

Wildfire Management Plan Template

Introduction

Fires require a source of ignition and a supply of fuel and measures to address wildfire risk should address both.

A first stage in developing a Wildfire Management Plan is to decide what is the purpose of the WMP, and what it will achieve. This may include one or more of the following:

- Reduce likelihood of a wildfire starting
- Reduce fire severity (i.e. the amount of organic matter burnt); minimise the burned area and the effects of fire on vegetation including roots and dormant seeds and peat soils
- Reduce impact – for example, minimise or prevent damage or disruption to: business, livestock and wildlife, buildings, infrastructure, water quality and special features

A comprehensive Plan would aim to achieve all of these objectives but emphasis will vary from place to place.

Plans should consider the full range of options to coordinate and integrate an approach. Care should be taken to ensure unintended consequences are avoided.

Plan Template

See notes for advice about what to include

Title (see note 1)		
Name of Estate / Farm:		
Plan produced by:		
Contributors:	1	
	2	
	3	
	4	
	5	
Date:		Expected review date:
Linked Response Plan Reference:		

Summary of risks on the land: (see note 2)

This section is intended to make sure that you include all the relevant issues

List of risks identified in the Risk Assessment

Proposed Actions: (see note 3)

1 Management of behaviours (see guidance note 4)

2 Use of strategic firebreaks – purpose, siting, scale, management, monitoring and maintenance (see note 5)

3 Changing vegetation type and structure and soil wetness (see note 6)

4 Fuel Load management (see note 7)

4 Infrastructure (see note 8)

5 Protection of critical infrastructure, property and biodiversity or archaeological sites (see note 9)

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6 Strategic wildfire management (see note 10)

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Engagement Record (see note 11)			
List and summarise engagement			
	Engaged		Comments
	Y	N	
Planning Authority			
Environment Agency			
County Council			
Highways Authority			
Natural England			
Rural Payments Agency			
Historic England			
National Park			
Area of Outstanding Natural Beauty			
Fire and Rescue Service			
Commons Committee			
Tenant(s)			
Neighbour(s)			
Grazier(s)			
Other			

NOTES TO AID COMPLETION OF THE WILDFIRE MANAGEMENT PLAN

Note 1 Title

Include here information about the authors of the Plan and who has contributed. This will help with revision. The Plan should be reviewed at intervals to make sure it remains fit for purpose. Reviews should be carried out whenever there has been a significant change on the land, for example, change of personnel. We suggest a thorough review at least every 5 years.

Note 2 Summary of risks on the land

This section is intended to make sure that all the relevant issues are included and that the focus is on key risks identified in the Risk Assessment.

Include here a concise description of the land, indicating the areas where fire is most likely with a summary of habitats, structures, commercial interests or other assets at risk, the likely sources of ignition and the potential impacts of fire.

Record here any key infrastructure assets, such as: roads, electricity supplies, water resources, fuel pipelines, masts, wind turbines.

Record here any likelihood of risk to the public and how this might arise.

Supporting this summary by mapping values, assets (including infrastructure) and risk would be very valuable. One or more annotated maps may be needed depending on the complexity of the site which might include:

Map 1 Access and High Risk Areas

- Access points and routes for firefighting
- Historical wildfire ignition points
- Human behaviour hotspots – car parks, camping sites, BBQ areas
- Rights of Way – roads, footpaths, bridleways
- CRoW¹ open access land
- Location of infrastructure
- Property (residential, commercial and industrial)
- Priority habitats at risk
- Commercial assets at risk
- Historic or archaeological sites at risk
- Designated sites² protected by legislation

Map 2 Fire Risk Management

- Vegetation types
- High fuel load areas
- Areas with ground fuels (peat)
- Topographic features that affect fire behaviour
- Environmental Scheme options (Higher Level Stewardship /Countryside Stewardship agreement/ELMS options
- Areas where peatland restoration work is in progress
- Target areas for strategic management
- Target areas for re-wetting

¹ Countryside & Rights of Way Act 2000

² See: <https://magic.defra.gov.uk>

These maps are to help you and others understand the relationships between features on the land. It is suggested that you annotate the map with a list of any of the features above that are not relevant so that it is clear that they have been omitted deliberately.

