ely were statistically significant.
- There was no evidence of an improving trend in the North Wales, Swansea and Neath Port Talbot ART area in deliberate fires with past trends either continuing to fall or levelling off.

⁶⁰ February 2006. ARSON CONTROL FORUM. Evaluation of the Arson Control Forum. Research Bulletin no. Implementation Fund: Emerging Findings

⁶¹ ELS Evaluation of Arson Reduction Teams in Wales. June 2007. Payne S, Read T and Cannings A.

- A comparison between trends in the ART areas and FRS family groups and E&W did not show that the ART areas had greater change, with the exception of North Wales and Swansea – but none greater than E&W as a whole.
- Vehicle fires fell more than in comparison areas.
- Education fires did not show a clear trend.
- Secondary fires may have fallen more than in comparison areas.

5.92 However, our own review of this study noted that no account was taken of scrap metal price and whilst rates in target areas fell more than in comparison areas, the prior trends were also better in those areas.

2009 Australian forum

5.93 In 2009 a National Forum⁶² was formed in Australia after the 2009 bushfires that killed 173 people to look at examples of bushfire arson prevention initiatives from around the country, and identify national priorities for action. It concluded that there was a need for greater cooperation between fire agencies, police, social services, the criminal justice system, and all levels of government, to address bushfire arson effectively. Some key tactics cited included:

- Utilise fuel reduction and community education programmes in high risk fire and arson areas at the urban-rural interface consistent with land management objectives.
- Crime prevention and criminal justice - These are actions by which bushfire arson crimes are prevented, criminal conduct investigated, and alleged offenders prosecuted. These actions recognise that many deliberately lit bushfires may be preventable utilising crime prevention techniques.
- Community education.
- Evidence based solution e.g. hot spot analysis.

⁶² Report on the National Forum to Reduce Deliberate Bushfires in Australia 25 March 2009. Outcomes of the National Forum to Reduce Deliberate Bushfires in Australia 25 March 2009 Page 2 of 10, Australian National Government

- Enabling actions – information sharing.

- 5.94 These actions are similar to those carried out by Arson Reduction Teams.
- 5.95 Whilst the forum did not cite evidence in support of their list of key tactics, other studies do provide some evidence.
- 5.96 The effectiveness of situational crime prevention in the context of outdoor fires has been assessed in the USA and Australia. In particular, fuel reduction by prescribed burning is reported⁶³ to reduce the amount of easily combustible material available. Grazing, mulching and pruning is reported to also obtain the same effect. The controlled use of fire burns the dry undergrowth and debris on the forest floor. Increased and appropriate use of fuel reduction was central to many of the key recommendations made in response to the Australian bushfires of 2009 that killed 173 people.
- 5.97 The Fire and Emergency Services Authority (FESA) of Western Australia commenced its arson reduction program in December of 2001 as a community centred, multi-agency approach to deliberate bushfires in Western Australia (Smith 2004⁶⁴). Rather than identifying and targeting individuals, the program focuses on the community as a whole in an effort to raise awareness and thereby reduce deliberate firesetting. This included primary school presentations, shopping centre display and house to house visits. Smith (2004) reports that in all instances arson, bushfire numbers have declined following the intervention. He notes, however, that it has so far been used primarily in town and suburban environments, and has not been tested on more isolated communities.

⁶³ A Nation Charred report (House of Representatives Select Committee 2003). Australia.

⁶⁴ Smith RD 2004. Community centred bush fire (arson) reduction. Paper presented at 11th annual AFAC conference and inaugural Bushfire CRC conference, Perth, Western Australia

5.98 Similarly, research from the United States is reported to supports these conclusions, having found that bushfire arson was less likely following prescribed burns (Prestemon & Butry 2005⁶⁵).

⁶⁵ Prestemon JP & Butry DT 2005. Time to burn: Modeling wildfire arson as an autoregressive crime function. *American journal of agricultural economics* 87: 756–770

6. Appendix B: Evaluation criteria

Introduction

6.1 From looking at previous research and evaluations of arson reduction work, the following evaluation criteria were developed for the evaluation of the Arson Reduction Programme in Wales. These criteria are noted below.

