



## Wildfire Prevention Manual – Chapter 4

### Prevention

Whereas chapter 3, Education, looks to provide the learning that will prevent high risk activities and / or behaviours from the public (or indeed land managers / owners) that may cause a fire at an early stage - often *before* they go into the countryside – this chapter will look at some of the actions that Fire and Rescue Services (and their partners) can take to stop these fires occurring at high risk times with the countryside in use.

Some of these initiatives are referenced in the education information but covered in greater detail here. Their application is just as effective in both.

The suite of prevention activities is divided into three main categories for ease of reference, those of managing the risk, encouraging better behaviours from countryside users or intervention to prevent high risk behaviours taking place, as follows:

[Part 1](#)

[Part 2](#)

[Part 3](#)

**Managing the Risk**

**Changing Behaviours**

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### Managing the Risk

An effective method of preventing wildfires occurring in the UK and in particular from threatening life and property existing along the RUI (Rural Urban Interface) is to eliminate (or remove) the risk before the fires occur. If it were as simple as *just* removing the fuel, then this element would be relatively easy to achieve. However, the distribution of land ownership across the UK is complex and there is little legislation available to enforce land management practices relevant to fire prevention.

The following looks at methods of managing, or even eliminating, the risk through good land management practices by land managers / owners but with FRS and communities playing a part where relevant

### Forestry & Land Managers

Land management and wildfire are closely related. Livestock, farming, timber and logging operations, species management, and development can all impact on the wildfire risk. Both public and private land managers can help reduce the risk and create what will become known as a 'Fire Adapted Community' as this manual develops. Some basic steps that land managers / owners can take include:

- Carry out a risk assessment and complete a fire management plan or forest action plan to address the risk on the land that you manage
- Share this information with the local fire authority
- Talk to other land managers within their local area to gain a mutual understanding of land uses and management goals and strategies

In the USA most of the above can help form part of a Community Wildfire Protection plan (CWPP), an example of which is discussed later and included for use as applicable.

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### Forestry & Land Managers

Additional steps for land managers / owners to consider include:

- Understanding fully the impact wildfire will have on all their different land uses and management strategies. In particular, understanding the economic impacts of a wildfire on both the land and the local community as a whole
- Understanding the protocols around the use of prescribed burning
- Liaising with the local fire authority to ensure they understand when fires can be left burning in line with the natural cycle
- Understanding the requirements and impacts of all relevant planning legislation
- Understanding the expectations of land managers / owners from other neighbouring regions (as well as locally) and reach a common understanding of the risk and the resources available

With the number of wildfires predicted to increase in the UK, due to both climate change and changing land-use, there are likely to be impacts on sustainable forest management as well as, potentially, devastating human and environmental consequences.

The Swinley Forest Fire (2013, pictured) saw major disruption to the South East and major infrastructure / habitation threatened at times during the week that it burnt. There were key lessons learned for everyone involved in the incident and it was apparent for those involved within the forestry sector that reducing the number and

impact of wildfires in forests and woodlands through good management planning was vital to protect the delivery of forest ecosystem goods and services. This incident helped move preventative measures evolve from one of linear defence (fire breaks) to one of total area resilience.



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### Forestry & Land Managers

Further, this approach could also help to prevent small wildfire incidents escalating into more significant, disruptive and damaging wildfires, the impact of which on sustainable land management can be categorised as follows:

- **Social** impacts, including threats to the health of visitors, damage to residential and commercial properties and damage to paths and recreation facilities.
- **Economic** impacts including losses to forestry businesses (and the wood processing sector), to businesses associated with heathlands, moorlands grasslands and forests (such as providers of tourism and recreation) and the significant costs of restoring this land after a wildfire incident.
- **Environmental** impacts including damage to the natural and historic environment (for example protected sites and endangered species). Wildfires also release carbon dioxide stored in vegetation and soils, contributing to climate change.



Whilst recognising that fire is a natural phenomenon, which in some situations can have beneficial ecological effects contributing to habitat renewal, the Forestry Commission have produced a practice guide that supports the [UK Forestry Standard](#) by setting out good practice for building wildfire resilience into land management planning. Whilst it details the factors that can increase wildfire risk and sets out the planning measures that should be considered, it, importantly, describes the management techniques that can be implemented to mitigate the risks to all land types, including forests and woodlands. Although wildfires in forests and woodlands make up a relatively small proportion of the total number of wildfires in the UK, their impacts can be disproportionately large and costly to society.

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### Land Managers Guide

The Forestry Commission have recognised that it is unlikely that wildfires will be prevented completely, but have produced a guide for **all** land managers (not just forestry managers) that will enable land managers to improve wildfire resilience through good land management planning.

The planning process they advise focusses on reducing the likelihood of wildfires occurring (and their severity) and explores the impacts on people and the environment should they occur. The guide emphasises the importance of considering wildfire resilience **at the start** of the land management planning process and, where relevant, of ensuring that a wildfire management plan is produced and integrated with the final land management plan.



Link

[Building Wildfire Resilience into Forest Management Planning](#)

The Forestry Commission Practice Guide is comprehensive and can be (indeed should be) freely used and adopted by **all**. For the purposes of this manual the areas of land management planning, contingency and wildfire planning will be looked at further, but again, these are covered comprehensively in the guide.

The guide suggests three different levels for management plans, that of a basic plan, a more detailed one and a fully comprehensive plan should the proposals come under the Environmental Impact Assessment (EIA) Regulations and require comprehensive analysis. At the basic level the plan should utilise work already undertaken by land managers, to optimise the use of time and effort and make the adoption of the guide viable within the constraints that everyone operates. For example, the details required for a forest or woodland grant scheme or felling application can provide the basis for the management plan at its most basic. A basic plan is appropriate for the majority of small-scale proposals and provides an approach that is proportionate to the risks involved.

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### Contingency and Wildfire Planning

In areas where wildfire has been identified as a risk, land managers / owners and Fire and Rescue Services should work together, perhaps through a specialist officer (Subject Matter Advisor or Rural Affairs Officer) to ensure appropriate prevention measures are incorporated into any management plan. In this way their combined skills can be used to identify and define fire hazards and agree the appropriate prevention measures to be incorporated into a plan.



With regards to forestry, contingency plans are required by the UK Forestry Standard and produced as part of the forest management planning process. As well as preparing for fire, they are used to address other threats such as accidents, spillages, pest and disease outbreaks and extreme weather events.

Although wildfire management planning is a part of the forestry contingency planning process, the forest management planning process ensures wildfire resilience is embedded within it. This is sensible as it is clear that good planning along with appropriate resilience measures helps prevent wildfires occurring and also reduces the impact of those that do occur.

Whenever it is undertaken, wildfire management planning should be proportionate to the level of risk and considered at the landscape scale. It will therefore include the risk that the surrounding land poses in addition to the forest or woodland itself, reinforcing the need to work with surrounding land managers / owners.

In areas that are at high risk of wildfire, a specific wildfire management plan should be produced that will provide details of all issues relating to wildfire prevention and management and the evidence upon which it is based. With regards to Forestry this wildfire management plan will, in some instances, be an integral component of the forest management plan, but in more complex, high-risk situations, it will be a separate document. For communities in general this plan could use the format of the Community Wildfire Protection Plans used in the USA and both discussed and made available in this manual.

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### Contingency and Wildfire Planning

Contingency planning for wildfire resilience can be considered in six phases:

1. Anticipate
2. Assess
3. Prevent
4. Prepare
5. Respond
6. Recover

Where a wildfire plan is developed it should contain, as a minimum, details of the following:

1. Wildfire risk assessment
2. Wildfire prevention measures
3. Wildfire response plan.



#### Wildfire risk assessment

A wildfire risk assessment can be a useful tool for identifying fire hazards and evaluating fire risk. It can be used as a framework for planning decisions on wildfire prevention measures, and form the evidence base for a wildfire management plan, by providing details of specific site hazards and how wildfire risks will be mitigated and managed.