Maps could be updated annually to show progress on fire risk management, and shared with local Fire and Rescue Service and/or local wildfire groups to facilitate co-ordination between holdings as part of annual liaison.

Each of the issues noted here as relevant to the land should be addressed in the risk assessment.

Note 3: Proposed Land Management Actions

Describe here what actions you will take and how they are expected to achieve reduction or mitigation of the risks identified in the risk assessment. Explain here how the actions reduce specific risks. Actions can include the full range of land management activities including vegetation management. Ensure you have consulted the relevant authorities to ensure relevant permissions have been given.

Note 4: Management of behaviours

Consider how you can change your activity and the behaviour of others both generally and at times of heightened fire risk to reduce likelihood of fires starting. Options include:

- Suspension of management actions (eg cease management burning, avoid use of vehicles or machinery likely to generate sparks or hot exhaust gases) when risk is high.
- Use of posters and other awareness raising (consider how will you ensure that information posted remains relevant?).
- How can you work with others to raise awareness – for example:
 - The local police force may be able to help stress that arson is a crime through press or signage,
 - Fire & Rescue Services or Wildfire Groups/Fire Operations Groups may help co-ordinate messages, and
 - Local Authorities may be able to use road signage or signage on rights of way to alert the public.
- Use of media, including social media, to alert heightened risk / need for vigilance and encouraging reporting.
- Asking visitors to report fires.
- Adopt a local fire watch initiative.
- Deployment of staff or volunteers as lookouts.
- Closing access points / routes, where this is possible.
- Regular management of hotspots of human activity to reduce litter and biomass.
- Monitoring of ignition points (such as, vehicle parking on vegetation, BBQ use etc.)
- Patrolling - for moorlands close to urban areas there may be options for Police and/or Fire and Rescue Service support in terms of weekend or Bank Holiday presence, for instance via patrols by Community Police Officers. There may be capacity to deploy estate staff, countryside rangers etc to fire watch duty.

Note 5: Use of strategic firebreaks – purpose, siting, scale, management, monitoring and maintenance

Be clear about the purpose of fire and fuel breaks. Do you intend the break to stop a fire or slow fire spread to help tackle it? Fire breaks may be intended to cause fire behaviour to change, rather than stop fire altogether, so may be used as firefighting control lines.

A map (Map 2 above) would be useful to show the location of breaks and more resilient wet areas in relation to assets at risk, likely sources of ignition, prevailing wind(s), and topographic factors that will influence fire behaviour.

Plan for wildfire by working out where a fire may be brought under control or may stop due to changes in topography or vegetation. Fire breaks should be sited taking account of wind direction, slope, aspect, history of ignition points, surrounding fuel load as well as special features, infrastructure and habitats to be protected. Experience of previous fires (wildfire and prescribed burning) may help to predict how a fire may behave and the direction it may take.

Breaks can also be sited where fire behaviour can be predicted to change anyway, so reducing intensity, and in these situations may be co-ordinated with firefighting 'control lines', for example where a vegetation fire break runs up to a hard track, allowing access to a fire front of reduced intensity.

Fire break width will depend on purpose, soil and vegetation type and on expected fire characteristics. As a rule of thumb break width needs to be a minimum of 2.5 times expected flame height.

Naturally exposed mineral soil is the most effective fire break but creating bare mineral soil may not be appropriate or desirable on open moorland.

Where there are peat soils even a bare peat surface represents a residual fuel load. Severe fires can propagate through or beneath the peat.

Breaks that remain vegetated will require frequent and repeated maintenance and may have limited effect if any remaining vegetation or brash provides large quantities of rapidly drying fine fuels. Breaks may require less frequent maintenance if they become and remain dominated by Sphagnum or other moss species. Cut vegetation may create a mulch that helps retain moisture and reduces vegetation regrowth but must be chopped fine so that it stays in contact with the ground and remains damp. All vegetation will burn if it is dry enough.

