



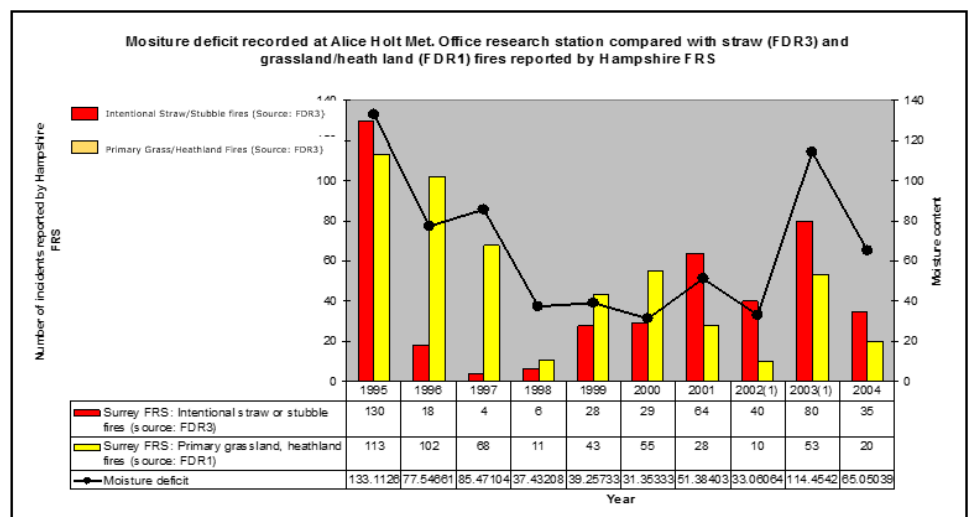
Wildfire Prevention Manual – Chapter 3

Education

Most wildfires in the UK originate from human activity. These will either be leisure activities or deliberate acts and more often than not will be carried out by people unaware of the risks associated with fire, especially wildfires. Educating individuals, organisations and communities as a whole about these risks can therefore go a long way to forging an understanding of how these behaviours contribute to the problem, and how modifying them forms part of the solution.

There are often difficulties in deciding when to carry out education, what education to provide and how to put the message across. The prevention message can be lost if delivered at the wrong time, in the wrong way or to the wrong audience. Educating the public after a significant incident, when awareness is high, is a good option but there is also a wealth of data for Fire and Rescue Services to call upon to be able to predict when there is the greatest risk of wildfires occurring, who will start them and also where and how they are likely to start.

For example, figure 3 compares fuel moisture content with spikes in fire activity. Other spikes in activity can be identified temporally, coinciding for example with the Easter School holiday periods. The weather is also hugely influential on the potential for wildfires and it is becoming increasingly unpredictable, meaning even that the planning and preparation of campaigns could be subject to change.



Fire and Rescue services can now use this type of data to be able to undertake effective education campaigns. This chapter contains examples of the good practice already in use, both in the UK and overseas. Whilst it is not exhaustive this toolbox is intended as a starting point for effective prevention work to be undertaken without the time and effort required to create completely innovative activities.



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The choice of prevention activities is already extensive and so they are divided into eight sub categories to allow the right activity to be selected.

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Seasonal Rural Education

Youth Education

Education & Enforcement

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Seasonal Rural Education

It is important to understand that wildfires are not everyday occurrences in the UK and this will make coordinated seasonal education difficult as, for most UK Fire and Rescue Services and other interested stakeholders, wildfires only make up small part of their workloads. To ensure the effort put into seasonal education is effective therefore, it should look to tackle one or more of the following themes:

- Promote understanding of the accidental causes of wildfires and how to modify behaviours to minimise the risk
- Highlight the consequences of deliberate fire setting (Arson) on the individual and wider impact on communities, economy and environment
- Promote understanding of the actions to take in the event of a wildfire to minimise the risks to individuals, homes and communities

Effective seasonal education is best achieved through timely partnership interventions. However, it can be difficult to effectively plan for this due to fluctuating / sporadic summer periods. Consideration of the following may assist all partners to plan effectively and optimise the use of resources:

- Use local intelligence / data to identify the main causes and areas at risk
- Monitor the [Fire Severity Index](#) pattern and long range forecasts as these are a positive indicator of high fire risk
- Decide on the best format for seasonal education – for example printed literature, radio, television, face to face patrols / engagement and social media.
- Keep the prevention messages simple and to a nationally agreed standard if possible
- Ensure that the delivery is able to adapt to changing weather conditions

Examples, where relevant, of the above are included in this manual in appropriate sections / chapters. There are a number of effective methods of seasonal education around the country, examples of which are detailed in the following pages.

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Moors for the Future Partnership

An effective example of good inter-agency cooperation is the Moors for the Future Partnership in the Peak District National Park. The partnership sees the full cooperation of utility companies and national bodies (Peak District National Park Authority, National Trust, Natural England, United Utilities, Severn Trent Water, Environment Agency, Yorkshire Water and RSPB) to manage wildfire prevention within the overarching management of the National Park.

Whilst their focus is the general protection of the moorland heritage, they fully understand that wildfire is an increasing threat to the uplands biodiversity and its ability to deliver essential ecosystem services such as carbon storage, erosion prevention, water quality regulation and recreation opportunities. As such, preventative education initiatives are currently being rolled out across the park to increasing public awareness.

The Moors for the Future Partnership has three objectives:

1. To raise awareness of value of the moors and to encourage responsible use and care of the landscape.
2. To restore and conserve important recreational and natural moorland resources.
3. To develop expertise on how to protect and manage the moors sustainably.

The partnerships comprehensive web site can be found using the following link:

Link

<http://www.moorsforthefuture.org.uk/>

The partnership has also undertaken extensive mapping / modelling research into wildfire and the results can be seen in the following paper.

Link

[Mapping and Modelling Research](#)

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MoorLIFE Fire Aware Display and Games

One programme delivered by the partnership, and funded by the EU to the extent of £5.5 million, is the MoorLIFE Fire Awareness Display and Games initiative.

Link

<http://www.moorsforthefuture.org.uk/moorlife>

Case Study	
Title	MoorLIFE Fire Aware Display and Games
Aims	<ol style="list-style-type: none">1. To preserve biodiversity and protect blanket bog, an EU priority habitat, by restoring moorland habitats of European importance in the Peak District and South Pennines.2. To educate visitors of the dangers of fire in these sensitive areas (which could take many years and great cost to repair) and to value and care for the peat moorlands.
Details	Two engaging interactive map-based computer exhibits have been created at two visitor centres in the Peak District National Park. The exhibits are identical at each location
Objectives	<ol style="list-style-type: none">1. To raise visitor awareness of the risks and consequences of wildfires on the moors of the Peak District and South Pennines at two key access points.2. To influence visitor behaviour to help prevent accidental wildfires and ensure visitors know what to do if a wildfire is discovered.
Audience	Primary audience – moorland visitors, predominantly walkers. Secondary audience – teenage visitors, including those visiting the area as part of the Duke of Edinburgh's Award.
Content	The map uses both current and historical data from weather stations sited at each visitor centre to show the daily fire risk. Visitors are able to zoom in on areas of interest and interact with the map by changing parameters such as date or weather scenarios to understand the effect that weather has on fire risk.