Further information on wildfire risk assessments and an example wildfire risk assessment template are provided within the manual

#### Wildfire Prevention Measures

Wildfire prevention measures are planned management techniques used to increase the resilience of a high risk area to wildfire and reduce the severity and spread of a wildfire event. Prevention can be achieved by building wildfire resilience measures into management plans. Prevention will reduce the impacts of the wildfire itself and improve the response and recovery phases.

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### Contingency and Wildfire Planning

For this purpose, it can be useful to divide a high risk area into zones. These 'wildfire management zones', around particular assets or infrastructure, can then be used to determine the nature and extent of any wildfire prevention measures required.

This could include, for example, where operations such as prescribed burning should be avoided or can be carried out.

### Wildfire response plan

Wildfire response plans (also known as 'fire plans' and 'fire maps') provide vital information to the fire and rescue services in the event of a wildfire. Although they are prepared in advance for the response phase of an incident, the information gathered can be used to help refine forest planning decisions in areas of high wildfire risk by consideration of factors such as access points and water supplies.

It is critical that the wildfire response plan accurately reflects what exists on the ground; plans may only be valid for short periods if land management requirements / use change the structure or fuel loading of the site. For example, in the case of forestry, through thinning and clear-felling operations.

The information required to develop a wildfire response plan is considered at all stages of the land / forest management planning process. A typical wildfire response plan should include:

1. High wildfire area name and location
2. Any contact details (of managers / owners)
3. Access and communications
4. Signage and orientation features
5. Assembly/rendezvous points
6. Site hazards
7. Fuel hazards
8. Priority protection areas
9. Water supplies



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### Environmental Impact Assessment

In England, where a woodland or forest is to be removed and converted into an open habitat (grassland, lowland or upland heathland or moorland) and it meets certain thresholds an applicant may need, as described earlier, to undertake an Environmental Impact Assessment (EIA). At the time of writing of this manual the roles of each agency and the finalisation of the policy are still to be agreed. The following should therefore be seen to be drafts only. The EIA process is defined in the following documents:

Link

[Environmental Impact Assessment \(Forestry\) \(England and Wales\) Regulations 1999](#)

In England the role of FRS and applicants is defined in the following document:

Link

[When to convert woods and forests to open habitats in England: Government policy \(Open Habitats Policy\)](#)

The policy (provisionally) states:

*“Evidence indicates that open habitats generally present greater wildfire risk than woodland. This is a particular issue for lowland heathland. We will routinely look at the impact of wildfire risk in the scoping exercise for all proposals for converting woodland to open habitat that are over thresholds for environmental impact assessment. Where we require an environmental statement, and wildfire risk is identified as an issue, the practitioner should liaise with the local fire authority to agree appropriate mitigation and control measures.”*

Further information can be found in the Forestry Commission Practice Guidance (2014) - Building Resilience to Wildfire in Forestry Management Planning and the Integrated Risk Management Planning Steering Group (2008) - Integrated Risk Management Planning: Policy Guidance – Wildfire. Further Wildfire and EIA Guidance is currently being drafted by Forestry Commission England, Chief Fire Officers Association and Fire Brigades Union. Further information can be obtained from:

Email

[Rob Gazzard](#)

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### The Benefits of Adapted Land Management

To encourage Land Managers, Owners and Fire and Rescue Services to invest time, effort and money in land management initiatives to prevent wildfires it is important to be able to demonstrate the benefits that their investment will bring.

A review of two fires that occurred almost simultaneously on the 17<sup>th</sup> September 2003 in North Yorkshire provides useful evidence of the benefits of good land management.



The fire at **Fylingdales** proved problematic for both land managers and the Fire and Rescue Service. There existed a very large fuel load on the moor as there had been no managed burning for several years prior to the incident and only very sporadic controlled burns in the preceding decades.

The environmental consequences of the fire at Fylingdales were catastrophic with total loss of peat, dormant seed layers etc. over many hectares and of course, the contribution to air and water pollution. The impact on that environment was permanent - although extensive and costly efforts have subsequently been made to revegetate it with some success.



The fire at **Bransdale**, although starting in a more remote location than the Fylingdales fire, was on moorland managed for grouse shooting that had had plenty of prescribed burning in the previous years. The Estate also had access to plenty of firefighting equipment and staff etc. in addition to that provided by the Fire Brigade. The Bransdale fire, because of the effective land management in place in the months / years prior to the fire, required far fewer resources, burnt for considerably less time and the impact on the environment was very short term and of no real significance.

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### The Benefits of Adapted Land Management

Case Study		
Title	Study of wildfire on managed / non-managed land	
Description	Managed Moor	Unmanaged Moor
Location	Bransdale	Fylingdales
Time / Date	17 <sup>th</sup> September 2003 @ 1.30pm.	17 <sup>th</sup> September 2003 @ 1.45pm
First Ignition	In a remote site but noticed by the keepers. FRS called at 1.55pm. Difficult access to the control point and fire and therefore less easy to provide an initial heavy attack on the fire.	Started in a layby and spotted immediately. FRS called at 2pm. Even with excellent access and quick response the fire was too intense and crossed the A171 and got away.
Day 1 – response and resources	A total of 7 FRS appliances attended, the first in attendance by 2.30pm. These complimented the 15 estate staff and private assets (water bowsers, ATV etc.) that were already on scene. The fire was out by 4.30 and then the focus was dealing with the hot spots in the peat. A perimeter zone around the boundary of fire had been thoroughly damped down by 9pm. Overnight presence consisted of 2 keepers who continued watering all night using well over 6000 litres of water.	Around 20 FRS appliances and over 100 firemen attended the site with various support vehicles. In addition, 3 local farmers and 15-20 staff from the National Park and Forest Enterprise complimented the FRS efforts. The fire threatened residential properties meaning 24hr cover was required for several days. Every fire appliance in North Yorkshire attended this fire at some stage and neighbouring FRS had to provide fire cover in North Yorkshire. Cleveland FRS also deployed resources at the incident.

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### The Benefits of Adapted Land Management

Day 2 onwards - response and resources	Damping down operations continued throughout day 2 lead by estate staff and complimented by the FRS. One keeper remained on site overnight. Operations finished by lunchtime on day 3	All resources assigned on day 1 remained in attendance for the majority of the next 5 days, the fire being considered under control by day 6, 22 <sup>nd</sup> September. Helicopters were called in and spent 27 hours tackling the incident. The incident remained ongoing until day 15, October 1st
Area Damaged	11 acres	600-700 acres
Long Term Damage	Small pockets of peat destroyed but as sufficiently small (a few square metres only), areas around them will be able to re-vegetate it naturally. Any long term damage will be insignificant.	50% of the area –350 acres - of peat totally destroyed. A “re-vegetation and regeneration” programme to prevent erosion is costing in excess of £250,000. The National Park is still working to re-vegetate sites that were similarly damaged in 1976 and in the 1930’s. Much of the peat, dormant seed banks and biodiversity is lost <b>forever.</b>

The study of the outcomes from these two wildfires lead to a number of obvious conclusions around the benefits of land management in high wildfire risk areas. It also points to the benefits of partnership working (both before, during and after an incident), the use of private resources alongside public (FRS) ones and the benefits of good wildfire preparedness and planning including consideration towards, amongst other things, water supplies.