Where cutting is used to create fire breaks, it may be possible to adopt techniques to reduce the likelihood that brash forms readily drying fine fuels. Forage harvester type machinery can fine-chop dwarf shrub canopies so that material is blown away from cut areas and dispersed. Fine-chopped material left on the ground surface is more likely to remain in contact with the ground and resist drying.

Fire breaks may be used to 'compartmentalise' a moor or isolate locations identified as likely ignition sources, fire pathways (e.g. gullies) or to isolate features, habitats or infrastructure that require specific protection.

Fire breaks should incorporate existing infrastructure, such as tracks, which may form a starting point for fire break development. Other features such as ribbon ponds, walls and patches of less fire-prone vegetation such as wet flushes or short grazed grass may also be used as part of the fire break network. Drainage or erosion gullies, blocked as part of a re-wetting scheme, can maintain networks of wet areas and provide a water resource where dams

maintain deeper permanent pools. Strategic siting of plastic piling dams could be considered as a method of pool creation.

Lines of grouse butts could be integrated into the plan as infrastructure that needs to be protected. Butts often have access routes that may be used for firefighting and where vegetation is kept short for picking up it may be built into the network of fire breaks.

Areas of short grazed grassland can act as a firebreak. Where there are neutral or alkaline soils, grazing stock are more likely to take off the herbage and dead plant material decays more quickly leaving less litter as fuel load.

Fire breaks will need to be monitored regularly to assess build-up of vegetation and review effectiveness. Indicate here when that will be carried out and by whom.

Note 6: Changing vegetation type and structure and soil wetness

Describe here measures to modify vegetation for example, to change fuel quantity or type and changes to habitat.

Changing vegetation composition by rewetting and peatland restoration will in most cases result in vegetation with lower biomass and wetter soils that are less likely to be severely damaged by fire. For example, restored bog vegetation will be likely to have more moss and other low growing vegetation that is naturally damp and in contact with the ground and so less likely to dry out. By comparison, unrestored areas may have a canopy of heather, which, if not managed, dries readily to form flammable fine fuel.

For blanket bogs, management to achieve abundant moss (especially Sphagnum) will naturally ensure ground is damp and also support a varied and often sparse fuel load. Even at relatively low coverage, patches of moss, especially Sphagnum, dominated vegetation will break up the homogenous higher fuel-load vegetation typical of drier habitats.

Low stocking rates will often allow the increased development of moss in the field layer, both Sphagnum mosses and also 'feather-mosses' that are still relatively good at holding moisture, inhibiting the dense high fuel load vegetation growth that is seen in mono-cultures of heather and purple moor-grass.

On deep peat, suitable management of heather or purple moor-grass dominated vegetation can likewise promote the development of a more moss-dominated vegetation, particularly if accompanied by work to re-wet peat by drain or gully blocking and inoculation of bog plant species.

Change can take place in only a few years where a combination of reduced grazing, water table restoration and Sphagnum restoration is carried out.

Such changes will not prevent fire. In the right conditions all vegetation and peat will burn and facilitate fire spread but retaining more moisture in vegetation and soils reduces the severity of fire and its impact.

Consider here the options for re-wetting and peatland restoration including blocking grips and gullies and restoring peatland vegetation. These measures are likely to be part of a vegetation management or restoration plan to which you could refer.

Where there is vegetation made up of native grasses that are relatively palatable to grazing stock low biomass can be achieved though effective utilisation of herbage. In some situations,

grazing livestock can be used to maintain or create breaks in the continuity of fuels across the landscape.

Note 7: Fuel Load management

For effective wildfire resilience consider the types, structure and composition of vegetation, which can be described as 'fuel loading', across the whole site.³

Describe here where fuel load management is required and why and what actions you will undertake to reduce fuel loads. Describe how fuel load reduction will be achieved and how build-up of load will be monitored.