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MoorLIFE Fire Aware Display and Games

	<p>The exhibit also tells the “fire story” by using the map to display additional content and games.</p> <p>It is intended for the story to graphically communicate the devastation caused by moorland wildfires, the scale and cost of the restoration work already completed and the damage and cost of any future fires.</p> <p>It also shows the disastrous effects on our work of future fires and encourages visitors to take care not to cause fires</p> <p>The project focuses on two key incidents - the two fires that happened at Easter 2003 on Bleaklow and Kinder Scout, ideally graphically demonstrating the fire damage and current state of the moorland</p> <p>The exhibit also tracks and logs the number of visitor interactions, and includes a facility for visitors to rate the game and leave feedback.</p>
Games	<p>At the time of writing this document the project is developing two simple but engaging games to help younger children (aged 8-12, but which can be played by all the family) understand the dangers of fire on the moors. The games, which will be simple to use but challenging, are to be part of the visitor centre exhibits but will also be played online and downloaded to mobile devices including phones and portable play stations. They will leave the gamer wanting to ‘beat the fire’.</p> <p>The game will finish with an evaluation to assess the success of the learning</p>

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MoorLIFE Fire Aware Display and Games

Videos	<p>As part of the exhibit the agency will undertake filming and post-production work for 6 video sound bites which will be added to the map, as well as short (2-3 minute) video interviews, to be chosen from the following stakeholders, to represent different aspects of the issues surrounding moorland wildfires</p> <ul style="list-style-type: none">• Ranger• Moors for the Future Partnership conservation and research team member• Academic• Landowner• Game keeper• Firefighter (FOG representative)• Natural England• Helicopter pilot• Local resident who has experience of fire
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The MoorLIFE web site contains a wealth of information / education activities. A few samples are included below:

Lesson plans and PowerPoint presentations for primary and secondary school students are available, as with all the information, for free:

Link

<http://www.moorsforthefuture.org.uk/moorlife-learning>

The information / lesson plans using the link below have been developed to encourage responsible behaviour on the moors:

Link

<http://www.pawsonthemoors.org/>

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Youth Education

For many fire and rescue services periods of high wildfire activity occur when the correct weather conditions are combined with high public activity, particularly school holidays, to high risk areas. One proven method of reducing the risk of wildfire is to engage with young people during school holidays. Providing structured activities can not only act as a diversion to these children, but also allow face to face wildfire awareness education.

Many fire & rescue services already provide Fire Fighter for a Day programmes (FF4AD), or more concentrated Youth Engagement Schemes (YES). Ensuring these programmes contain wildfire education materials and timing them to coincide with historic periods of high fire setting should provide a marked reduction in fire activity.

Some fire and rescue services have gone further than this and developed bespoke education programmes. **Project Bernie** is a good example of this and features a collaboration which included Cardiff University's ESRC Centre for Business Relationships Accountability, Sustainability and Society (BRASS) and the South Wales Fire and Rescue Service (SWFRS) – seeing young people getting involved in a programme of Easter activities including bush-craft skills, DJ skills, abseiling, filmmaking and graffiti workshops as well as the tried and tested 'Fire-fighter for a Day' programme.

Link

<http://www.bernie.uk.com/>

Whilst there are many different variants of the FF4AD programme the core aims remain the same. This manual will provide an example that can be tailored to suit the recipient's needs.

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Firefighter for a Day (FF4AD)

Case Study	
Title	Firefighter for a Day
Overview	<p>An intensive one-day course aimed at young people. It encourages the students to work as part of a team in a structured manner in a Fire and Rescue Service environment. Students learn new skills and put these into practice both as a group and in small teams.</p> <p>The day has a wide remit and can be used as a diversionary tactic with young people or as an education / team building day for school or youth groups. It can be targeted at both a particular group and a geographical location.</p>
Audience	Primary audience – Young people
Aims	<p>The primary aims include encouraging young people to:</p> <ul style="list-style-type: none">• Work together• Have respect for others• Understand the need for rules• Develop leadership skills• Increase their self-esteem and self-confidence
Activities	
Standard Course Content	<ul style="list-style-type: none">• Hose running• Use of water jets• Road traffic collision (RTC) procedures• Breathing Apparatus procedures• Communication skills
Wildfire Education Options	<p>These activities can be used to educate and ‘deter’ young persons from deliberately setting grass fires</p> <ul style="list-style-type: none">• Bush craft survival skills• Wildfire Awareness input including, designing and producing a piece of fire related graffiti art, making pottery or writing a song and recording a CD

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Firefighter for a Day (FF4AD)

An overview of the FF4AD event is provided below:

Link

[FF4AD Overview](#)

A suggested timetable for a FF4AD event can be found here:

Link

[FF4AD Timetable](#)

It is important that all students on the course stick to an identified set of ground rules. An example of such is provided below:

Link

[FF4AD Ground Rules](#)

A sample student information sheet and health questionnaire is provided below:

Link

[FF4AD Information Sheet and Health Questionnaire](#)

It is important that the achievements of the young people, after a gruelling day, are recognised. A certificate is one way of doing this and a sample is provided below:

Link

[FF4AD Certificate](#)

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Project Bernie

This six-week intervention programme, as a part of the 'All Wales - Project Wildfire' reduced grassfires by 46% in the study area - three times the programme's original target. It is important to note that the overarching project encompasses aspects of land management and ensuring that firefighters training and equipment are suitable and up to date.

Bernie encompasses a number of prevention activities which are included within this manual. Including multiple prevention strands within one initiative can only be achieved with a successful partnership approach, where all members take an active role within the group to achieve the overall objectives.



