Forestry Commission England

Operations Note 040 Date: 8 September 2020

Assessment of potential wildfire risk resulting from planned deforestation to an open habitat

1 Purpose

This Operations Note seeks to ensure a consistent approach to the planning and assessment of proposals for deforestation (or heavy tree number / canopy cover reduction), and the potential increase in wildfire risk resulting from those proposals.

This note provides:

- an identification of risks from wildfire, and processes to ensure wildfire risk is fully considered when planning and assessing proposals for deforestation under Environmental Impact Assessment (EIA) (Forestry) regulations
- advice for project proposers on when to engage with relevant Fire and Rescue Authorities when considering a deforestation project or when preparing a Wildfire Management Plan
- guidance for Fire and Rescue Authorities when responding to requests for advice on proposals for deforestation (or heavy tree reduction) projects, and responding to formal consultation on those proposals

2 Background

The risk of wildfire incidents and their impacts may increase where forest or woodland is converted to, in particular, heathland or grassland, and where significant vegetation and timber debris remain on the converted site.

Failure to adequately address wildfire risk may threaten human life, property and the wider environment. Whilst incidents will always be a threat, the risk and impact of significant wildfires can be reduced.

3 Context – policy and regulation

A key element when considering prevention of significant wildfire incidents and reduction of the impact of wildfire is in understanding the level of resilience inherent in the land use type, and how this is affected by management practice.

The effectiveness of the response to a wildfire incident can be greatly enhanced by pre-planned and effective control measures. All but the most extreme wildfire incidents and their impacts can be mitigated using appropriate control / response measures. Enhanced resilience to wildfire is best achieved through consultation with key stakeholders and the application of good practice.

Various policies and regulations exist, and overlap, and must be considered when planning operations that will potentially increase or create a wildfire risk.

The Environmental Impact Assessment (Forestry) Regulations 1999

EIA forestry regulations require that any potential environmental impacts arising from proposals for deforestation (and potentially for afforestation) are assessed by the project proposer before seeking the opinion of the Relevant Authority, or their consent. In England that is the Forestry Commission.

This means that a project proposer is required to identify risks associated with their project and should seek information and advice to help with the planning, delivery and long term sustainability of the project. They should identify any potential impacts (direct and indirect) on people and places (including the architectural and archaeological heritage), flora and fauna, soil, water, air, and the wider landscape.

This includes considering the lifetime of the project, so understanding how a deforestation project is to be sustained, or how it will be managed if it is not sustained or if any of the project driver's change, are important factors. In most forestry projects, the potential impacts of wildfire can be avoided or mitigated.

Information on EIA and deforestation projects can be found on GOV.UK, on the Assess environmental impact before felling trees page.

Open Habitats Policy

There is a government policy on 'When to convert woods and forests to open habitat in England'. The policy indicates that open habitats generally present an increased wildfire risk than woodland habitat alone, and that people using open habitats increase that risk further. In particular, a greater risk of wildfire exists on lowland heathland and grassland habitat types.

Forest Services will routinely look at the risk factors and potential impact of wildfire as part of the EIA screening process for all proposals seeking to convert woodland to open habitat. Where wildfire risk can be identified as a significant issue, the project proposer is expected to liaise with the local fire authority in order to seek advice on, and agreement of, appropriate mitigation and control measures.

Fire and Rescue Service Act (2004)

The Fire and Rescue Service Act (2004) places duties on Fire and Rescue Authorities, and these duties are discharged using the Fire and Rescue Services.

The duties include providing information, publicity and encouragement to prevent fires, and the provision of fire safety (including advice), as well as firefighting for the purpose of extinguishing fires and protecting life and property.

Natural England has identified wildfire as a key threat and it is assessed as a significant risk in the Natural England and National Fire Chief Councils adaptation report / plan in response to the Climate Change Risk Assessment.

The National Risk Register and Assessment

The National Risk Register defines wildfire as a natural hazard that authorities defined in the Civil Contingencies Act (2004), such as Fire and Rescue Authorities, must assess, plan for and advise on.

The risk rating of 'Severe Wildfire' or 'Forest and Moorland Fires' will have been assessed in Community Risk Registers by Local Resilience Forums. Further guidance may be available through the relevant community risk register when you look to determine what might be appropriate measures for wildfire prevention.

The lead government organisation is the Home Office, who in turn pass wildfire prevention to the 45 Fire and Rescue Services across England.

FC National Emergency Plan

Forestry Commission England's National Emergency Plan provides a list of Subject Matter Advisers (SMAs) for contingency planning requirements. The woodland wildfire SMA role is to provide help during a response, but they can also advise on wildfire prevention options for open habitat restoration, such as mitigation, adaptation, control measures and use of wildfire prevention tool kits, as well as help to interpret the Forestry Commission Practice Guide - Building Wildfire Resilience in Forest Management Planning.