A full review of the incident and the learning outcomes is found in the attached:

Link

[Land Management Case Study](#)

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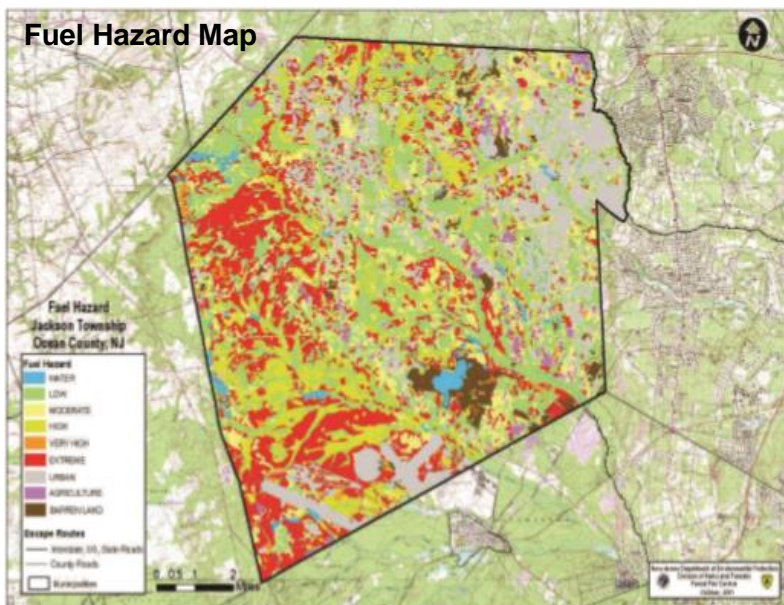
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### Community Wildfire Protection Plans (CWPP)

Where there is no identifiable single managing organisation, either with or without any form of statutory responsibility, then a different approach is required. Where a local community is also involved this should be one of creating understanding and providing the encouragement and support required to generate a collaborative community approach to the problem of wildfire.

One way of generating this is through the Firewise / Fire Adapted Community approach discussed elsewhere in the manual. Encompassing, and building, on these concepts the Community Wildfire Protection Plan (CWPP) encourages the local authorities to work with the community in order that they:

1. Recognise their responsibility to protect themselves and their property from wildfires.
2. Determine and prioritise the fire protection options available.
3. Implement the selected options to reduce their exposure to the threat of wildfire.



The CWPP should encompass a comprehensive review of the wildfire fighting capabilities available along with the fire risk, fuel hazard classifications and past fire occurrences. Evaluating these factors and any others that contribute to wildfire risk in a spatial format will then allow the community to develop a cooperative plan targeting specific issues requiring action.

Further, the CWPP should be a working document, available for modification when required, and the efforts and priorities that are identified should be able to be changed, rearranged added to or dropped depending on the needs at any particular time.

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### Community Wildfire Protection Plans (CWPP)

It is key however that the Community is committed to implementing the identified projects within the agreed timescales of any such plan and that they continue to reassess and refresh this process in order to continue to reduce the severity and threat from wildfire.

Unlike the USA, where the use of CWPPs is widespread, there is no statutory requirement to develop this type of plan. Indeed, the cost and effort may at first seem prohibitive to doing so. However, when you consider the costs of a single large wildfire – and these are now well documented – along with the ever increasing likelihood that they will occur, this is a step that should now be considered and implemented by all at risk communities in the UK.



Prescribed burning in Monmouth  
Battlefield State Park

CWPPs should be a collaborative effort between the local community, authority, land managers / owners and other stakeholders. The management team, tasked with making key decisions, agreeing and reporting on the plan, should be kept to a reasonable size and could consist of representatives from the following:

1. Community Representative(s)
2. Local representative from the Fire Authority
3. Parish council
4. Land Managers
5. Statutory bodies such as Natural England, Water Authorities etc.

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### Community Wildfire Protection Plans (CWPP)

#### Aims and Objectives of a CWPP

The following represents an extensive (but not exhaustive) list of potential aims and objectives for a CWPP. These can be taken as a whole or individually to suit to help in the creation of each unique CWPP that is created – according to the needs of the community it is designed to protect.

1. To promote collaboration in the development of the plan between the relevant community, agencies and authorities
  - a. To allow an open community debate around the wildfire threats and mitigation options
  - b. To allow the integration of wildfire protection into local planning applications / initiatives
2. To assess the wildfire hazards and risks within the forested and rural urban interface areas of the community.
  - a. To estimate the likelihood and severity of a wildfire, and the impact to the community, structures or other areas of concern.
  - b. To perform a comprehensive assessment of the local infrastructure to ensure it supports the required wildfire prevention initiatives, including;
    - i. Access heights and widths
    - ii. Bridge weight limits
    - iii. Street and property signage
    - iv. Hydrants or other water sources
    - v. Interoperable emergency communication networks
    - vi. Firewise and other prevention schemes already in situ
3. To identify areas requiring hazardous fuels reduction and recommend ways to achieve this.
  - a. To coordinate community assistance where required with fuel reduction initiatives
  - b. Align the aims and objectives of the landowners (public and private) with the needs and expectations of the community regarding reduction of wildfire hazards and risks

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### Community Wildfire Protection Plans (CWPP)

4. Encourage the ownership by homeowners of their responsibility to protect their property and identify / recommend measures that homeowners and communities can take to reduce the ignitability of their own homes.
  - a. Coordinate fire protection strategies at a landscape scale across the Community / landowner (or wider) boundaries
  - b. To address the issue of builders' / developers responsibility regarding fuel-break installation in new developments
5. Increase individual and community awareness of wildfire hazards, risks and related issues as well as promote wildfire mitigation and community protection initiatives. This to include:
  - a. An educational component to remind residents of their responsibility to adopt concepts such as defensible space
  - b. The integration and support of Firewise Communities goals
6. To seek and oversee the use of funding to reduce the wildfire threat
7. To prioritize hazardous fuel reduction, structural ignitability reduction, and community awareness projects within the community and assist in their implementation.

It is worth noting that a CWPP will also help signpost the areas that a FRS needs to target its prevention efforts at.



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### Community Wildfire Protection Plans (CWPP)

#### Hazard & Risk Assessment

The basis for a successful CWPP is a comprehensive assessment of the risk posed by wildfire to the locality. This could include (but is not limited to):

1. Any history of wildfire in the area
2. The possible effects of wildfire on the community
3. The structures and the area most at risk
4. The fire suppression capabilities of the local Fire Authority and any other firefighting equipment that can be utilised.

There is a fairly standard (and widely available) format for assessing and tabulating this risk in the UK. In the USA, where CWPPs have been widely utilised the following, or similar, format is used:

Community, Fire District Structure or Area at Risk	Fuel Hazard	Risk of Wildfire Occurrence	Structural Ignitability	Firefighting Limitations	Overall Threat
Whitesville Station 57 Fire District 1	4	3	3	3	<b>13</b>
Cassville Station 56 Fire District 2	4	3	4	3	<b>14</b>
Jackson Station 55 Fire District 3	3	3	3	3	<b>12</b>
Jackson Mills Station 54 Fire District 4	4	3	4	3	<b>14</b>

The above depicts the areas/communities in Jackson Township that are most at risk of wildfire in line with the factors identified in the first row. The following will help explain the methodology and terminology in the above table:

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### Community Wildfire Protection Plans (CWPP)

#### Rating System

Low	Moderate	High	Very High	Extreme
1	2	3	4	5

**Fuel Hazard** – The fire rating of the fuels that will burn in and around the community, structure, or area.

**Risk** – The measure of what causes a wildfire and the impact that it has.

**Structure Ignitability** – The ranking of the communities' structure's ability to resist the threat from a wildfire as determined by an assessment that meets or exceeds NFPA standards

**Firefighting Limitations** – An assessment of the equipment, organization, training, communication, mutual-aid agreements, and water supply available and in place.

The analysis of the above then leads to an overall risk rating system:

Low	Moderate	High	Very High	Extreme
1 - 4	5 - 8	9 - 12	13 - 16	17 - 20

The natural progression from the risk assessment is then to look at options to reduce the risk in the community. In the case of the CWPP this is pursued in a number of key areas:

1. Reduce the hazard posed by the fuel
2. Reduce structural ignitability
3. Community Engagement

Each of these areas is tackled in a variety of ways, as follows:

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## Wildfire Prevention Manual – Chapter 4

### Community Wildfire Protection Plans (CWPP)

#### Reduction of the hazard posed by fuel

1. Establishment of fuel breaks and wildfire preventative land management practices
2. Education initiatives aimed at any identified target group

#### Reduction of Structural Ignitability

There are numerous and the following, used in the USA, are intended as a guide. Many FRS and partners will have other, equally valid, schemes in place.