Delivery of arson reduction work

6.2 To what extent is arson reduction work delivered?

6.3 In particular, to what extent:

- Did the ARTs deliver arson reduction interventions using WG funding?
- Did the arson reduction activity carried out by the ARTs reflect the level of WG funding received?
- Was WG funding used to develop the ARTs to full capacity?
- Did the ARTs deliver activities to their full capacity?

6.4 As previously noted, we were unable to identify any benchmarks or metrics with which to evaluate the productivity of the ARTs or FRSs.

Links with strategy

6.5 To what extent is arson reduction work carried out related to national strategy?

6.6 In particular, to what extent:

- Is there a clear link between the aims of the WARS, the aims of the ARTs and the interventions carried out by the ARTs?

- Are the outcomes of the ART's activities related to the aims of the WARS?

Consistent with good practice – ARTs

6.7 To what extent is the conduct and management of the Arson Reduction Teams consistent with good practice, as elaborated below?

Planning and management

6.8 To what extent have the ARTs planned and managed their arson reduction work?

6.9 In particular, to what extent:

- Do the ARTs have set targets to reduce deliberate fires?
- Do the ARTs have targets to achieve levels of arson reduction work?
- Is there good internal management of the arson reduction work?
- Is there a schedule of arson reduction work set?
- Is there a range of staff involved in carrying out the arson reduction work?
- Are there staff seconded from other organisations, such as the Police?

Working with other ARTs in Wales?

6.10 To what extent:

- Do the teams work with the other ARTs in Wales for their arson reduction work?

Scanning

6.11 To what extent do the ARTs conduct scanning of arson incidents?

6.12 In particular, to what extent:

- Is scanning conducted on a regular basis, e.g. daily/ weekly?
- Do the ARTs refer appropriate work to FRSs?

Monitoring performance

6.13 To what extent do the ARTs monitor their performance?

6.14 In particular, to what extent:

- Has the amount of each type of arson work carried out been tracked and compared against targets at a local level and central level?
- Does the arson work carried out undergo quality checks?
- Has an evaluation of the arson reduction work been carried out to determine the impact on outcomes?

Targeting

6.15 To what extent has arson reduction work been targeted?

6.16 In particular, to what extent:

- Has the arson reduction work been targeted at incidents that are an issue for Wales?
- Has the arson reduction work been targeted by:
 - Area (areas of high numbers of incidents)?
 - Type of arson?
 - Type of offender?
 - Time of year?
- Has FRS fire data and Police incident data been used to target the arson reduction work?

Interventions

6.17 As regards interventions:

- Do interventions match good practice elsewhere?
- To what extent are partnerships used for interventions?
- Is there a member of the ART responsible for managing any partnerships?
- Do the ARTs carry out the following types of interventions:
 - Awareness raising – to what extent:
 - Do the ARTs conduct visits to provide advice on arson?
 - Do the ARTs provide information on issues such as the consequences and cost of arson?
 - Is information provided at relevant times e.g. advice provided to schools prior to the summer holiday period?
 - Are key members of the community worked with to help the ARTs reach the public?
 - Are a range of materials used to provide information to the community e.g. posters, leaflets etc.?
 - Removal of fuel – to what extent:
 - Are there activities in place to remove abandoned vehicles?
 - Are appropriate partners such as the DVLA, Police and Local Authorities worked with to remove abandoned vehicles?
 - Are fly tipping hotspots identified?
 - Do the ARTs conduct refuse/rubbish removal e.g. gas cylinders?
 - Are landowners educated on their legal requirements to secure their sites?
 - Do Multi Agency Action Days take place to clear an area?