4 Planning for wildfire

As part of preparing for any land use change away from woodland cover, a project proposer is expected to assess the probable environmental risks and impacts from the change proposed and, in respect of wildfire, may be required to provide a Wildfire Management Plan where a risk from wildfire is identified.

4.1 Identifying risks

Using the survey templates provided in this guidance, project proposers should survey the site proposed for land use change, and all neighbouring land (where possible) to identify existing habitats, land use etc., and determine what level of wildfire risk exists, and how this may change by implementing a deforestation project.

Some of the factors that need to be considered are detailed below.

Relevant adjacency

Wildfire incidents can be highly dynamic, quickly moving from the land where the ignition occurred and into to other adjacent habitats, especially when driven by wind. Wildfire can be significantly influenced by topology and vegetation, particularly where vegetation is of a dry and flammable nature (for example, heathland).

In respect of wildfire, a deforestation proposal must consider the whole of the spatial area (the landscape scale) of the project and its surroundings, the operations involved in deforestation, and the aftercare required in maintaining open habitat status.

Distance between projects - considering coalescence

In particular, areas adjacent to the project boundary that contain "high risk" habitats (e.g. existing lowland heath or grassland habitat types), within or outside the land holding should be considered in terms of wildfire risk.

The importance of distance between projects of a similar type is dependent upon the habitat type the new project is creating, the type of adjacent habitats already in existence, and the time elapsed since previous projects were undertaken / how much successful restoration has been achieved. These factors directly affect the likely wildfire risk, and future wildfire behaviour.

When considering the distance between projects of a similar nature, particularly in terms of wildfire, numerous other factors should also be considered, such as fuel loading (brash, timber, stumps left on site), topography, aspect, wind direction, effective engagement with other landowners, the open habitat management regimes, and financial sustainability of the aftercare.

Management timescales

Timescales over which assessment of wildfire risk and impact should be considered are short, medium and long term. These impacts will be determined by the initial land use change (from – to), and the recovery (time it takes) from project implementation to open habitat vegetation fully colonising. See Table 1 below:

Table 1 – Timescales for management of habitats

Habitat type	**Timescales**		
	Short	**Medium**	**Long**
Grassland	Period of project implementation	5 years	'In perpetuity'
Heathland		25 years	

Other environmental factors

For wildfire risk, we must consider the threat to other environmental social and economic factors too (for example, impacts on people, property and business, water and air

quality, infrastructure, wider flora and fauna, and, for significant projects in sensitive locations, landscape and soils).

4.2 Stakeholder engagement

Undertaking relevant stakeholder engagement will help inform the project as to the concerns of others who may be affected by or have to respond to a wildfire incident resulting from the project.

For any open habitat project being restored from woodland cover, a record of stakeholders that are engaged should be created, and responses received should be recorded and addressed within the project planning process. Evidence of stakeholder engagement will be required when seeking an EIA Opinion or Consent of the Forestry Commission.

A list of suggested stakeholder groups is detailed in Appendix E.

A draft template letter for contacting the relevant Fire and Rescue Service is provided in Appendix F.

4.3 Existing wildfire precautions

When considering wildfire risk, it is equally important to recognise what fire control and planning is already in place. A completely new project may have none, but extending an existing project may already have adequate identification of risk, precautions and controls in place.

These need to be clearly identified in any wildfire planning work.

4.4 Is a Wildfire Management Plan required?

In Appendix B and Appendix C, a Wildfire Risk Assessment template and a Wildfire Risks and Hazards Checklist are provided to help project proposers assess the project and determine if a more detailed Wildfire Management Plan is needed.

These documents should be used when planning the deforestation project to identify hazards and what could be harmed by or increase the risks of wildfire, and to help find obvious precautions or mitigation to wildfire. Where significant hazards or risks are identified, it is suggested that a Wildfire Management Plan is required.

The project proposer should then use the project proposal description and the completed Wildfire Risk Assessment to seek the advice of the relevant Fire and Rescue Authority. Project proposers should use any advice that may be received from the Fire and Rescue Authority to inform the project proposal in advance of a submission for an EIA decision, felling permission or any funding administered by the Forestry Commission or Natural England.

4.5 Templates and checklists

Appendix A – A Wildfire Management Plan – the minimum requirements

Appendix B – Wildfire Risk Assessment template and Risk matrix

Appendix C – Wildfire Risks and Hazards Checklist

Appendix D – Example - Wildfire Risk Assessment

Appendix E – Stakeholders to contact

Appendix F – Template letter to Fire and Rescue Service

5 Preparing a Wildfire Management Plan (WMP)

It is recommend that the creation or restoration of higher risk habitats such as lowland / upland heath and grassland types should require a Wildfire Management Plan, as defined in Appendix A - Table 2, but this may be subject to understanding any existing wildfire controls in place.