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Project Bernie

Case Study	
Title	Project Bernie
Overview	An engagement project that has been tailored for communities that historically suffer from a high amount of deliberate grass and mountain fires. It combines new social marketing techniques in education, diversionary activities, enforcement, operational tactics, along with partnership working to reduce these deliberate grass and mountain fires
Audience	Primary audience – Young people
Activities	
Diversion	By working in conjunction with the young people who live and study in the target areas, a programme of diversionary activities has been developed. These run throughout the high risk period (in this case the Easter Holidays) and include Fire-fighter for a day, designing and producing a piece of fire related graffiti art, making pottery, writing a song and recording a CD and learning 'bush craft' survival skills. The activities are used to educate and 'deter' young persons from deliberately setting grass fires
High Visibility Patrols	South Wales Fire and Rescue Service will provide a high profile presence in areas where there is a high level of grass and mountain fires to 'deter' young persons from deliberately setting grass fires
High Visibility Media Messaging	Enforcement / diversionary messages promoted through media tools such as billboards, street stencils, posters, booklets and flyers all using the 'Project Bernie' brand
Community Support	Gaining community support will be achieved by raising public awareness of the problem and effect of grass and mountain fires. Local comprehensive schools will be used to promote and enforce the Bernie activities and messages. The support of local traders will also be identified and used to restrict sale of lighters and matches to under 18's
Zero Tolerance	By working with South Wales Police and other partners, zero tolerance will be shown to those responsible for deliberately starting grass and mountain fires and CCTV will be used to identify perpetrators

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Education and Enforcement

Many education initiatives look to make people more aware of the dangers associated with dry conditions and the reduction of the associated risks. Typical education focuses on modifying thoughts / behaviours to things such as disposed cigarettes, bonfires and BBQs during hot periods by increasing the awareness of the impact certain accidental actions have. However, as previously mentioned, the UK sees marked increases in occurrences of wildfire during school holiday periods with reasonable certainty that many of these incidents are deliberately started.

The education efforts could therefore focus either on addressing the general consequences of these actions or on the specific consequences for the individuals. The 'Bernie Project' aims to educate and therefore divert young people as one method of preventing wildfires. However, the project is resource intensive and depending on the partnership opportunities available, may not always be achievable. It may therefore be more effective to educate children with the focus on the consequences to the individual, via the legal system, should they get caught. In this way prison can be shown as the ultimate deterrent for starting a wildfire deliberately.

'Prison Me! No-Way!' is a national educational charity with a core aim of raising awareness among young people about the causes, consequences and penalties of crime. Set up as a project by prison officers in 1993, it aims to help eight to 18 year olds from all walks of life and cultural backgrounds.

Link

<http://www.pmnw.co.uk/>

This approach has been adapted and used within the State of Jersey Fire and Rescue Service with great effect to reduce deliberate wildfires, as follows:

Link

[Jersey Fire and Rescue Service](#)

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Prison Me No-Way

Case Study	
Title	Prison! Me! No-way: State of Jersey Fire and Rescue Service
Overview	<p>The aim of 'Prison! Me! No Way!!! Jersey' is to raise the awareness of young people in the Island about the causes, consequences and penalties of crime, by using a non-threatening and non-lecturing style of education.</p> <p>We hope to dissuade young people away from a life of crime, by using a multi-agency approach, which will give young people information enabling them to make informed life choices to help them grow into responsible citizens and hopefully reduce the devastating effects of criminal behaviour on society.</p>
Audience	Primary audience – Key stage 3 children
Approach	<p>The workshops identify the impacts of countryside fires that the children may not have considered. They look at the causes of open land fires and apply some transactional analysis to set up cognitive dissonance. It is fairly common to blame open land fires on the summer (dry) weather and accidental ignition (e.g. discarded cigarettes). However, it is shown both that fires tend to coincide with school holidays and that the science indicates (e.g. in Gorse) dryness isn't the main factor. Further it is shown how unlikely it is for a discarded cigarette to ignite vegetation, allowing the conclusion to be made that these are deliberately started fires, by school age children with access to a handy ignition source. Once you accept deliberate ignition you can choose to accept it is either malicious or immature (started without an understanding of what the consequences will be).</p>

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Prison Me No-Way

Outcomes	There is little to be done to stop a malicious arsonist intent on causing damage and destruction for their own needs, so the programme explains to the risk group the unintended consequences of setting a fire in the countryside such as killing wildlife, disrupting tourism, costing jobs, straining the firefighting services and getting in serious trouble with the criminal justice system. This allows them to make a fully informed choice about their future actions with an understanding of all the potential consequences. Jersey Fire & Rescue Service have confirmed this programme as good value, effective and not disproportionate to the problem.
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This is one, very effective method, of reducing the problem of deliberate outdoor fire setting and other FRS (Bedford and Luton, Shropshire) have already invested in the programme as a result.

However, it is not the only education and / or enforcement approach available. Often deliberate countryside fires are not investigated as thoroughly as a deliberate structural fire as there is not seen to be a 'victim'. Often they are not treated as arson at all. These incidents may not be a priority for either the police or the fire service yet they have the ability to destroy habitat, species, threaten human life and settlements and severely impact on the UK economy.

Any effort to overcome these issues cannot be a standalone one by any individual organisation or Service. Dorset Fire and Rescue Service have recognised this and taken a different approach, setting up a cross service / organisational team – the Urban Heath Partnership.

Link

<https://www.dorsetforyou.com/article/394032/Urban-Heaths-Partnership>

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Urban Heaths Partnership

Case Study	
Title	Urban Heaths Partnership
Overview	<p>The Urban Heaths Partnership (UHP) facilitates the combination of a zero tolerance policy to deliberate fire setting and an education programme, Crime Scene Investigation and Courtroom Drama. The UHP ensure that they can identify a management body, who carry out works or conservation for example on any individual tract of heathland, and thereby enable the land to be classified (legally) as 'being taken into the care of' or 'reduced into ownership'. There is then a 'victim' when a fire is set and therefore the offence of arson is complete.</p> <p>All offenders in Dorset are therefore arrested for Arson rather than the CRoW Act (third party damage to a SSSI). This is far easier to get through the courts and potentially a far more serious offence, with no arguments as to whether irreparable damage was caused.</p>
Audience	Zero Tolerance – Any deliberate fire setter CSI, Courtroom Drama – Key Stage input
Partners	Dorset FRS, Dorset Police, Dorset County Council, Borough of Poole, Bournemouth and Christchurch Borough Councils, Dorset Wildlife Trust, East Dorset District Council, Amphibian and Reptile Conservation, Natural England, Purbeck District Council, National Trust, Forestry Commission and the Royal Society for the Protection of Birds
Approach	The partnership is funded through placing a levy on planning applications between 400m and 5km of a Natura 2000 heathland of £1031 per flat and £1719 per house. Within 400m applications are normally refused.