1. FRS Preparedness
  - a. Exercising / Hydrant testing / maintenance / visibility / Fire plans
  - b. Mutual aid
  - c. Support community hazard mitigation schemes / education
  - d. Firebreak maintenance
2. Community Preparedness
  - a. Community Fire response teams
  - b. Reverse 911 notification (**NB:** Police are trialling reverse 999 in the UK – should FRS be utilising this facility?)
  - c. Evacuation routes
  - d. Infrastructure improvements,
  - e. Home visibility (e.g. house names, numbers)
3. Firewise Communities
  - a. Home assessments (with the local FRS potentially)
  - b. Community clean up days
  - c. Firewise landscaping
4. Firewise Homeowner Preparedness
  - a. Home escape plan
  - b. Home Firewise maintenance clean ups and landscaping
  - c. Committee formation

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### Community Wildfire Protection Plans (CWPP)

#### Community Engagement

While all activities considered should include some degree of community engagement, such engagement is very often a powerful tool on its own. The following provides some typical opportunities for this work, some of which have already been discussed in this manual. Again, many FRS in the UK will have other, equally valid, examples that they are pursuing and which are more relevant to their intended target. Indeed, this is the key – any engagement has to be relevant to the target audience or it will be wasted effort.

- Use of the most appropriate media, whether this be a local radio station, social media (local Facebook page or FRS Twitter feed) or local papers
- Dedicated community / wildfire engagement days
- Use of displays at other community celebration events
- Use of signage in the high risk area or at the local fire station
- Community newsletter
- Displays (in village halls, libraries for example)

Whichever of the above is taken up it will be challenging for FRS and partners to get the messaging across and achieve true community buy in. Wildfire in the UK is, unlike the USA and other countries, either not fully recognised as a risk or seen as ‘someone else’s’ problem. This engagement will require an enthusiastic, persistent and innovative approach by UK FRS to be successful. It will be however, community uptake / buy in, the key component to making our communities resilient to the growing threat and keeping, ultimately, community loss, FRS and partner costs down.

Link

[Community Wildfire Protection Plan](#)

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## Wildfire Prevention Manual – Chapter 4

### Planning and Wildfire Mitigation

There are extensive areas of countryside in the UK that are becoming more and more fragmented by the relentless advance of urban development. The pressures brought about by such development are unlikely to ease in the future, indeed they are likely to become more extreme.

This manual has already explored schemes, such as Firewise, that can help make an existing community in a high risk area safe. However, with new communities this is an issue that should be considered at the planning stage, seeing planners working collaboratively with wildfire mitigation experts in the UK to ensure that the Rural Urban Interface remains as safe as possible for both the residents and users of these areas.

There are a number of different approaches that planners / developers can take, two key ones being:

- To identify areas with the highest wildfire risk and avoid development in these areas altogether
- Introduce appropriate wildfire mitigation schemes into any new development to ensure that its residents and their property are as well protected as they can be.

Whatever approach is taken it is vital that planners, developers, local authorities and communities work together to prevent the scale of loss that is seen repeatedly in the USA and other high fire risk countries.

Over the last 30 years, despite immense and ever increasing expenditures by governments (in countries where there exists a high wildfire risk) on both



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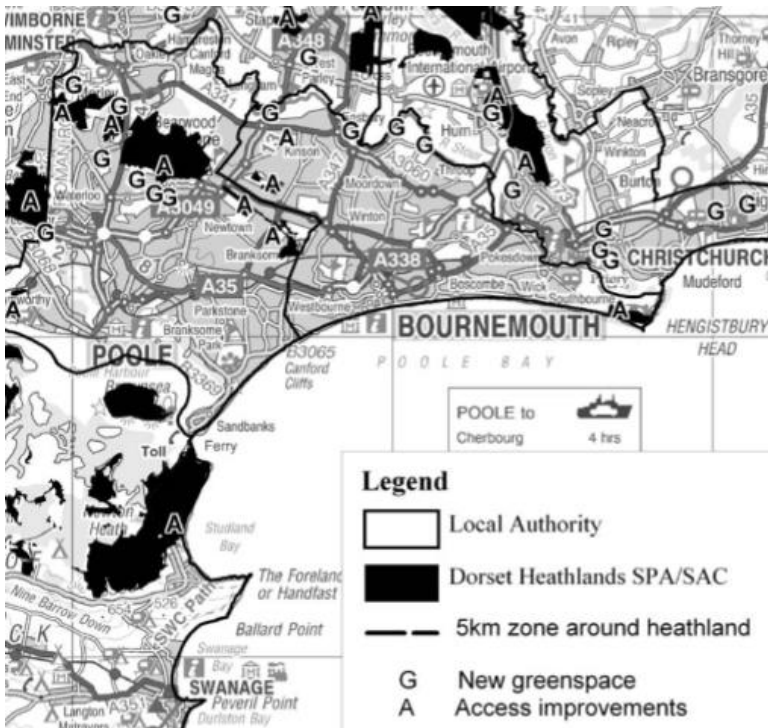


## Wildfire Prevention Manual – Chapter 4

### Planning and Wildfire Mitigation

disaster preparedness and relief, the catastrophic losses caused by wildfire (and other natural hazards) have increased at an alarming pace. In the USA wildfire suppression costs society over two **billion** dollars annually and there is concern that these costs will increase as extensive development continues in states with extensive wildfire risk.

Whilst the relevant authorities in the USA recognise that these problems exist (and are still being added to) because of the failure to steer the development of the last 30 years away from the highest wildfire risk areas, they also recognise the potential to reduce future losses, provided the authorities and planners work together in partnership to ensure “safer” and “smarter” patterns of land development occur in and near the high wildfire risk areas.



This problem is not unique to the United States and there is a growing realisation in the UK that, if action is not taken now then we will face the same types of problem – and associated losses – here. In Dorset Natural England have recognised that further residential development up to 5 kilometres from protected heathland in Dorset would have a significant effect on Dorset’s lowland heaths, which are covered by several international designations.

This has seen Natural England working with the local authorities in South East Dorset, whose administrative area is within 5 kilometres of protected heathland and which have responsibility for the determination of residential planning applications, to agree a 3-year interim strategy for the protection of this heathland.

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### Planning and Wildfire Mitigation

Case Study	
Title	<b>Dorset Heathlands Interim Planning Framework 2006 - 9</b>
Aims	<ol style="list-style-type: none"><li>1. To mitigate the harmful effects of residential development in South East Dorset on Dorset's lowland heaths.</li><li>2. To remain in place until the local planning authorities have agreed a joint Heathland Development Plan Document (DPD) as part of their Local Development Frameworks.</li></ol>
Background	The Dorset Heathlands cover an extensive area of South East Dorset fragmented by urban development and other land uses. Without mitigation to counter the effects of residential development within 5km of designated areas within the County it is likely to prove difficult to grant planning permission within these areas.
Details	<p>Local authorities in South East Dorset, with responsibility for residential planning applications, whose administrative area is within 5 kilometres of protected heathland have agreed a 3-year interim strategy for the protection of this heathland.</p> <p>During the life of this strategy the local authorities will have worked with Natural England and other partners to continue research into the effects of urban pressures on the protected heaths and to secure a longer term solution.</p>
Audience	The document has been adopted by all the local authorities in South East Dorset i.e. Borough of Poole, Bournemouth Borough Council, Christchurch Borough Council, East Dorset District Council and Purbeck District Council.

Link

[Dorset Interim Planning Framework](#)

It would be erroneous to leave this section discussing planning without further reference to the UK's own National Planning Policy guidance.

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## Wildfire Prevention Manual – Chapter 4

### National Planning Policy Guidance

The National Planning Policy Framework is a key part of the UK government's reforms to make the planning system less complex and more accessible. It vastly simplifies the previous number of policy pages regarding planning. The [planning practice guidance](#) to support the framework is published online and regularly updated.