Supporting guidance is provided in the appendices of Forestry Commissions Practice Guidance '*Building Wildfire Resilience in Forest Management Planning'*, pages 8 and 9.

Wildfire Management Plans should provide analysis of previous wildfire incidents.

The following appendices provide guidance and templates to help prepare a wildfire risk assessment and a wildfire management plan.

A Wildfire Management Plan template can be found on the Ops Note 040 webpage.

Competent expertise

When planning a deforestation project that requires the Forestry Commission's EIA consent, the project proposer will need to demonstrate that they have considered wildfire risk, and that (where relevant) they have secured a competent expert to advise on aspects of the project that may themselves increase wildfire risk or that may be affected by risk of wildfire.

As the relevant authority, the Forestry Commission will need to be satisfied that the information provided on wildfire by the proposer has been appropriately assessed by a competent expert – someone with relevant qualifications and/or professional experience - before reaching its regulatory decision.

6 FC review of wildfire planning

Proposals for deforestation may arise through:

- an Environmental Impact Assessment (EIA) application to Forestry Commission England for an EIA opinion or Consent, along with the appropriate application form to convert woodland to open habitat
- a felling licence application, along with the appropriate EIA opinion or consent application and application form to convert woodland to open habitat

- a grant application for woodland removal to an alternative habitat, along with the appropriate application form to convert woodland to open habitat

Applications to undertake deforestation, and potentially other forestry projects, will initially be subjected to an EIA screening process as part of the opinion forming process.

The Proposer, when seeking an EIA decision, is required to provide supporting evidence to demonstrate how their project will address any significant environmental impacts.

For deforestation projects, this will need to include evidence that a Wildfire Risk Assessment has been completed. Where a Wildfire Management Plan has been produced, it should be assessed as part of the EIA screening process.

The Proposer should, for wildfire related evidence, confirm that a Fire and Rescue Authority has been asked for its advice, and where this is provided, clarify how the advice has been used. Also, where the Fire and Rescue Authority is satisfied with the fire control planning, the Proposer should provide this evidence (see below for contacting Fire and Rescue Services).

The Forestry Commission, when screening the proposal, will form an opinion as to whether the project requires EIA Consent or not. The FC Woodland Officer / Field Manager may also contact the relevant Fire and Rescue Authority to confirm that the wildfire risk evidence provided, or the Wildfire Management Plan itself, have been seen by the Fire and Rescue Authority and that they have had an opportunity to respond to the wildfire mitigation proposals.

Where the risk factors indicate the likelihood of a significant impact, and/or wildfire mitigation and adaptation is not appropriate, the Woodland Officer and Field Manager will either:

- ask the applicant to reconsider the risks and resubmit the proposal
- decide that the proposal represents a relevant project under EIA and, through EIA scoping, will ask for an Environmental Statement to be produced

The FC Wildfire Subject Matter Adviser can help to advise project proposers and FC staff alike with regards the above questions.

7 Contacting Fire and Rescue Authorities

Fire and Rescue Authority

A Fire and Rescue Authority has a statutory duty to "*make provision for the purpose of fire safety and fire fighting in its area and to plan, assess and advise*". These duties are exercised by a Fire and Rescue Service.

It is strongly recommended that the project proposer contact the local Fire and Rescue Authority covering the project areas in order to seek advice on potential wildfire risk and likely controls.

As indicated previously, confirmation that the Fire and Rescue Authority have seen and agreed (or disagreed) with the mitigation and control measures proposed should be submitted to the FC. This decision will help inform our decision making.

Where the local Fire and Rescue Authority has identified that they do not have the relevant wildfire expertise to assist, further advice can be sought from local wildfire groups.

Projects covering two or more Fire and Rescue Authority areas

Where projects cover two or more Fire and Rescue Authority boundaries, all services should be engaged.

What should the Applicant include in letters?

A template letter is included in Appendix F. However, any letter sent to the relevant Fire and Rescue Authority, seeking advice on wildfire risk management, should request the following information.

- That the Fire and Rescue Authority are being engaged to provide advice and to comment on proposed wildfire mitigation and control measures on a project that is subject to Environmental Impact Assessment (Forestry) Regulations
- That the Fire and Rescue Authority can obtain further information on Forestry EIAs and the Open Habitats Policy on the relevant Forestry Commission webpage
- That the letter of enquiry is referred to the Fire and Rescue Authority 'in-house' wildfire specialist for advice and guidance, if one is available

8 Sources of further advice

Integrated Risk Management Plan: Wildfire (2008). Department of Communities and Local Government.

Building Wildfire Resilience in Forest Management Planning: practical guidance (2014). Forestry Commission.