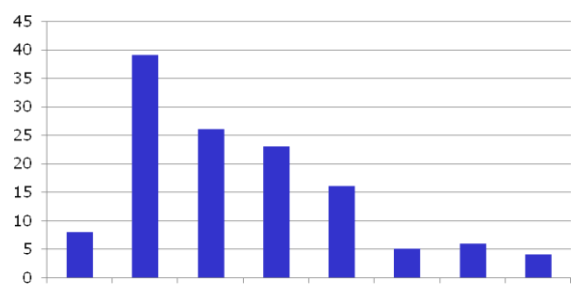
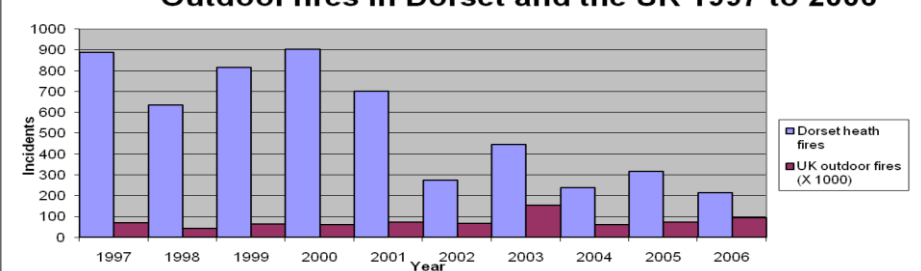
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Urban Heaths Partnership

	<p>This levy funds most heathland mitigation works in Dorset to, currently, around £1,000,000 per annum as well as enabling the purchase of land as alternative open spaces. Mitigation works to date include the funding of a dedicated police officer, ranger staff, monitoring equipment, land management work to reduce fire load and firefighting equipment / hydrants etc.</p>																		
Outcomes – Arrests	<p>The majority of those arrested were juveniles, however six people have been successfully prosecuted with sentences ranging from supervision orders to 2 years' imprisonment.</p>  <table border="1"> <caption>Arrests Data (2002-2009)</caption> <thead> <tr> <th>Year</th> <th>Arrests</th> </tr> </thead> <tbody> <tr><td>2002</td><td>8</td></tr> <tr><td>2003</td><td>38</td></tr> <tr><td>2004</td><td>25</td></tr> <tr><td>2005</td><td>22</td></tr> <tr><td>2006</td><td>15</td></tr> <tr><td>2007</td><td>5</td></tr> <tr><td>2008</td><td>5</td></tr> <tr><td>2009</td><td>4</td></tr> </tbody> </table>	Year	Arrests	2002	8	2003	38	2004	25	2005	22	2006	15	2007	5	2008	5	2009	4
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2002	8																		
2003	38																		
2004	25																		
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2006	15																		
2007	5																		
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2009	4																		
Outcomes – Fire reduction	<p>Outdoor fires in Dorset and the UK 1997 to 2006</p>  <p>By following the principles of the UHP the number of heathland fires in Dorset has dropped (-62%) despite the upward national trend (+46%).</p>																		

Email

urbanheaths@dorsetcc.gov.uk

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Crime Scene Investigation

Crime Scene Investigation:



who is the fire setter?



Crime:

A protected area of heathland has been set alight.

Students are the **Crime Scene Investigators**

- testing the evidence to see **who is the fire setter**.

Investigation:

- ★ Students will take on the parts of **Crime Scene Investigator**: back in the lab, analysing data
- ★ Practical task involves fingerprint lifting; students will study their own fingerprints to identify key points
- ★ To find the arsonist, the following evidence will be studied:
 - ✓ Fingerprints
 - ✓ Tread patterns
 - ✓ Photographic evidence
 - ✓ DNA analysis
- ★ Video statements from individuals will be watched
- ★ Team work will help catch the culprit!



This unique session will involve groups of students investigating arson.

The hands-on approach is a great way to encourage students to investigate all of the evidence before they can reach a conclusion.

CSI: Dorset helps students to identify the techniques used to collect evidence to make an arrest along with promoting knowledge about the importance of the heathland habitats.



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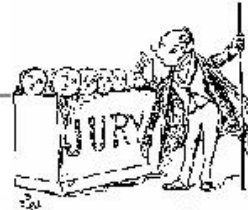


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Courtroom Drama



Arson Courtroom Drama



- ★ Students dress-up in character roles (seven character parts)
- ★ Students act out scripted scenarios – which can involve own ideas!
- ★ Takes **one hour lesson** to complete – prior preparation is not essential
- ★ UHP lead the activity, supported by DFRS and Police (attend when available)
- ★ Up to the class to decide if defendant is **guilty** or **not guilty** – they are the jury!
- ★ Arson Courtroom scenario involves:
 - ✓ Film footage of arson incident
 - ✓ Displays of courtroom
 - ✓ Character costumes
 - ✓ Real-life scripts
 - ✓ Evidence given



Preparation for school and teachers:

- **Room availability prior to session for set-up (20 mins prior)**
- Choose appropriate students to act out scenarios
- Provide an evaluation of the event
- Continue with heathland education

supported by:



For further details, please contact:
UHP Education Officer, Sarah Doel,
01202 642 785



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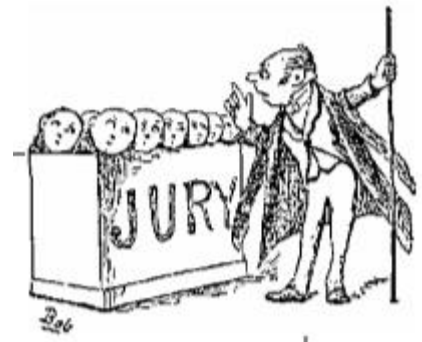
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Supporting Documents

Urban Heath Partnership Supporting Documents	
Courtroom Drama Leaflet	A promotional leaflet to help encourage uptake in schools
Courtroom Drama Requirements	Outlines the necessary requirements to run the courtroom drama
Courtroom Drama Lesson Plan	Courtroom drama lesson plan
Crime Scene Investigation Lesson Plan	Crime Scene Investigation lesson plan
CSI Leaflet	Crime Scene Investigation Leaflet



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Public Education Events

Many people, even whole communities, are completely unaware as to the extent of the dependency of their community on the rural habitat. These dependencies include, amongst others:

- Arable farming
- Livestock farming
- Outdoor pursuits
- Forestry
- Species habitats
- Conservation
- Rural based businesses

One effective method of highlighting the risk that wildfire poses to a community is to identify all these different dependencies to them and demonstrate how they could be affected should a wildfire occur. This could be through a Fire Station Open Day, with themed presentations / attractions or through a dedicated wildfire awareness day.

A wildfire awareness day can be used to bring all these industries together, under the umbrella of the fire and rescue service, and create an effective framework in which to deliver both community and public awareness input.

Fire and rescue services can deliver key prevention messages and rurally dependant organisations and businesses can showcase their business and highlight how wildfire would impact their role within the local community. These types of events are effective at delivering messages to all age groups as they are designed as family events.

**WILDFIRE
AWARENESS DAY**
23rd of May
10:00- 4:00

**Haslemere Fire Station
West Street
Haslemere, GU27 2AP**

The day will include:

- Fire service demonstrations
- Wildlife and reptiles
- Bush craft demonstrations
- Local farms + Animals
- Rural organisations
- Prize Draw

For further details on the event contact Surrey
Fire & Rescue on
01428 643991 or email Mark at
mark.busby@surreycc.gov.uk

Logos: The Fire Fighters Charity, Surrey Fire & Rescue, NFCC

(Click the image to download)

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Wildfire Awareness Day

For these events to be successful it is key for one organisation to operate as the lead and to establish early agreements between the partner organisations on the role each will play at the event.