The framework acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications. It should be increasingly possible for FRS and their partners to use the framework, particularly in relation to climate change and natural hazard policies within the National Planning Policy Guidance.

One excellent example of the application of the Framework is demonstrated by the collaboration between the South East England Wildfire Group (SEEWG) and Bracknell Forest Council, who have worked together to develop wildfire mitigation and adaptation within a large development adjacent to the location where the Swinley Forest Fire occurred in early May 2011.

Further details can be found in the following case study concerning the work between Bracknell Forest Council and the South East England Wildfire Group:



Link

[National Planning Policy Framework Case Study](#)

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## Wildfire Prevention Manual – Chapter 4

### Changing Behaviours

There are many different ways to influence or change the public's behaviour when they use the countryside. These range from major advertising campaigns, coming at a high cost but proven to be effective (as with the long term smoke detection campaign), social and other media to short term point of use messaging such as:

- Road signage in high risk areas
- Signage on Fire Appliances and other associated vehicles and equipment
- Signage on commons in high public use areas

It is equally important however to change the mind-set / behaviours of other parts of our rural communities. Previous chapters have looked at the Firewise programme, which focusses on rural communities largely from the perspective of the householder, but there is also a need to assist other areas of these communities – farms, rural businesses, private land owners etc.

To do this effectively a different prevention delivery model may have to be considered by some Fire and Rescue Services, there potentially being a need for a dedicated resource to deliver this work.

### Advertising

Advertising can be used – in the sense of this manual – both as an education and a prevention tool. For simplicity it is included under this, prevention, chapter but its application should be to suit each FRS / partners' needs.

Advertising in the UK has not been extensively used to prevent wildfires in the same way as it has been used to prevent fires and fire deaths in the home. It has however been used extensively overseas with great success.



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## Wildfire Prevention Manual – Chapter 4

### Advertising

One of the biggest advertising campaign (and indeed national) icons in the USA is Smokey Bear. Introduced to America in 1944, with his famous warning "Only You Can Prevent Forest Fires" the Smokey Bear advertising campaign is the longest running in American history, helping to reduce the number of acres lost annually from 22 million recorded at its inception to 8.4 million in 2000.

The campaign has moved with the times and changing risk. It responded to the massive outbreak of wildfires in 2000 by changing its focus from 'Forest Fires' to 'wildfires' and Smokey's slogan to "Only You Can Prevent Wildfires." The use of Smokey Bear may not be appropriate to the UK market, although the materials are freely available on the official website, found on the link below.



It is anticipated however that a range of materials will be developed over time more suited for the UK, some of which it is hoped to include as a part of this manual at a later stage.

Smokey Bear can be aimed at adults and children across a range of media from children's reading and activity books. In the USA this form of prevention is used everywhere from television and radio to children's colouring books given away by local community fire stations. It is also used to educate the public prior to them venturing into the countryside.



Link

<http://www.smokeybear.com/>

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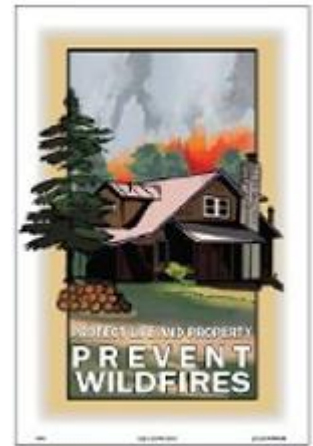
## Wildfire Prevention Manual – Chapter 4

### Fire Danger Signage

Signage should be used to help notify the public of the conditions in the high wildfire risk area that they are entering and of the potential for a wildfire to occur as a result. It is important that any signage used follows these basic guidelines:

- It is clear and easy to understand
- It cuts through any language barriers
- It provides consistency and continuity of message from sign to sign in the risk area.
- As with any outdoor signage, they are durable and changeable dependent on the risk

Signage in these areas could vary between permanently fixed signage or more manoeuvrable signage to deliver messaging in temporarily high risk locations and pop up displays that can be used to deliver and enhance wildfire prevention events.



The following are all signs used commonly overseas and could be adapted easily for use in the UK.



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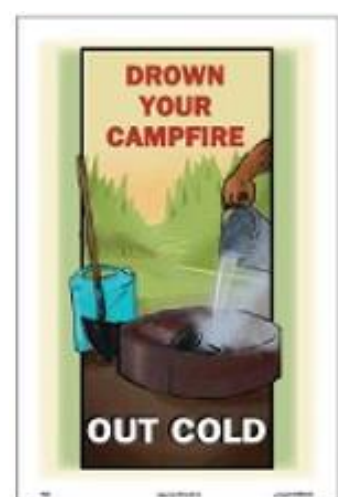


## Wildfire Prevention Manual – Chapter 4

### General Wildfire Prevention Signage

Many Fire and Rescue Services utilise this type of signage routinely to deliver other prevention messages or general information about their Organisation. Their use to optimise the delivery of wildfire prevention messages is a relatively new concept for the UK but one that will prove just as worthwhile as the more traditional uses.

As with other signage there are extensive examples from the USA on which to model signage appropriate for the UK market, examples of which can be found below.



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## Wildfire Prevention Manual – Chapter 4

### General Wildfire Prevention Materials

The Fire Service in the UK uses a multitude of different media to promote fire prevention messages generally. Applying the same initiatives to wildfire prevention has the potential to achieve the same results. The use of bookmarks, leaflets, children's books (colouring or story), fridge magnets and mascots (such as Smokey Bear) will all assist with preventing wildfires in the coming years.



These media have the ability to extend the communication of the wildfire messaging into schools, people's homes etc. They can be used to support education initiatives and for fund raising purposes or, if funding permits, can be used as giveaways at promotional events

FRS and partners may wish to consider the use of themed posters. In the USA Smokey Bear features on a set that not only delivers the prevention message in at risk areas, but has the ability to carry this messaging into people's homes as they are also attractive, collectable items.



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## Wildfire Prevention Manual – Chapter 4

### Road Signage

In the same way that a business uses signage to attract the attention of customers, road signage can be used to highlight key messages to motorists and other users of a high fire risk area.

They can:

- Inform the public that they are entering a high fire risk area
- Raise awareness of the current fire risk
- Inform the public of any activities that are permitted or banned
- Inform the public of safe ways to exit a high risk area in the event of a wildfire (evacuation routes)



Evacuation routes may be temporary or permanent, perhaps in communities with pre-planned routes created potentially as part of a Firewise scheme.



 **FIRES BANNED**  
**Due to Wildfire Danger**

PERMITTED	PROHIBITED
 Fires inside concrete or metal rings provided at <b>designated</b> recreation sites	 Fires outside <b>designated</b> recreation sites
 Portable stoves and lanterns using liquid petroleum fuels	 Charcoal briquettes <small>Except in grills provided at <b>designated</b> recreation sites.</small>
	 Fireworks

 **LEARN MORE AT:** [UtahFireInfo.gov](http://UtahFireInfo.gov)

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## Wildfire Prevention Manual – Chapter 4

### Signage on Appliances / Vehicles

Fire Danger Vehicle Signs (magnetic or otherwise) can be attached to appliances to increase the visibility and awareness of the current fire conditions. These vehicle Signs enhance community / public awareness and compliment any fixed signs or other prevention materials used.



Wherever possible the signage should carry the agreed messaging, or parts of it relevant to the risk. Examples of this messaging, as currently agreed, are included in the [targeted campaigns](#) section in the Education chapter.

Dorset Fire and Rescue Service use advertising as part of a three pronged prevention campaign, including youth education and the removal of the risk through a process of identifying areas of high fire loading and the removal of it through a premises risk profiling process.

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## Wildfire Prevention Manual – Chapter 4

### Press and Social Media

The traditional press, the internet and, more and more so, social media such as Facebook and Twitter are powerful tools to warn and inform the public, yet (with the possible exception of the press) they are not yet being used to their full potential in the UK.