National Operational Guidance Programme – Wildfire Incidents (2016). UK FRS

Scottish Wildfire Operations Guidance (2013). Scottish Government.

9 Versions

Version 2.0, issued 17.09.2018
Version 3.0, issued 04.03.2019
Version 5.0, issued 06.11.2019
Version 6.0, issued 08.09.2020

10 Appendix A: Wildfire management plan – minimum requirements

Table 2 – Minimum requirements for a Wildfire Management Plan + Link to FCPG022 Building Wildfire Resilience in Forest Management Planning

Toolkits required	**For EIA Screening**	**For EIA Environmental Statement**	See **FC Practice Guide FCPG022**
Wildfire Risk Assessment (WRA)	A Wildfire Risk Assessment (WRA) is required to identify: • Present hazards • Post proposal hazards (no mitigation or control measures, or • Post proposal hazards (with mitigation and control measures) The WRA will define the level of risk and will ensure mitigation and control measures avoid significant negative impacts to Environmental Factors.	As for EIA Screening, and in addition: • (Minimum requirement) The WRA will be reviewed and updated at least every 5 years, or after further land use change, operational activity or a wildfire incident.	See Appendix 1 – p37
Wildfire Management Zones (WMZ)	(Minimum requirement) A completed WMZ plan and WRP to be agreed, and for it to be updated at least every 5 years, or after land use change or significant operational activity. To be provided in a format suitable for the relevant Fire and Rescue Authority use.		See Appendix 2 –p39
Wildfire Response Plan (WRP)			See Appendix 3 – p41

Wildfire management techniques	To be provided as part of an Environmental Statement. This will identify and clearly state management techniques for wildfire mitigation and adaptation. Management techniques should be integrated within wider site management practices.	Pages 19 to 34

11 Appendix B: Wildfire risk assessment template

A wildfire risk assessment is an evaluation of the likelihood of a wildfire occurring, and the severity of damage it might cause if it does occur. The level of detail required will be proportionate to the level of risk, and will depend on the nature and extent of the forest or woodland and the type of operations involved. The assessment may be a broad scale, map-based exercise (for large habitat areas), or a more detailed matrix-based approach for small habitats at very high risk.

If required, it is possible to quantify wildfire 'risk rating' using the formula: 'Risk = Likelihood x Severity' and the descriptions and scales in the tables below.

Wildfire Risk Assessment template

Site Name:			**Location:**						
What are the fire hazards?	**Who / What might be harmed and how?**	**What are you already doing to manage risk?**	**Initial risk rating score**			**What else do you need to do?**	**Revised risk rating score**		
			L	**S**	**R**		**L**	**S**	**R**

Completed by:		**Date of assessment:**		**Date of review:**	

Wildfire Likelihood, Severity and Risk Matrix

Likelihood of wildfire starting			
Scale	**Likelihood**	**Chance (%)**	**Description**
1	Very unlikely	0-20	Event may occur in exceptional circumstances
2	Unlikely	21-40	Event could occur at some time
3	Moderate	41-60	Event will occur at some time
4	Likely	61-80	Event could occur in most circumstances
5	Very likely	81-100	Event will occur in most circumstances

Severity of a wildfire				
Scale	**Severity**	**Chance (%)**		**Description**
1	Negligible	0.005	**Life** **Property / Business** **Environment**	Minor local first aid treatment (e.g. minor cuts / abrasions) No financial loss or damage Minor damage - habitats and species will recover in less than a year
2	Minor	0.05	**Life** **Property / Business** **Environment**	Injury requiring first aid treatment Minor financial losses (up to 1% of profit), disruption or damage Minor damage - habitats and species will recover in 1 - 5 years
3	Serious	0.5	**Life** **Property / Business** **Environment**	Medical treatment required Serious financial losses (up to 5% of profit), disruption or damage Serious damage - habitats and species will recover in 5 - 10 years
4	Major	5	**Life** **Property / Business** **Environment**	Permeant or life changing injuries Major financial losses (up to 10% of profit), disruption or damage Major damage - habitats and species will recover in 10 - 20 years
5	Fatalities	50	**Life** **Property / Business** **Environment**	Single or multiple deaths Destruction of property (total loss) or business Irreversible impact on habitats and species

The Wildfire Risk (Low, Moderate, High or Unacceptable) can be calculated using the matrix below

		Likelihood				
		1	**2**	**3**	**4**	**5**
Severity	**1**	1	2	3	4	5
	2	2	4	5	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Score	Rating	Threat
1 - 5	Risk rating 1	Low
6 - 10	Risk rating 2	Moderate
12 - 16	Risk rating 3	High
20 - 25	Risk rating 4	Unacceptable