There is much competition to secure public attendance at events, particularly during the summer months. It cannot therefore be emphasised strongly enough that a critical factor to an events success is early, effective publicity. The level of effort provided to organising the event must be matched in the effort given to promoting it.

Case Study	
Title	Surrey FRS Wildfire Awareness Day
Overview	<p>In 2009 Surrey Fire & Rescue Service developed, as a part of its overall wildfire strategy, an event for the public highlighting the impact of wildfires on a community. Land managers and rural organisations were invited to exhibit at a specific event aimed at wildfire awareness.</p> <p>By creating a partnership with local and national organisation (such as the National Trust) it allowed all organisations to receive the mutual benefit of the event.</p> <p>The events success is based on providing the public with a free family orientated event providing activities which are fun, informative for children and adults such as nature trails and bush craft skills, and whilst there, exhibitors from all sectors of the rural community talk about how wildfire would impact their organisation/activities.</p>
Audience	All members of a community

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Wildfire Awareness Day

Partners	Surrey Fire and Rescue Service, Surrey Police, Surrey Wildlife Trust, National Trust, Waverley Borough Council (Rangers), Forestry Commission, RSPB, Natural England, GPM Ecology, Bush craft, Surrey Amphibian and Reptile Group, Coppice worker, Environment Agency, Donkey Sanctuary, Trueways Survival, Hilltop Birds of Prey.
Aims	<ol style="list-style-type: none">1. To raise people's awareness of Wildfires and the impact they can have on the environment.2. To give the public an understanding of what can be lost in a wildfire, and the importance of preventing them3. To enable the public to see some of the native species that can be affected by wildfires, and speak to rural organisations and businesses who are dependent on rural habitats and the impact fires would have4. To provide an opportunity for direct interaction between Fire & Rescue Services and the community to educate in the reduction of wildfires
Documents	A planning document for the event and further information can be obtained from SFRS or through the following links

Link

[Surrey Fire and Rescue Service Contact Details](#)

Documents

[Wildfire Awareness Day](#)

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Business and Land Owner Education

Businesses and land owners / organisations operate within and can be affected severely by wildfires. They also have the ability to impact on the wildfire risk within the UK in either a positive or negative manner. Such organisations can include:

- Government organisations
- Heritage organisations
- Charity organisations
- Commercial industry
- Farming/ agriculture
- Sport & recreation
- Outdoor pursuits

All of these industries can either affect or be affected by wildfire through their practices, dependency on the infrastructure around them or merely their proximity to the risk.

Example: 600 hectare fire closed Split airport for a period the 18th August 2012

In many instances, a business forms part of the RUI and, whilst none of its processes may provide an ignition source for a wildfire, should it be affected by such an incident there may be an increased risk to their business or even to the incremental development.

Example: The Upton Heath fire in Dorset in 2011 at one stage threatened an electricity substation and a methane processing plant. The shut down of the substation would have seen the methane plant release the gas over the burning common, posing an unforeseen and substantial risk to the RUI and the housing estate in particular.

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Business and Land Owner Education

Without an understanding of wildfire and its development or of how to create a safe separation between the risks, businesses will not take appropriate action to reduce this risk. This may result in avoidable fire impingement on to their business. Businesses operating in a rural environment are therefore central to the success of wildfire prevention for Fire and Rescue Services in many different ways. They:

- Operate within the rural community
- Employ / have a workforce – regardless of where from
- Have resources, including heavy machinery at their disposal
- Often have specialist knowledge

As a part of any successful education programme Fire and Rescue Services should be engaging with land owners at a strategic level. An already established mechanism to achieve this is through regional wildfire groups such as the South East England Wildfire Group (SEEWG) or the Peak District National Park Fire Operations Group (FOG). Further information on these, and other, groups will be provided later in this manual. However the Peak District FOG has a good web presence and can be found on the link below:

Link

[Peak District National Park Fire Operations Group](#)

Fire and Rescue Services can also directly interact with land managers, owners and businesses on a local level by undertaking risk mapping (chapter 5) or other types of workshop. These will allow face to face contact with organisations and, importantly, other FRS along with the opportunity to share knowledge and highlight the risks of wildfire which these organisations may not be aware of. These workshops can be powerful educational and partnership tools. This type of engagement could be driven by an experienced, dedicated officer (or officers) and this is discussed in chapter 5. A good example of this type of workshop can be found in the following case study, a workshop held by Hampshire FRS and the Forestry Commission.

Link

[Forestry Commission and Hampshire FRS Workshop](#)

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Targeted Campaigns

Wildfires that aren't started deliberately are often caused through innocent but inappropriate use of the countryside by people enjoying the outdoors. Fires started in this way can be just as devastating to the economy and impactful on Fire and Rescue Service (and partner) resources as a deliberately started fire, yet in many cases may be preventable.

Example: A 50 hectare fire on Frensham common in 2011 was started by a BBQ. Frensham village was threatened by the fire, resulting in its evacuation and the intensity of the fire was such that the common has still not recovered some 4 years after the event

The use of targeted campaigns to provide an increased awareness of the dangers present in a rural area allows Fire and Rescue Services and its partners, Volunteer groups or even communities to target the cause of the problem within a locality and raise the awareness within the community as a whole.

It can be very easy and quick for FRS and partners to put the information together and distribute it within a risk area. However, the quality of the message and the method of distribution are both key to ensuring the campaign is a success.

Too often the format can vary from area to area, thereby risking diluting the message and confusing the public it is intended for.



(Click on the leaflet to download)

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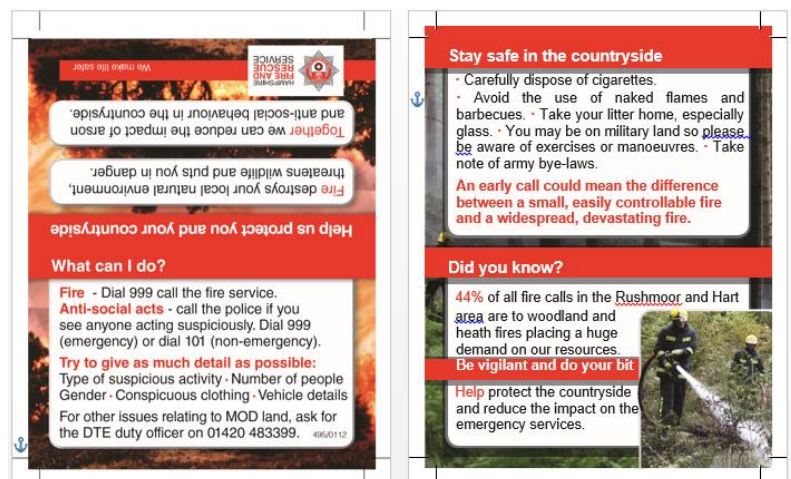
Targeted Campaigns



The shown two leaflets (click to download in A5 and A6 wallet card formats) produced by Hants FRS and Surrey FRS provide the CFA approved messaging and can be adapted for local use during these campaigns.