The Chief Fire Officers Association (CFOA) along with the South East England Wildfire Group (SEEWG) have agreed a standard press release to use at times of heightened fire risk. It contains information and advice for the public and other users of the countryside on matters such as:

- The causes of most outdoor fires
- Do's and don'ts for the public around issues such as smoking, open fires
- What to do should a fire be discovered
- Preparation works that can be undertaken by land managers / owners
- The consequences of fire in the area concerned

The advice given also recognised that the public will still want to enjoy activities such as BBQs in high risk areas and provides advice accordingly:

- Where to site your BBQ
- How to prepare the area
- How to light them safely
- Supervision of the site

Link

[Draft Press Release](#)

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## Wildfire Prevention Manual – Chapter 4

### Social Media and the Internet

We are currently living in a technologically-driven society where the Internet and Social Media are regarded as a necessity in most people's lives. The Internet is growing exponentially and, thanks to companies such as Google, Facebook and Twitter its use as an information and education tool is being recognised worldwide.

Technology has the ability to get information / messages to the public instantly as opposed to the use of the traditional press for example. Where speed is of the essence these media are the obvious choice. So when there is a high risk level in a wildfire risk area messages can be delivered to a partner community, volunteers and the general public swiftly and easily. FRS and partners can also use these media to deliver important prevention information, encourage the formation of voluntary / community groups or even its own dedicated volunteer corps.

### Facebook



Despite being a social networking tool mainly for young adults to connect with their friends, co-workers and family members, Facebook can also be an excellent education platform. The South East England Wildfire Group (SEEWG) are one of a growing number of partners / FRS that are using this media to promote fire safety and wildfire prevention initiatives.

Link

[SEEWG Facebook Site](#)

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## Wildfire Prevention Manual – Chapter 4

### Twitter

Twitter is a very simple platform for fast two-way communication but it also has a lot of useful features for education as well. As with Facebook its use amongst FRS and partners is growing rapidly, notable users including CFOA, the International Association of Fire Chiefs (IAFC) and the National Fire Protection Association (NFPA). The SEEWG are again making full use of Twitter:



Typical uses currently include:

- Promoting FRS and partner activity
- Heightening awareness of the danger of wildfire
- Promoting community fire prevention activities
- Providing quick links to more comprehensive information

### You Tube

You Tube is the largest Social Website in the world, a video sharing website, and plays an important role in enhancing the online experience. Videos can also help a lot in prevention / education work. It is clear that video communication will also feature prominently in the future of multi-media communication.



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## Wildfire Prevention Manual – Chapter 4

### The Internet

Of all the electronic media referred to the Internet has been the longest established and currently offers, perhaps the best opportunities for FRS and partners to promote the wildfire prevention message. Its use is extensive both in the UK and around the world and the amount of information that it can offer is vast. The UK FRS has a strong web presence as do the majority of its partners. The FRS uses the internet to promote all forms of fire safety, including wildfire safety. To ensure the right message gets to the right people, the following may be worthy of consideration:

- Consider the content of the site – this may include dedicating it to a particular topic such as wildfire to ensure the reader is not presented with irrelevant information. Ensure the work is of quality and engaging to the end user, rather than full of key words that are there to try and attract search engine optimisation

British Columbia Wildfire Service

**Program Information**

- Wildfires of Note
- Fire Prohibitions
- Fire Danger Rating
- Current Wildfire Situation
- Prescribed Fire
- Wildfire Prevention
- Fire Weather
- Fighting Wildfire
- Fuel Management
- Wildfire History
- About Us
- Legislation, Regulations and Policies
- Strategic Planning
- Employment
- Stakeholders & Industry Partners
- Frequently Asked Questions
- Links
- Media Room
- Contact Us
- RSS

**BC Wildfire Service**

**FireSmart Your Home and Property**

Wildfires are unpredictable, but simple steps can reduce the chance they will impact your home and property. Learn more about FireSmart construction, landscaping and maintenance.

**Prevent Wildfires While Enjoying B.C.'s Outdoors**

Take the steps to limit the chances of causing a wildfire.

**Is your community prepared for a wildfire?**

Interface fires present unique challenges and obstacles that must be

- Ensure the site is linked to other trusted sites – this may be the FRS home site (thus separating the content but keeping it linked to the Service) and / or leading sites by other partners / subject matter experts such as the NFPA, England and Wales Wildfire Forum (EWWF) etc.
- Provide all the necessary accompanying details with any pictures that are included on the website - Search engines will not be able to deal with them correctly otherwise.

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## Wildfire Prevention Manual – Chapter 4

### The Internet

- Ensure that your site looks good, is fast and easy to navigate around. If it isn't then it is not only the end customer that will be put off, the search engines may overlook your site to some degree as well!
- Ensure that your site is optimised for the other media available, some of which have been referred to already, such as Facebook, Twitter and You Tube.

One good site (see image) is the wildfire prevention site maintained by British Columbia in Canada.

Link

[BC Wildfire](#)

Some UK FRS as well have started to use the internet to its full potential, creating bespoke web sites that have a clear target audience and set of prevention messages to deliver. Following a series of deliberate grass fires in the Wyre Forest area, Hereford and Worcester FRS designed, in consultation with children from the local junior school, set up an interactive website to try and educate local children and prevent further fires.

Hereford and Worcester FRS had a historic issue with fires on the Rifle Range (a SSSI site, about 60 hectares in size) in Wyre Forest. It was seen by many locals as a rite of passage to start a fire and this had a big impact on Hereford & Worcester FRS either due to the size or the frequency of the fires, tying up resources for many hours. Many different approaches by the FRS to resolve this problem had been unsuccessful.

Since the introduction of the programme the number of incidents has dropped considerably this has also been supported by better management of the land by the Ranger Service and the introduction of cattle to keep the fuel loading low.

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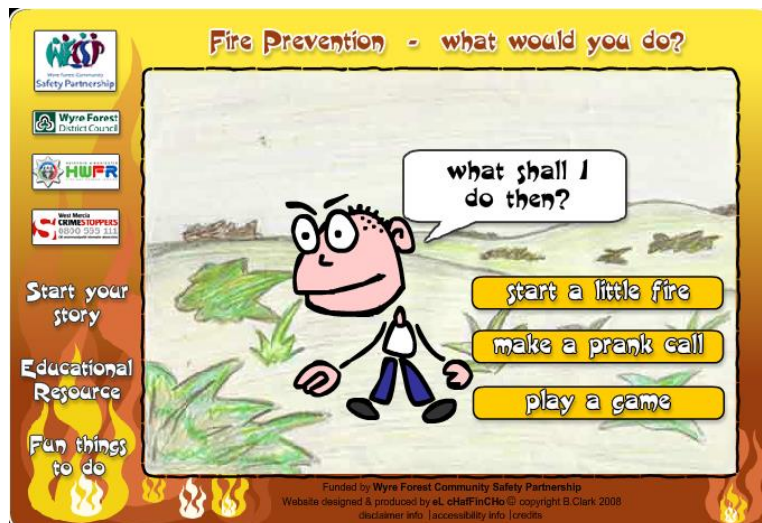
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## Wildfire Prevention Manual – Chapter 4

### The Internet

The project and resulting website ('Colin') came about through the local community safety partnership (who invested £4,000 to fund the project) working with the Fire Service, Police, Ranger Service and Wyre Forest District Council. A week's research in the nearest Middle School (years 5 & 6), discussing the issue with the children produced a series of storyboards highlighting both the issues with and the consequences of starting fires. The funding paid for an artist to draw up the artwork from the storyboards and put it onto the website.



The launch of the site was very well received by the local press and to support the launch the Fire Service Community Support Advisor visited every school in the district to promote the site and its messages. Over the years since the launch these visits have reduced to targeted schools in the vicinity of the nature reserve itself.