12 Appendix C: Wildfire risk and hazard checklist

Site Hazards

Risk	Hazard	Description	Yes	No
Site characteristics	Potential for larger than medium scale wildfires	Site is over 1 hectare and/or there is sufficient surrounding area to cause a larger wildfire	☐	☐
	Possibility of wildfires from adjacent land ownership	Site is location next to species and habitats at high risk from wildfires and/or prescribed burning operations that go out of control	☐	☐
	Wildfires increase due to no natural protection	Is the site vulnerability increased due to a lack of natural breaks and fire belts adjacent to or within the site?	☐	☐
	Has topographical extreme fire behaviour features	Site has topographical features (i.e. gullies, valleys or slopes) that increase the potential for extreme fire behaviour	☐	☐
	Unexploded ordnance (UXO)	Evidence or suspected evidence of unexploded ordnance on site	☐	☐
	Poor accessibility for fire response	Site has poor access from the highway and/or has limited internal roads and rides and/or has restrictive off road access to aid firefighting, orienteering and locating the fire	☐	☐
	Site has a heavy and/or complex fuel loading	Site has sufficient vegetation fuel loading to cause extreme fire behaviour	☐	☐
	Known site for deliberate and accident fires	Site has a history of past wildfires incidents (see fire reports from your local Fire and Rescue Service and your organisations records)	☐	☐
Climate and weather	Exposure to weather	Site is exposed to high winds, liable to changes in direction, etc.	☐	☐
	Increase wildfire potential due to drought and heat waves	Site has suffered a period of recent intermittent, sustained drought and/or heat waves	☐	☐

Risk	Hazard	Description	Yes	No
Management and training	Poor fire training	Staff are not trained to respond to wildfire incidents or prescribed burning operations	☐	☐
	Poor level of contingency planning	Site has no risk assessment, emergency and/or fire plan and/or control measures for vegetation fires	☐	☐
	Poor site management planning	Site has no management plan and does not provide appropriate fire planning	☐	☐
Land management practices	Poor level of site management	Site is not actively / effectively managed (e.g. no vegetation management, firebreak cutting etc.)	☐	☐
	No planning for prescribed fires	There is no management design and operational planning for prescribed fire operations in the site management plan	☐	☐
	Poor potential for early detection of wildfires	There is no or limited potential for detecting wildfires by the landowner, its users or the general public	☐	☐
	Unmanaged site	Site has had no management undertaken for over 2 years	☐	☐
	Use of inappropriate management practices	Such as the use of non/minimal intervention management in woodlands	☐	☐
	Poor on site prevention	Breaks and belt are not effective enough for the risks identified	☐	☐
Land management activities	Possible inappropriate ignition by machinery	Are vehicles and equipment used for management likely to ignite fine fuels? (i.e. inappropriate vehicles, poor guarding of exhaust, build-up of fine fuels on equipment surfaces etc.)	☐	☐
	Poorly undertaken activities	There is poor implementation and maintenance of control measures (i.e. fire breaks)	☐	☐
	Use of pyrotechnics and fire setting	Pyrotechnics and/or fire used on site for activities (i.e. tracer bullets, flares, fireworks, barbecues, bonfires or brash burning)	☐	☐
	Inappropriate prescribed burning operations	Operation has not been appropriately planned, staff are not training, undertaken during inappropriate weather and season periods, etc.	☐	☐

Infrastructure and Assets Hazards

Risk	Hazard	Description	Yes	No
Risk to buildings				
Residential, commercial and retail, industrial properties	Buildings at high risk from vegetation fires	Thatched buildings are within 500m or adjacent to the site and can be impacted on by a vegetation fire	☐	☐
		The buildings contain flammable / hazardous products or machinery within 500m or adjacent to the site and can be impacted on by a vegetation fire	☐	☐
	Life risk from vegetation fires	The site has the potential to cause a life risk to the occupants of buildings	☐	☐
		The property is in close proximity to vegetation (i.e. within 30m), especially ladder fuels adjacent to the structure	☐	☐
		There are vulnerable persons or people (e.g. care home, hospital and retirement home) that could be adversely impacted upon by vegetation fires (i.e. air pollution, heat radiation, smoke, evacuation and stress etc.)	☐	☐
	Evacuation	Would a vegetation fire result in an evacuation of people from adjacent buildings?	☐	☐
	Disruption of commercial and/or industrial businesses	The site has the potential to disrupt commercial or industrial businesses through a vegetation fire	☐	☐
	Impact on food and tree crops	A vegetation fire would impact on timber, wood fuel and food crops	☐	☐
	Impact on listed buildings and monuments	A vegetation fire would impact upon listed building and/or monument	☐	☐