It is also imperative that the method of delivery is right. Leaflets left for the public to take or just handed out will have little effect. A well-motivated firefighter (or volunteer / partner organisation) engaging with the public and explaining why adhering to the code on the leaflet / information is important is much more likely to be successful in deterring inappropriate behaviours.

Combining this education with a 'wildfire patrol' (a visible presence by someone with 'authority') to further discourage unwanted behaviour, or to spot a fire in a high risk area at an early stage, can pay huge dividends for FRS and partner organisations in the drive to prevent serious wildfires and the devastating effect they have on our countryside.



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Community Resilience

Educating a community that sits in a high wildfire risk area to become more aware of and safer from, both individually and collectively, the threat of wildfire is a concept that is widely used overseas. It has to be a beneficial option for the UK and well worth Fire and Rescue Services (and partner organisations) engaging with communities to achieve, although not without its challenges.

In the USA the [Firewise](#) programme is widely used and has been shown to be highly effective when adopted by a community. For the purpose of this manual the Firewise elements of the wider programme [Fire Adapted Communities](#) (FAC) will be covered under the Education chapter of this manual. Firewise provides a tool for Fire and Rescue Services to educate communities and individual households about the dangers that wildfire poses and how to make themselves safer from it.

This is a familiar exercise for FRS who already carry out Home Fire Safety Visits to help make people safer *in* their homes. In high risk areas FRS should consider it a best use of resources to provide Firewise advice **at the same time** – thereby making the *outside* of the home safe and hence the home as a whole.

Fire Adapted Communities (FAC) will be covered under the Preparedness chapter as it offers many other ways to help prepare the entire community from the wildfire risk, its additional programmes and tools helping protect community wide assets for future generations. [Ready, Set, Go!](#) (RSG) will also be covered under the Preparedness chapter although, again, Firewise can be used as a part of this programme under the 'Ready' heading.

Thanks to work undertaken by CFOA with the [National Fire Protection Association](#) (NFPA) and the [International Association of Fire Chiefs](#) (IAFC) all the above programmes and associated materials are freely available to use in the UK. Whilst these materials are aimed at an American market they are easily adaptable and a selection of 'Anglicized' products are included in the manual as a starting point.

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Why Firewise?

Years of experience have shown key stakeholders in the USA that brush, grass and forest fires *don't* have to be disasters. The NFPA's Firewise Communities Program encourages local communities and householders to implement solutions for safety themselves.

This is a key concept for the UK FRS - by encouraging homeowners to take individual responsibility for preparing their homes from the risk of wildfire, there is the potential to optimise the use of a pressured FRS resource - not only in the prevention work discussed here but also in any response made to an incident in a community that has implemented a Firewise scheme.

In the USA, the program is co-sponsored by the USDA Forest Service, the US Department of the Interior, and the National Association of State Foresters. In the UK sponsorship may not be possible at the current time. However, this should not deter FRS as the costs of implementing a scheme can be pared down to that of printing the literature available in this manual and then prioritising personnel's time in a risk based manner – an approach already used throughout the UK FRS. As already mentioned these visits could take place at the same time as a Home Fire Safety Visit and utilise the same personnel.



To save lives and property from wildfire, the NFPA's Firewise Communities program teaches people how to adapt to living with the threat of wildfire and encourages neighbours to work together and take pre-emptive action to prevent losses. This will be a big step for UK FRS and communities, especially if there is a lack of understanding with regards to actually having a problem to start with. However, it is vital that the public understand that everyone has a role to play in protecting themselves and each other from the risk of wildfire to protect the UK from the type of problem in years to come that is seen more widely in other parts of the world at the current time.

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Bringing Firewise to the UK

Close collaboration between the NFPA, IAFC and CFOA has led to the signing of a tripartite memorandum of understanding that allows the free use of the NFPA's prevention materials, with adaption where necessary for the UK market. The mammoth task of producing a complete set of suitable materials for the UK market has begun and examples are included in this manual. Whilst Fire and Rescue Services are free to use the materials available through the NFPA, CFOA are looking to provide a fully standardised set of materials suitable for everyone's needs and the UK market, rather than see numerous bespoke versions, with potentially differing advice, of the materials spring up.

UK Fire and Rescue Services (FRS) and partners will know where their 'at risk' communities are. These communities will vary in size and may be anything from a single dwelling to a village or town. They will possibly have been exposed previously to serious wildfires and / or be in or adjacent to a known high risk area. Further, many of these communities may be looking to help themselves and seeking guidance - from the fire and rescue service.

Encouraging these communities to set up a Firewise scheme and follow its principles is a proven and cost effective method of helping them protect their homes from wildfire.

Firewise uses a five-step process to allow communities to develop an action plan that guides their risk reduction activities. It also allows people to engage with and encourage their neighbors to become active participants in building a safer place for everyone to live.

In the USA completing the fifth and final step of the five part action plan allows a community to apply for 'Firewise Communities Recognition Status'. With regards to its implementation in the UK this is nothing to be feared and is simply a self certification process, whereby the community confirms that they have complied with the requirements of the Firewise programme.



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Home Ignition Zones

Firewise looks to educate communities and / or individual homeowners about how to make themselves safe in the event of a wildfire. An important part of this is providing an understanding of the concept of the various potential ignition zones around their homes and the actions that they need to consider regarding each. There are three main zones to consider:

ZONE 1: 0-5 ft. around the perimeter of the home

The objective of this zone is to reduce the chance of wind-blown embers from a nearby fire landing near the home, igniting combustible debris or materials and exposing the home to flames. This zone is closest to the house, so it requires the most careful selection and management of vegetation and other materials

ZONE 2: 5–30 ft. around the perimeter of the home

The objective of this zone is to create and maintain a landscape that, if ignited, will not readily transmit fire to the home. Trees and shrubs in this zone should be in well-spaced groupings and well maintained. Ladder fuels (i.e., shorter vegetation or shrubs under taller trees) should be avoided to prevent the fire from climbing into the crown or upper portions of trees. If these groupings were to be ignited by wind-blown embers, the resulting fire should not be able to threaten the home by a radiant heat exposure or by flames being able to touch the exterior surfaces of your home.

ZONE 3: 30-100 ft. around the home

The objective of vegetation management in this zone is to reduce the energy and speed of the wildfire. Tree and brush spacing should force the fire in the tops of the tree, brush or shrub crowns to drop to the ground. Flame length should decrease. The actions in zone 3 may be a partnership approach between homeowner and adjoining land manager. It may be through agreement the land manager adopts the maintenance of this zone.