- Are communities encouraged to take ownership of their own areas?
- Boarding up empty premises – to what extent:
 - Are the ARTs involved in securing derelict sites?
 - Is action taken for buildings that are in danger of becoming derelict?
 - Are local authorities and private landlords worked with to secure sites?
 - Are sites monitored regularly?
- Assisting owners to prevent arson or mitigate its impact – to what extent?
 - Is advice provided to premises owners on how to prevent arson e.g. securing the site, responsible rubbish storage etc.?
 - Are target hardening measures in place to prevent arson?
- Fire patrols – to what extent?
 - Are partners worked with for patrols e.g. Police, Forestry Commission?
 - Is appropriate equipment used for patrols e.g. bikes, motorcycles etc.?
- Educating young people – to what extent?
 - Are children who play with fire educated on the dangers and consequences of their actions?
 - Is advice provided to parents and family?
 - Are home visits conducted?
 - Is a multi-agency approach taken including appropriate agencies such as social services?
 - Are referrals to other services provided?
- Youth diversion – to what extent?
 - Do the activities steer young people away from problem behaviours?

- Are the relevant young people included in youth diversion activities e.g. those displaying fire setting behaviour?
 - Are referrals for activities received from Youth Offending Teams and organisations in contact with target youths?
 - Are schemes in place to encourage and reward young people to take ownership of their areas/ schools?
- Psychosocial interventions – to what extent?
 - Are psychosocial interventions provided to juvenile fire setters?
 - Are cognitive-behavioural techniques used?
 - Is behavioural family therapy provided?
 - Are fire setters taught problem solving skills?
 - Are contingency management strategies used?
- Arson detection and investigation – to what extent?
 - Do the ARTs share data with the Police to detect arson incidents?
 - Does joint training between FRS and Police for arson issues take place i.e. managing evidence at the crime scene?
 - Are protocols in place for information exchange between the ARTs and the Police?
 - Are target hardening measure in place to detect arson incidents e.g. CCTV?
 - Are the public encouraged to report arson incidents e.g. through the use of arson information boards, free phone numbers and ‘Crimestoppers’?
- Do the methods of these schemes align with good practice?
- Is the work conducted by partners on behalf of the ARTs monitored?

Partnership work

6.18 To what extent are partnerships successful?

6.19 In particular, to what extent:

- Do the ARTs help partner organisations achieve their objectives?
- Do partner agencies help the ARTs to reduce arson?
- Is there a formal working agreement in place between the ARTs and partner agencies?
- Is the partnership able to be resourced appropriately?
- Can the partnerships be improved?
- Are partnerships being continued in the future?

Liaising with the local community

6.20 To what extent:

- Does the ART work with the local community to reduce arson?
- Does the ART assist the FRS in addressing local arson issues?

Impact

6.21 The two keys questions were:

- Is there statistical evidence of a reduction in arson associated with the work of the ARTs and/or or the grassland initiatives?
- Is there an association between the methods applied by the ARTs and the level of deliberate fires?

6.22 Due to the nature of the small grants work, it was not possible to assess the impact of small grants on fires using statistical methods.

Consistent with good practice – Grassland Initiative

6.23 To what extent is the conduct and management of the Grassland Initiative consistent with good practice, as elaborated below?

Targeting

6.24 To what extent has grassland fire prevention work been targeted?

6.25 In particular, to what extent:

- Has grassland fire prevention work been targeted by:
 - By area (areas of high incidents)?
 - By type of offender?
 - By time of year?
- Has fire incident data been used to target grassland fire prevention work?

Monitoring performance

6.26 To what extent:

- Has the amount of grassland fire prevention work carried out been tracked and compared against targets at a local level and central level?

Consistent with good practice – Small Grants Initiative

6.27 To what extent is the conduct and management of the Small Grant Initiative consistent with good practice, as elaborated below?

- Was funding applied for to carry out arson projects?
- To what extent were arson projects aimed at a range of groups, such as:
 - Local schools?
 - Local community groups?

- Foundation (3-5 year olds)?
- KS1 (5-7 year olds)?
- KS2 (7-11 year olds)?
- KS3 (11-14 year olds)?
- KS4 (14-16 year olds)?
- Young offenders?
- Local businesses?
- Local schools?
- Local community groups?
- To what extent were outside organisations worked with to deliver the arson projects?
- To what extent has the budget been spent on the projects?
- To what extent have the projects been evaluated to identify the impact?