Link

[Wyre Forest Project - Colin Website](#)

Link

[Wyre Forest Project - Educational Toolbox](#)

The site is hosted and maintained by the District Council. For those that wish to use the site, the password is 'colin'.

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## Wildfire Prevention Manual – Chapter 4

### The Internet

What is clear with all the above is that – whilst of potentially enormous benefit – the set up and maintenance of these social media sites requires, to ensure that they are up to date and informative, some considerable effort - and hence money. This is something that, currently, may be hard to achieve for FRS and partners unless they consider fully the savings that can be made if even one wildfire, or just potential wildfire / fire in a rural area is prevented.

**2013 saw Surrey Fire and Rescue Service attend over 300 incidents on farms alone.**

Rural fires are costly, both to owners and the Fire & Rescue Service. Many require huge resource commitments, often over a long period. To prevent these incidents -and move the wildfire prevention agenda forwards - there is an enormous amount of other work that needs to be undertaken with the rural sector.



All the above potentially identifies the clear need for the creation of a dedicated resource / officer within Fire and Rescue Services. For the purposes of this manual this resource will be referred to as a Rural Affairs Officer, an opportunity that is discussed in the following pages.

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## Wildfire Prevention Manual – Chapter 4

### Rural Affairs Officers

When debating what resources should be put into wildfire prevention in rural areas it is worth considering the following:

“In many communities, wildfires are an inevitable fact of life; it’s not a matter of ‘if’, but ‘when’” - (National Fire Protection Association, NFPA)

“As well as having one of the highest fatal accident rates of any industry in the UK, agriculture is also the only high risk industry that has to deal with the constant presence of children.” (Health and Safety Executive, HSE)

“There is a deeply embedded culture in farming of unwise risk taking, which can have fatal consequences” (Dr R. Nourish, HSE)

Further these fires occur in areas with poor signage, inadequate water supplies, bad lighting and narrow access roads. Information to help firefighters is usually sketchy and incomplete. Hazards include the (often) unknown location of cylinders, fuels, fertilisers, machinery, asbestos and electricity. There are added difficulties if animals (horses or livestock) are involved and require evacuation, with firefighters and employees putting themselves at risk to come to their rescue.

There is a little preparation or prevention work for wildfires that is enforceable on land owners, which can make both this work and information gathering in preparedness for the intervention phase of the incident difficult unless the landowner, manager or organisation is either responsible or has its own internal legislation to follow.

Children are potentially at an even higher risk, with rural establishments providing an exciting playground.

The HSE recorded over 400 serious accidents to children in the last 10 years, with 35 children dying. Many more accidents are believed to go unreported.

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## Wildfire Prevention Manual – Chapter 4

### Rural Affairs Officers

Like no other industry, farms and stables are homes as well as workplaces and it is the responsibility of land owners to control the hazards or reduce the likelihood of children coming into contact with danger. New legislation presents owners with increased responsibility towards anyone on their property or land, but help from partners and Fire and Rescue Services can prove problematic in some instances as they are a particularly hard to reach section of the community.

The rural sector in general often has insufficient time and resources to allocate to wildfire prevention / planning as it is not yet considered a priority, as:

- There is no enforceable legislation
- The problem is currently not a frequent one in the UK
- There is a lack of awareness of the potential size and scale of the problem
- There can be a lack of awareness of the prevention measures required to prevent the problem
- There can be a lack of resource to provide effective land management and reduce fuel loading where required



Fire and Rescue Services have an opportunity, not only to reduce the risk of fires occurring in these locations but also to promote a full partnership approach with the rural sector to the issue of prevention (and also preparedness). Formally extending current risk information gathering processes with the personal approach that a rural affairs officer will bring will only encourage the rural sector to be proactive in their approach to the increasing wildfire risk.

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## Wildfire Prevention Manual – Chapter 4

### Rural Affairs Officers

In its most basic form the risk information gathering visit could include the following prevention advice:

- Separation of flammable material from adjacent risks
- General housekeeping in respect of electrics, flammable storage, tidiness
- Land management required to reduce the surrounding wildfire risk

With this partnership approach it is anticipated that FRS will benefit as well, gathering during the process:

- Information on the wildfire risk in the locality
- Information on any hazards in the farm / rural business
- Information on any assets that the business may have that could assist FRS in tackling a wildfire



There will also be a number of benefits with regards to preparedness and intervention through the creation of this role and the suggested partnership approach. These will be discussed in full in the appropriate sections of this manual but in summary:

- These officers will ensure that their own FRS is prepared for wildfire in their area, carrying out any preplanning required
- They can take on the role of subject matter advisors (SMAs), or other specialist role within the Incident Command System (ICS) at an operational incident
- They can liaise with partner agencies to underpin the FRS prevention strategy

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## Wildfire Prevention Manual – Chapter 4

### Community Engagement

An important part of any prevention programme is community engagement, often referred to as Community Outreach in other parts of the world. Whilst all the prevention activities considered by FRS and partners should include some degree of community engagement, this engagement is often the best option in its own right.

The following community engagement activities offer some suggestions for FRS and partners, but many will already operate similar, or totally different, engagement schemes in their areas that are tailored specifically for the community that they are designed to reach:

- Prevention displays in suitable village locations – church halls, local pubs etc
- Prevention signage throughout the higher risk areas
- Local radio prevention messages / articles
- Displays at local village fetes, carnivals, community days
- Promotion of Firewise and wildfire prevention through the holding of dedicated prevention promotion days
- Installation of Firewise and other prevention signage at local fire stations – with personnel suitably trained / informed to advise the public
- Prevention messaging in local magazines / newsletters
- Prevention promotion at local council meetings
- Prevention messaging on any local internet sites with links to the main FRS / partner website promoted



It may also be possible, through this engagement to encourage community preparedness and intervention activities, through the formation of a Community Emergency Response Team (CERT). This will be explored later in the manual.

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## Wildfire Prevention Manual – Chapter 4

### Learning from Experience

Learning from past fire experiences is something that the UK FRS is very good at with very experienced, often dedicated, fire investigation teams ensuring the cause of every fire, and hence any prevention work that is required, is fully understood.

The need to learn from experience lead to the creation of wildfire partnership groups such as the South East England Wildfire Group (SEEWG) and the Peak District Fire Operations Group (FOG)

Extending this investigation and review process to wildfires is a natural progression and one that not just FRS are taking. The Moorland Association for example, whose members are responsible for managing over 700,000 of the estimated 800,000 acres of heather moorland remaining in England and Wales, aims to halt the loss of heather moorland and to secure its future by learning from past incidents.

A study, by the Moorland Association, of the 2003 wildfires produced the following:

- To enable the retention of long heather it must be surrounded by properly managed heather to limit the extent of any wildfire and make it easier to control
- Vegetation management should be appropriate to the circumstances /area around obvious risk areas. For example, given the link between public access and rural fires, trim, mow or flail to reduce biomass adjacent to public places – roadsides, car parks and picnic areas
- Remove fire risk material before high risk status is reached – litter and dumped cars for example
- Educate the public to be aware of the dangers / risk – for example, never lighting fires on moorland including gas stoves and barbecues.
- Provide information in high risk areas of the ecological effects of wildfires
- Place risk signs in key areas once there is a risk of wildfire. Keep the publicity and awareness ongoing during the high risk times to ensure that the public remain aware and not complacent

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## Wildfire Prevention Manual – Chapter 4

### Intervention

A key way to prevent fires from starting or from small fires developing into wildfires is to look at how FRS and its partners carry out intervention activities. This manual will not discuss actual firefighting, choosing to focus on intervention activities to prevent fires occurring. All of the intervention / firefighting work has already been completed and is included in the Wildfire Operational Guidance produced by the Scottish Fire and Rescue Service in consultation with CFOA / the UK FRS and the newly agreed National Operational Guidance (NOG).