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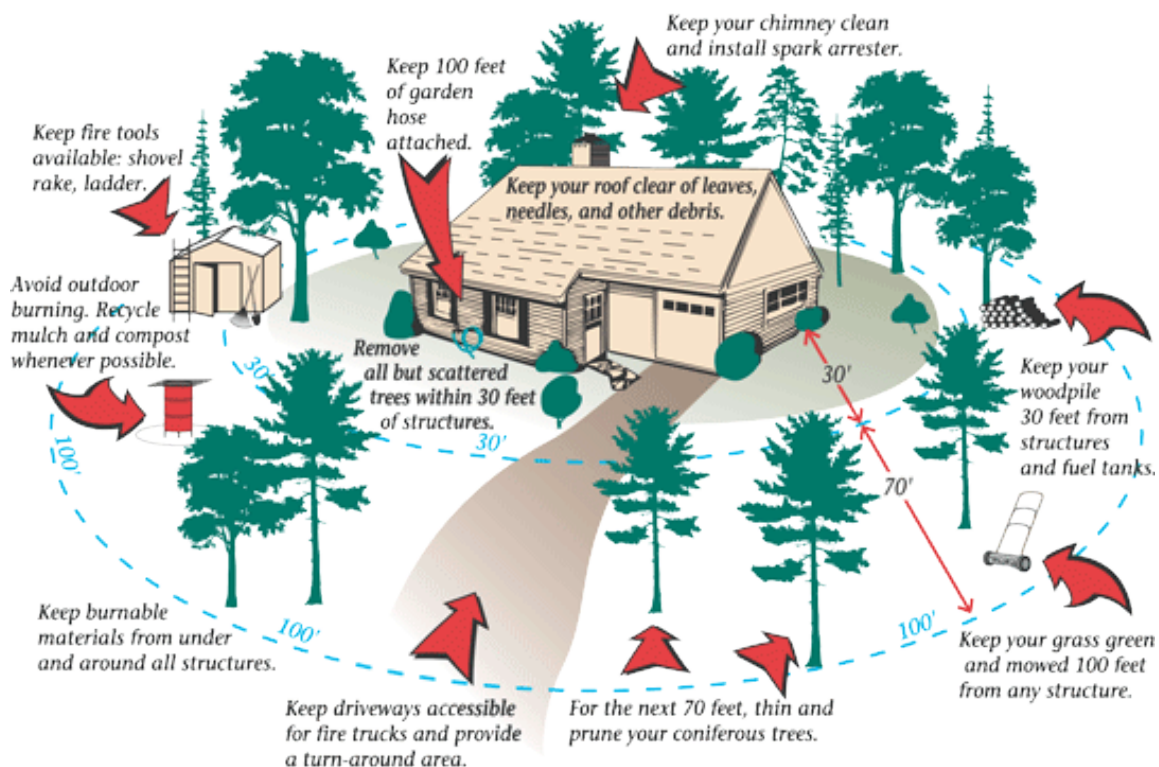
Home Ignition Zones

In addition, Firewise teaches homeowners to understand the considerable affect that the slope that their land lies on can have on a wildfire

The Effect of the Slope

The slope of the land around a home is a major consideration in assessing wildfire risk. Wildfires burn up a slope faster and more intensely than along flat ground. A steeper slope will result in a faster moving fire, with longer flame lengths.

Homes located mid or on top of a slope (without set back) are generally more vulnerable because of increased flame length and intensity of a fire moving up the slope. Depending on the location of a home, the defensible space (in the zones) may need to be increased.



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Preparing for Wildfire

It is important that Communities understand that firefighters can't always protect every home from wildfire - especially if they haven't done their part to prepare.

There are certain key actions that communities can take to ensure that they become 'Firewise' before the next fire approaches.

- Talk to the local fire station / Fire and Rescue Service about how to prepare for a wildfire, situational awareness before a fire, when to evacuate, and what you and your community should expect during a response
- Do a risk assessment on your property and within the community as a whole if possible
- Create a plan to address issues in your property's Home Ignition Zone / Defendable Space, including:
 1. Maintaining a "fire-free" area around the perimeter of your home;
 2. Managing vegetation along fences;
 3. Clearing debris from decks and patios, eaves etc.
 4. Selecting proper landscaping and plants;
 5. Knowing the local ecology and fire history;
 6. Moving radiant heat sources away from the home (i.e., wood piles, fuel tanks, sheds);
 7. Thinning trees and ladder fuels around the home
 8. Develop a personal and family preparedness plan
- Support land management agencies by learning about wildfire risk reduction efforts, such as using prescribed fire to manage local landscapes
- If you have a homeowner association, parish council, work with them to address the threat of wildfires as a community

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Keeping Your Home Safe

It is important that communities understand that wildfires don't have to destroy everything in their paths. There are very simple and effective actions that they can take, such as cleaning their property of debris and maintaining their landscaping / gardens that are important first steps to helping minimize any damage or loss.

The work / effort that communities invest today can make a huge difference when summer arrives. Following these simple action steps now (and throughout the year) will help ensure that they are fully prepared and reduce the risk of their homes becoming fuel for a wildfire:

Actions:

- Clear leaves and other debris from gutters, eaves, and decks. This prevents embers from igniting a home.
- Remove dead vegetation from under any decking and within 10 feet of the house.
- Remove anything stored underneath decking.
- Screen off or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.
- Remove flammable materials (firewood stacks, propane tanks, dry vegetation) within 30 feet of your home's foundation and outbuildings, including garages and sheds.
- Wildfire can spread to tree tops. If there are trees on the property, prune them so the lowest branches are 6 to 10 feet from the ground.
- Keep the lawn watered and well maintained. If it is brown, cut it down to reduce fire intensity. Dry grass and small shrubs are fuel for wildfire.
- Don't let debris and lawn cuttings linger. Dispose of these items quickly to reduce fuel for fire.
- Inspect thatch or roof tiles. Replace or repair those that are loose or missing to prevent ember penetration. Thatch can be treated with fire retardant to protect from ember or sparks

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Keeping Your Home Safe

- Cover exterior attic vents with metal wire mesh no larger than 1/8 inch to prevent sparks from entering the home.
- Enclose under-eave and soffit vents or screen with metal mesh to prevent ember entry.

In addition, there are further key actions that homeowners can take during the summer ('fire') season.

1. Maintaining the Home Ignition Zone

The home ignition zone consists of at least 30 feet of space immediately around the house and extends up to 100 feet (in certain cases 200 depending on the surrounding fuel characteristics). **This zone includes the home itself and everything around it.** Maintenance of the home ignition zone reduces the ignition hazards and improves the chances of a property surviving a wildfire.

2. Maintaining the Garden / Landscaping

Maintaining the garden to ensure ladder fuels are removed (preventing fire spread to the tree tops) and that highly flammable oil and resin based plants are removed.