Reduction of fuel load is likely to be most effective around ignition points or in high risk areas, but can be challenging in areas with significant open access. Fuel includes both man-made litter and vegetation. Management of vegetation to reduce fuel load around access points will require repeated and possibly frequent management.

Over a wider area, management could be undertaken to reduce biomass and break the continuity of fuels.

In naturally wet areas, such as active blanket bog, re-wetting work and restoration management, for example following the Blanket Bog Land Management Guidance (see Further Information) will help reduce the fuel load over time. As described in the section above, wet ground and wetland vegetation, particularly Sphagnum moss, inhibits the growth of more combustible vegetation, and the combination of wet pools and moss cover keeps the peat damp through some drier weather periods. All vegetation will dry out in prolonged and exceptionally warm periods.

Grazing may contribute to management of fuel load but at the levels required to be effective on its own may conflict with other objectives for the land especially on protected sites.

Note 8 Infrastructure

Include here details of any infrastructure (eg tracks, ponds, firefighting equipment left on the land) that is intended to contribute to reducing the risk and effects of wildfire.

Include measures required to maintain infrastructure to ensure that it is fit for purpose.

Include measures to protect public or utility infrastructure on or adjacent to the site (e.g. roads, powerlines). Some utilities may require protection as part of wayleaves and this will normally be the responsibility of the utility company. Nevertheless, any vegetation management to protect wayleaves could be incorporated in the Plan.

Include details of buildings or other infrastructure at risk.

³ See Wildfire Management Zones in the FC Practice Guide (Appendix 2).
<https://www.forestresearch.gov.uk/research/building-wildfire-resilience-into-forest-management-planning/>

Note 9: Protection of critical infrastructure, property and high value natural heritage or archaeological sites

Some features may require specific protection over and above that normally required.

Consider creating 'defendable space'⁴ for properties and critical infrastructure to improve fuel loading and to improve fire suppression.

Detail here any specific measures required to protect critical infrastructure or high value natural heritage or archaeological sites that would justify measures that might not otherwise be considered as acceptable. This information will be crucial in engagement with statutory agencies about your Plan.

Note 10: Strategic wildfire management

Consider how any of the measures adopted in the Plan contribute to wildfire risk management at the landscape scale. How can you work in co-operation with neighbours to reduce fire risk in the wider landscape?

Share your Plan with the local Fire and Rescue Service, and where there is one, the local Fire Operations Group.

Operate an early warning system with neighbours.

Note 11: Engagement Record

This section is to help you ensure that any statutory requirements have been met and that there has been useful engagement with others who may be affected by the Plan or who may be able to contribute to it. In some cases, there may be a 'duty' or courtesy reason to consult neighbours or those with interest in the land. You may not need or wish to discuss your plan with all the bodies listed and there may be others relevant to your circumstances. The Table below suggests those who might be consulted and reasons for doing so.

Keeping a record may help in discussions with statutory bodies and will serve as an audit trail for the future.

Include here a summary of why the engagement took place and of any response. Suggested consultees are those listed below.

⁴ See Appendix 2 of FC Practice Guide for more details.

<https://www.forestresearch.gov.uk/research/building-wildfire-resilience-into-forest-management-planning/>

Organisation	Details of Engagement
Planning Authority	Where proposals require or may require planning permission
Environment Agency/ County Council	May be required where watercourse or land drainage consent is needed
Highways Authority	Where proposals affect access or Rights of Way
Natural England	Where the land is SSSI. NE may also comment on implications for landscape
Rural Payments Agency	Where there are agri-environment agreements and the Plan affects prescriptions
Historic England	Required where proposals affect a Scheduled Monument
National Park / Area of Outstanding Natural Beauty	Where proposals require or may require planning permission, affect access etc
Fire and Rescue Service	Wildfire Response Plans should be lodged with the FRS
Commons Committee	Local knowledge and site history. Resource for actions
Tenant(s)	Local knowledge and site history. Resource for actions
Neighbour(s)	Local knowledge and site history. Resource for actions
Grazier(s)	Local knowledge and site history. Resource for actions
Other	