Risk	Hazard	Description	Yes	No

Risk to transport				
Airport	Flight paths	A vegetation fire would have an impact on airport flight path (i.e. smoke restricting visibility)	☐	☐
	Airport infrastructure	A vegetation fire would have an impact on airport infrastructure (e.g. hangers, fuel tanks, runway lighting)	☐	☐
Road classes and infrastructure	Adjacent road part of the strategic road network	Fire or smoke would impact on motorway and/or truck main road - a road (T) adjacent to or within 500m of the site that could cause congestion	☐	☐
	Adjacent road not part of the strategic road network	Fire or smoke would impact on non-truck main road - a road and/or secondary road (B road) adjacent to or within 500m of the site that could cause congestion	☐	☐
	History of smoke and/or fire impact on road classes	There are records or reports of vegetation fires adjacent to road classes (i.e. Motorway, A or B road, track etc.).	☐	☐
	Adjacent to road side services and amenities	Fire or smoke would impact on service area or petrol stations adjacent to or within 500m of the site	☐	☐
	Smoke and/or fire reducing road users and service providers visibility	Fire or smoke would impact on roadside furniture (e.g. message / sign gantry (variable message sign), CCTV cameras, road lightning, etc.) adjacent to or within 500m of the site	☐	☐
Railway infrastructure	Adjacent train lines part of the rail network	The site is adjacent to or within 500m of the rail network	☐	☐
	Smoke and/or fire reducing train driver visibility	The site adjacent to or within 500m of railside furniture/infrastructure - for example, message / sign gantry (variable message sign), CCTV cameras, lightning, etc	☐	☐

Risk	Hazard	Description	Yes	No
Risk to transport (continued)				

General road and train infrastructure hazards	Extreme fire behaviour due to embankments	A fire would exhibit extreme fire behaviour adjacent to or within 500m of embankments	☐	☐
	Smoke and/or fire restricting vision or damaging structures	Fire and smoke impact on structures (e.g. bridges, barriers, underpasses, acoustic barrier, fences, surface cabling etc.) adjacent to or within 500m of the site.	☐	☐
Strategic impacts	Delaying FRS	A vegetation fire (i.e. smoke and/or fire) would delay FRS response to incidents	☐	☐
Impact on wayleaves				
Underground and Overground Wayleaves	Vegetation fire would have an impact on powerlines	Fire, smoke and water media fire suppression would have an impact upon powerlines	☐	☐
	Vegetation fire would have an impact on communication	Fire, smoke and water media fire suppression would have an impact upon communications	☐	☐
	Vegetation fire would have an impact on petrol lines	Fire, smoke and fire suppression would have an impact upon petrol lines	☐	☐
	Vegetation fire would have an impact on sewers	Fire, smoke and fire suppression would have an impact upon sewers	☐	☐
	Vegetation fire would have an impact on water catchment areas	Runoff from a fire or fire suppression would adversely impact upon water quality from a water catchment areas (i.e. near reservoirs or Environment Agency defined zones)	☐	☐
	Vegetation fire would have an impact on water pipes	Fire, smoke and fire suppression would have an impact upon water pipes	☐	☐
	Vegetation fire would have an impact on wayleave infrastructure	Fire, smoke and fire suppression would have an impact on wayleave infrastructure, such as sub stations, maintenance buildings, etc	☐	☐

Risk	Hazard	Description	Yes	No
Risk to social assets				
Recreation and leisure	Public access	Is the site accessible by the public, especially during bank and school holidays (especially spring and summer)?	☐	☐
	Level of public access	Are there more than 10,000 visitors a year to the site?	☐	☐
	Accessibility	Does the site have Public Rights of Way (PRoW) adjacent to or across it?	☐	☐
		Does Open Access Land (under Countryside and Rights of Way Act – CRoW) or permissive access increase site risk?	☐	☐
Cultural heritage	Heritage designations	Is there a risk to ancient monuments?	☐	☐
Aesthetic value	Landscape character	Is there a risk to National Parks or Areas of Outstanding Natural Beauty (AONBs)?	☐	☐
Health and wellbeing	Evacuation	Is there a risk of evacuation from adjacent properties?	☐	☐
	Health	Is there a risk of ash/smoke causing respiratory illnesses (onsite and within 1km)?	☐	☐
Risk to economic assets				
Impact on economic assets	Impact on sustainable natural resources	Would a fire impact on site food, anaerobic digesters, timber and biofuel products and/or wind turbines/farms, etc?	☐	☐
	Impact on sporting	Would a fire impact on sporting benefits?	☐	☐
	Impact on tourism	Would a fire impact on tourism benefits?	☐	☐
	Impact on neighbouring assets	Would a fire have an impact upon neighbouring economic assets?	☐	☐
Risk to environmental assets				
Nature conservation	Impact on conservation, landscape and heritage assets	Would fire impact on nature conservation, landscape and heritage designations (i.e. SSSI, SPA, SAC, RAMSAR and SAM)?	☐	☐
Priority Habitats and Species	Impact on priority species and habitats	Would fire impact on priority habitats and species?	☐	☐