Link

[Wildfire Operational Guidance](#)

Link

[National Operational Guidance](#)

This guidance document has been written to give fire and rescue service personnel an additional understanding and awareness of the phenomenon of wildfire. It examines the hazards, risks and controls relating to Fire and Rescue Service personnel, the personnel of other agencies and members of the public at wildfire incidents and provides a point of reference for those who may be called upon to plan for or respond to wildfire events. It therefore should enable the development of a consistent approach to pre-planning, response and suppression practices, enabling and supporting cross border mutual aid.

As with other guidance documents, the guidance offers a starting point for Fire and Rescue Services to conduct their own assessments, produce their own operating procedures and written safe systems of work taking account of their own local circumstances. This is now ongoing up and down the country and there will be good practices emerging, one such being the handbook developed by Surrey Fire and Rescue Service, providing a ready point of reference for incident commanders on the ground where guidance needs to be readily accessible.

Link

[Wildfire Handbook](#)

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## Wildfire Prevention Manual – Chapter 4

### Wildfire Patrols

This method of preventing wildfires combines the education of the public, elimination of the risk (through early identification) and enforcement by providing a visible presence within high risk areas. If the right messaging is delivered at the right time in the correct way, preferably in conjunction with our partners such as the land owner, ranger, police or local community these patrols can be highly effective.

FRS can plan for their summer strategies to include operational crews identifying and patrolling high risk areas at key times by liaising and planning with the land owners, partners and organisations in advance. These patrols can be undertaken in FRS or partner off road vehicles or even on foot.

<b>Activity</b>	
Title	<b>Wildfire Patrols</b>
Overview	This prevention activity involves planned high visibility patrols of pre-identified high risk areas by FRS and / or partners.
Audience	<b>All users of the identified risk area</b>
Benefits	<ul style="list-style-type: none"><li>• The inspections provide risk familiarisation to operational crews</li><li>• They provide an opportunity for face to face education with the public</li><li>• The marked vehicles (and presence of partners) act as a visible deterrent</li><li>• Operational crews receive regular off road vehicle use, maintaining competencies</li><li>• Land owners / managers receive a direct line of contact with local fire crews</li><li>• Fire crews are in high fire risk areas in the event of a fire breaking out</li></ul>

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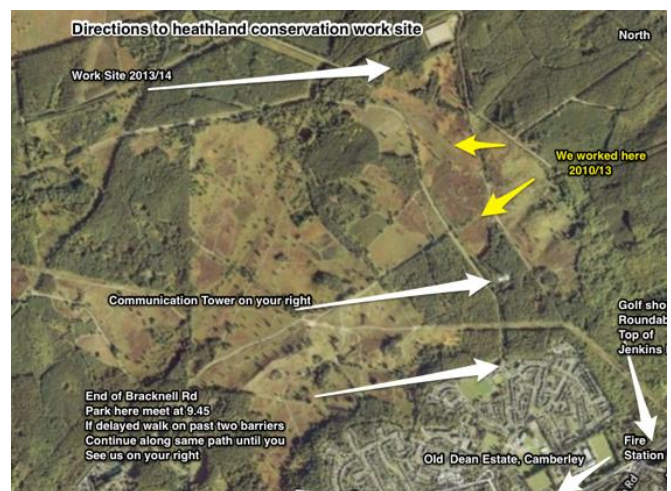


## Wildfire Prevention Manual – Chapter 4

### Wildfire Patrols

The use of voluntary (community) groups to help patrol in wildfire risk areas provides these groups with a sense of inclusion in the solution to the problem that they face. It is therefore likely to be more effective in the longer term, both in terms of sustainability and helping to eliminate the risk.

Partnership wildfire patrols with other (uniformed) agencies can also remove the need for secondary reporting of incidents that fall under other's jurisdiction (e.g. criminal & environmental offences such as fly tipping and car fires). These agencies are able to circulate prevention messages relating to their own services and respond quickly and effectively to any issues found, removing the source of the problem, and reducing the likelihood of the problem re-occurring in the same location.



**Example:** All stations within SFRS who have a wildfire risk, have, as part of their station plan the requirement to patrol at regular intervals at high risk times. These should be high profile patrols in partnership with the community and other organisations wherever possible. In Surrey Heath these patrols are undertaken with the Police and the Heathland Conservation Society (HCS) and they have, over a period of several years, seen an estimated 60% reduction in the heathland fires in the patrol area.

The onus of planning the patrols falls to the HCS and – whilst the FRS are a full partner to the activity - the patrols are owned and driven by the HCS

Link

[Heathland Conservation Society](#)

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## Wildfire Prevention Manual – Chapter 4

### Wildfire Volunteers

Wildfire patrols in partnership with other emergency services do however face logistical problems with regards to their organisation. It is often difficult for these services to agree priorities and balance workloads. Emergencies can often scupper the best laid plans at short notice and dilute the event or messaging. Therefore, whilst requiring some effort initially to set up, and a potentially dedicated management resource to maintain them, the use by a FRS of its own volunteer corps offers far more resilience and opportunity to promote prevention messaging.

Once the Volunteer Corps is in formed wildfire patrols are just one example of their potential use to assist FRS operations around the UK. More and more FRS are now recognising the huge potential that exists in the Volunteer sector.



Volunteers can be recruited to assist with wildfire prevention work from a variety of sources, including:

- Communities at risk from a wildfire
- Conservationists
- Rangers
- Dog walkers
- Ramblers
- Horse riders
- And many other interested parties / user of the outdoor space

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## Wildfire Prevention Manual – Chapter 4

### Wildfire Volunteers

Once recruited (and trained to meet the requirements of each individual FRS) these wildfire volunteers can assist Services in a variety of ways, including:

- Acting as an early warning system for fires, reporting them in a timely manner. This may be as a part of their daily routine (e.g. walking their dog) or as part of an organised risk based mobilisation of wildfire volunteers
- Delivering outdoor fire safety information to members of the public – simple leaflet handouts whilst patrolling the risk area
- If they are sufficiently well trained, then delivering educating other users of the common on fire risks and on how to report a wildfire.

A key factor in the success of wildfire volunteers is to be able to 'mobilise' them at a time when the risk is high, thereby optimising their use and potential. In addition, if the wildfire volunteers are given some form of official status to act on behalf of the FRS – through the wearing of High Visibility vests with 'Fire Volunteer' on it for example – then as well as educating other common users they also act as a visual deterrent to potential arsonists in the same way as the high visibility patrols discussed previously.

One FRS with a highly successful volunteer corps is Surrey. Further information can be obtained from their website at under 'Safety' and then 'Wildfire'.



Link

[Surrey Fire Volunteer Service](#)

Everyone understands the need to optimise the use of FRS and partner resources and this includes the use of volunteers, who offer their help and want to be used to their full potential.

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## Wildfire Prevention Manual – Chapter 4

### Wildfire Volunteers

Greater Manchester FRS have considered this issue and have twinned the need for prevention work in both wildfire and water safety, their being a correlation between the times when the wildfire risk is at its peak and the desire of the public to swim in open water.



Seven volunteers for GMFRS recently completed training to become specialist Wildfire and Water Safety Volunteers. They will be deployed during hot, dry spells when the risk of both wildfires occurring and people getting into difficulty through entering open water are at their highest.

There are several areas in Greater Manchester and the surrounding countryside where both risks are high during hot weather. Places such as Dovestone Reservoir and the Longendale Valley are examples of popular areas where people visit to cool off in the water, often taking BBQ's along without thinking about the risks of moorland fires.

The small volunteer team have received training to equip them to talk to people about these risks in a non-confrontational manner, and to help educate the public about enjoying the countryside safely. They will also provide a presence during high risk periods where they can hazard spot and encourage members of the public to report any hazards they come across. The training included water safety information, first aid, the countryside code and consequences of wildfires and map and compass reading skills. The first two days were classroom based sessions delivered with the help of partners from The Peak District National Park, United Utilities, GMFRS and the RSPB. The next phase of training will be practically based, deliver by the ranger services, and will give the volunteers an opportunity to practice their map reading skills.



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