3. Create a Disaster Plan

The time to plan for any emergency is prior to the event. Homeowners should discuss with their family what actions they will take. These include actions such as putting emergency telephone numbers in a visible place, leaving before it is too late and deciding where to go and how to get there. (A full disaster plan template is provided as a part of this manual). Further, people should be encouraged to discuss the disaster plan with their families, as they would with a home escape plan, to ensure that everyone is familiar with the actions required. (In addition, it is worth noting that the disaster plan will be transferable across to different types of natural disaster)

4. Providing Emergency Access

Encourage homeowners to make sure the emergency services can always reach their property. Driveways should be accessible for emergency vehicles and house names or numbers visible from the road side.

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The Five Steps

The Firewise programme asks a community to follow the five steps listed below to make themselves safer from Wildfire and to set themselves on the way to receiving Firewise Communities (UK) recognition status. Amongst the obvious benefits provided by following the programme, communities can proudly display signage confirming their participation in the programme. In the USA the signage is high profile, but this may be an issue in the UK and something more discreet may be required. In either case signage has an additional visual 'prevention' benefit.

The five steps to achieve 'Firewise' status are as follows:

1. The community should produce a wildfire risk assessment as a written document. It is anticipated that this will be in conjunction with the host Fire and Rescue Service and compliment any Risk Management Planning that the FRS undertakes. Examples / potential templates for this process are included in this document.
2. The community should form a committee, and create an action plan based on the risk assessment. The committee should if possible represent all the interested parties and include for example householders, landowners and land managers. Fire and Rescue Services may not want (or be able) to make such a commitment in the longer term but should consider their involvement initially to get them off the right start. They may also wish to have oversight on an annual (or other) basis.
3. Conduct a "Firewise Day" event to raise awareness of the scheme, encourage new members and potentially raise funds. More than anything this day should be fun and bring the community together. This is something that FRS should consider their participation in – to educate and build links with the community concerned.
4. Invest a minimum of £1.50 per capita in local Firewise actions for the year. This does not have to be actual money but could be – for example – accounted for by labour put into schemes to make the community safe.
5. The Committee and local Fire and Rescue Service confirm Firewise status.

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Thursley Case Study

Case Study	
Title	Thursley Village Firewise Scheme
Background	<p>Thursley has suffered a number of devastating wildfires, the last one being in July 2006 and affected both the common and surrounding areas. A number of homes were at high risk during the fire and people were evacuated from their homes as a result. Surrey Fire & Rescue Service (SFRS) spent nearly 5 days bringing the vast blaze under control and finally extinguishing it at a cost to SFRS in the region of £200,000. The real cost to the infrastructure and economy of the area was nearer £2 million with major roads being shut (including the A3) and power supplies closed down.</p> <p>This incident left the community feeling vulnerable and wanting to do something to help protect themselves as much as possible in the future from any reoccurrence. The introduction of Firewise into the UK brought the community the opportunity that they sought.</p>
Participants	Thursley residents, Thursley Parish Council, Natural England, Surrey Fire and Rescue Service
Supporters	South East England Wildfire Group (SEEWG), Surrey Police, Surrey Wildlife Trust, Forestry Commission, Dorset Fire and Rescue Service, National Trust, Waverley Rangers, Defence Infrastructure (DIO), Landmarc



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Thursley Case Study

Overview	<p>A series of meetings with the Parish Council and potential stakeholders through the summer of 2014 lead to a successful public event in the village to launch the scheme in October.</p> <p>This was followed by the production of a risk assessment and the training of SFRS personnel, Parish Councillors and Surrey Fire Volunteers to enable them to undertake Firewise visits with residents.</p> <p>Visits to all properties identified as being potentially at risk followed with a risk assessment being completed at each property and advice given on remedial works.</p> <p>The key land management partnership – with Natural England – has seen work carried out in what can be regarded as zone 3 around the village to provide both fire defendable lines for the Fire Service and the necessary reduction of the fire loading in this zone.</p>
Future Work	<p>At the time of writing this manual -March 2015 - this is as far as the work has progressed. It is anticipated however that the full implementation of the scheme will be achieved through the course of 2015 with the confirmation of the formation of a committee and planned future Firewise visits together with continued complimentary land management.</p>



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Supporting Documents

Firewise Documents	
Firewise Principles	This document sets out the need for a community to take up Firewise and the basic principles behind it
Firewise Factsheet	A simple fact sheet outlining the history of Firewise
Firewise Checklist	The main actions that a homeowner will need to take to become 'Firewise'
Firewise Recognition Programme	Everything a community needs to do to meet the criteria for the recognition programme
Firewise Home Leaflet	Leaflet providing the home owner with clear simple steps to take to achieve a 'Firewise' property
Firewise Five Steps	Handout to explain in clear terms the five steps to achieving a Firewise community

Additional Documents from Trial in Thursley Village	
Promotional Leaflet	Leaflet / Flier to distribute to the targeted community
Press Release	Press release to promote the launch of the scheme
Planning Aide Memoire	Aide Memoire to assist with the roll out of a Firewise Scheme
Thursley Risk Assessment	Pictorial Risk Assessment of Thursley Village
Personal Action Guide	Personal Wildfire Action guidance document

Further information can be found on the Firewise site using the following link:

Link

<http://www.firewise.org>

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General Education

There will be numerous different education initiatives that do not fit in any of the previous, specific, sections of this chapter. They are included below and are for the user to determine how best they will work for their organisation.

Networking and Message Distribution

Increased awareness of the natural world through TV & Multimedia has led to many organisations springing up teaching outdoor living, bush craft and survival skills. These, when combined with other established organisations such as the Scouting movement, mountaineering groups and rambler's associations, are an excellent networking avenue for spreading effective messages regarding wildfire prevention.

Fire and Rescue Services can approach these organisations and work with them to ensure that they provide appropriate input that can raise the awareness of the prevention message whilst not detracting from any commercial interests that the organisations may have.

While the concept of this method may be adopted across the UK, it will need to be researched and applied on a very local level depending on the organisations that operate in each location.

Potential organisations to approach include:

- Scouting organisations
- Outdoor pursuits organisations
- Bush craft training companies
- Local Duke of Edinburgh awards groups
- Local environmental education groups
- Agricultural & land management colleges

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Resources from Around the World

There are a wide variety of resources from around the world, most freely available, that this manual will attempt to draw together. Some, such as Smokey Bear (an American icon) are covered in more than one chapter as they cover a wide variety of preventative activities – youth and adult education, use of advertising, prevention etc.

Additional Education Resources

Smokey Bear	The Smokey Bear web site contains a wealth of prevention / education material for children and adults alike
San Diego Education Project	The primary purpose of these materials is to educate and motivate individuals most directly affected by wildfire in terms of understanding and monitoring the environmental recovery process, with special emphasis on source and run-off pollution, watershed and habitat restoration, and species recovery.

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