13 Appendix D: Example wildfire risk assessment

Site Name: Example Site **Location:** Woodland and heathland site

What are the fire hazards?	Who/What might be harmed and how?	What are you already doing to manage risk?	Initial risk rating			What else do you need to do?	Revised risk rating		
			L	S	R		L	S	R
Wildfire could adversely impact upon the SSSI and SAC as well as the protected species	Wildlife	• Partnership working with Fire and Rescue Service including development of Wildfire Response Plan.	4	4	16 High	• Heathland across the site, including the area of woodland removal, will be managed to create a dynamic mosaic of age classes and structures to reduce the risk of extreme fire behaviour through mechanical cutting and prescribed burning operations linked to strategically located fire and fuel breaks and other prevention features (e.g. actively managed woodlands) • Wildfire Management Plan will be integrated in the Site Management Plan to ensure that wildfire risk is fully considered in management to protect SSSI, SPA and protected species	3	3	9 Moderate

Removal of existing woodland would restrict the use of certain firefighting tactics , increase risk of extreme fire behaviour and have an adverse impact on Environmental Factors (including SSSI, SPA and priority species).	Staff, Fire fighters, public	• Heathland is not currently managed but firebreaks have been established and annually cut across the site.	**4**	**4**	**16 High**	• Use a fully implemented Wildfire Management Plan (see page 8 and 9 of the FC Practice Guide, which will include the below control measures) integrated into the overall Site Management Plan • Implementation of a dynamic mosaic of lowland heath which is actively managed to reduce the sites fuel loading to be implemented by either i. Prescribed burning ii. Heather mowing / cutting and heavy grazing or other • Planning and implementation of strategic fire and fuel breaks across the site to improve firefighting tactics • Update of a Wildfire Response Plan which will be sent to FRS • Siting of Safety Zones across the site to ensure refuge from extreme fire behaviour for fire fighters, public and staff • Retention and active management of broadleaved woodland in strategic areas within the EIA area to reduce fuel loading and risk of extreme fire behaviour • Active and sustainable management of the surround woodland to restrict fire spread to property and infrastructure.	**4**	**2**	**8 Moderate**

Risk of ignition of wildfires and fire spread from bonfires/barbecues set on site.	Staff/public/Fire fighters	• No bonfires during dry spells, water containers taken if burning up. • Bonfire sites clear of debris and at a safe distance from scrub and trees • Do not light bonfires during excessively high winds	2	3	6 Moderate				
Injury and fatalities resulting from wildfires on site.	Staff/public/Fire fighters	• Visitor notices about wildfire risk have been located at entrance points during periods of high risk • Staff have received wildfire response training and have had joint training exercises with Fire and Rescue Service	1	5	5 Low				
Electrocution by 33kv overhead power lines during response to wildfire due to smoke and water media firefighting techniques.	Staff/public/Fire fighters	• Powerlines are clearly marked on the Wildfire Response Plan • Staff will inform Fire and Rescue Service the site has overhead powerlines • Vegetation under powerlines is managed by Electricity contractors on a regular basis	2	3	6 Moderate	• Wildfire Management Plan includes strategic vegetation management to reduce the risk to extreme fire behaviour	2	2	4 Low
Wildfire affecting adjacent oil wells managed by private company	Oil Company Staff/Fire fighters/public	• Oil wells clearly marked on the Wildfire Response Plan	4	5	20 Unacceptable	• 30m broadleaved woodland will be retained along the boundary adjacent to the oil wells and will be actively managed to increase resilience • Wildfire Management Plan will include strategic vegetation management to reduce the risk to extreme fire behaviour near oil wells	2	5	10 Moderate

Fire or smoke would impact on Non-Truck Main road - A Road and/or Secondary road (B road) adjacent to or within 500m of the site that could cause congestion.	Public	• Strategic plan produced by Fire and Rescue Service to divert traffic and minimise disruption	3	3	9 Moderate	• Road to be clearly marked on the Wildfire Response Plan. • Wildfire Management Plan will include strategic vegetation management using Wildfire Management Zones to reduce the risk to extreme fire behaviour near road • 30m broadleaved woodland will be retained along the boundary of the road and will be actively managed to increase resilience			
Vegetation fire would have an impact on petrol lines crossing to the north of the site	Staff/Public/Fire fighters	• Vegetation above the pipe is kept to a minimum and the pipeline is regularly inspected	1	5	5 Low	• Large fuel pipeline will be marked on the Wildfire Response Plan • Wildfire Management Plan will include strategic vegetation management using Wildfire Management Zones to reduce the risk to extreme fire behaviour near overhead power lines			
Wildfire causing evacuation, disturbance, damage or destruction of adjacent private residential property	Public/Firefighters	• Properties clearly marked on the Wildfire Response Plan	4	5	20 Unacceptable	• 30m wide fire break will be established adjacent to the boundary of the property to provide defendable space and will be cut annually • Wildfire Management Plan will include strategic vegetation management using Wildfire Management Zones to reduce the risk to extreme fire behaviour near properties	2	5	10 Moderate

Are there more than 10,000 visitors a year to the site?	Staff/public/fire fighters	• Notices are put up warning of the dangers of fires during dryer months • Fire and Rescue Service was liaised with to ensure adequate planning and cooperation in the case of a wildfire • Lighting of fires/ barbecues by members of the public is strictly prohibited on the site.	3	4	12 High	• Fire safety will be incorporated into the next site information day	2	3	6 Moderate
The site is accessible by the public, especially during bank and school holidays (especially spring and summer)	Staff/public/fire fighters	• Notices are put up warning of the dangers of fires during dryer months • Lighting of fires/ barbecues by members of the public is strictly prohibited on the site	2	2	4 Low				
The site is open access land with PRoW crossing it in a number of places	Staff/public/fire fighters	• Notices are put up warning of the dangers of fires during dryer months • Lighting of fires/ barbecues by members of the public is strictly prohibited on the site	2	2	4 Low				
Site is over a hectare and/or there is sufficient surrounding area to cause a larger wildfire	Staff/public/fire fighters	• Main firebreak splits the site as well as a number of wide rides and will be cut annually • The overall coverage of gorse / herbaceous vegetation will be reduced by up to 80%	2	3	6 Moderate				

14 Appendix E: Stakeholders for wildfire planning

In order to inform a project or EIA opinion (or consent), the following stakeholder organisations and groups should be considered when seeking views and gathering evidence:

- Fire and Rescue Services (who are acting on behalf of the Fire and Rescue Authority)
- Local Authority/s (the Emergency Planning Officer) who will advise on their 'Community Risk Register', which will define the level of wildfire risk and state control measures
- Representatives of Local Wildfire Groups, where they exist
- Adjacent landowners and/or land managers, including tenants
- Adjacent residential and business property owners
- Owners of national infrastructure or other assets that could be adversely impacted upon by a wildfire from/to the site (e.g. Highways England, Utility Companies, Airport companies, National Health Service, Network Rail, etc.)
- Representative/s of the Local Resilience Forums, defined by its chairperson, using their Community Risk Register to define wildfire risk and control measures in hazard 'H58 Severe Wildfire'. Not all LRFs hold information on wildfire

15 Appendix F: Template letter to Fire and Rescue Service

To Chief Fire Officer
XXX Fire and Rescue Service Headquarters
XXXX
XXXX
XXXX XXX

Dear CFO XXX

Wildfire Risk Assessment for determination under ENVIRONMENTAL IMPACT ASSESSMENT (FORESTRY) (ENGLAND AND WALES) REGULATIONS 1999:

Proposal:

- Name of applicant XXXX
- Location XXXX
- Description of proposal Deforestation to Open Habitat

Within the borders of [name] Fire and Rescue Service I/we propose to convert existing woodland cover to an open habitat type, namely [open habitat type].

This proposed land use change comes within the scope of the Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999. The Forestry Commission in England is the Relevant Authority for the assessment of environmental impact before felling trees under these Regulations.

As defined in the Government Policy on Open Habitats - When to convert woods and forests to open habitats in England, the project proposer is expected to liaise with the relevant Fire and Rescue Authority to help determine if risk from wildfire is appropriately assessed; this is with regard to the EIA forestry regulations identifying if there is a likely significant impact from a wildfire incident associated with this site, once converted.

The Forestry Commission has outlined information on wildfire resilience in FC Operations Note 40. Further information can be found in the Forestry Commission's Practice Guide, Building Wildfire Resilience in Forest Management Planning.

As the project proposer, I wish to seek advice from the Fire and Rescue Service to ensure that the proposed land use change from woodland habitat to [Open habitat Type] does not increase wildfire risk to an extent that it results in significant negative impacts on the environmental.

I enclose [*list documents – such as Wildfire Risk Assessment and Checklist, and / or Wildfire Management Plan*] for you to consider.

Please can you review these documents and provide feedback and advice that will enable the project proposals to adequately address wildfire?

If you are satisfied that these proposals do address wildfire risk adequately, please provide confirmation of that view.

Please contact me should you wish to arrange a site visit?

Please can you respond to this request within XX working days to enable the project to proceed for determination by the Forestry Commission under EIA Forestry Regulations?

If you have any queries or require further details on this project, please contact me.

Yours sincerely