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Fighting fires
in open rural areas

# Generic Risk Assessment 3.4

Fighting fires in open rural areas

June 2011

London: TSO

**TSO**
information & publishing solutions

# Contents

**SECTION 1**

# Generic Risk Assessment 3.4 Fighting fires in open rural locations

This generic risk assessment examines the hazards, risks and control measures relating to Fire and Rescue Service personnel, the personnel of other agencies and members of the public when fighting fires in open rural locations including grass, moor land, crop and forest fires.

Depending on the nature and scale of the operational incident a variety of significant hazards may be present. Fire and Rescue Service may therefore need to consider the contents of other specific generic risk assessments in this series.

You should, therefore, consider this generic risk assessment in conjunction with all other relevant assessments, which may include:

- Introduction

- 1.1 Emergency response

- 2.2 Rescues – from ice and unstable ground

- 2.4 Rescues – Flooding and water safety

- 2.5 Rescues – Of large animals

- 3.5 Fighting fires in farms

- 3.7 Fighting fires in refuse

- 4.5 Incidents involving transport systems – Helicopters

- 5.1 Generic hazards – Electricity

- 5.3 Generic hazards – Chemicals

- 5.4 Generic hazards – Biological

- 5.10 Generic hazards – Working at heights

Fire and Rescue Service must conduct their own assessments and produce their own safe systems of work (which include Standard Operating Procedures, training programmes, provision of equipment, levels of response, etc.) within the context of integrated risk management plans, local conditions, knowledge and existing organisational arrangements.

This generic risk assessment is intended to assist Fire and Rescue Services in the assessment of risks at the planning and preparedness stage and is not designed to be used at incidents. Services should ensure this assessment is undertaken by a competent person(s).

# Significant hazards and risks

The degree to which rural area fires represent a risk to personnel may vary between each Fire and Rescue Service area. Personnel from Services which serve predominantly urban areas may occasionally attend fires in rural areas.

Significant hazards which face Fire and Rescue Service personnel at rural area fires may include:

- environmental conditions
- terrain
- non-service equipment, personnel
- insects and animals
- movement of vehicles
- military ranges and hunting/shooting areas
- open water
- pylons/overhead power lines
- manual handling and heavy physical work; and
- stacked materials.

The type of rural area, e.g. forest or moorland will determine the hazards and risks faced.

## Environmental conditions

### WEATHER
The UK is generally experiencing prolonged dry spells with associated potential water supply shortages in certain areas of the country. Any prolonged dry spells have the potential to increase the risk of countryside fires. This type of incident can be very resource intensive and protracted.

Rural firefighting is a strenuous activity and there is a possibility of heat stress, heat exhaustion, sun burn and heat stroke occurring.

Consideration should be given to Fire and Rescue Service personnel that may be moving continually from incident to incident (spate conditions).

Air temperature, humidity, wind, terrain and the nature of the burning material will affect fire behaviour.

Sudden changes in wind direction may change the direction of fire spread, with an increased risk of Fire and Rescue Service personnel becoming trapped.

### SMOKE AND DARKNESS
The degree to which smoke presents a hazard on the fireground is affected by the following factors:

- the size of the fire front

- the material burning (type and amount)

- the speed of combustion

- ambient air temperature

- ambient weather conditions, e.g. wind speed and direction; and

- density and buoyancy of the smoke.

Risks may arise from:

- Electrocution from overhead high voltage power lines arcing through the smoke to the ground

- Inhalation of smoke and other products of combustion

- Reduced visibility. This may conceal other fireground hazards, e.g. pot holes, tree stumps, ravines, waterways, power lines or cause the isolation of personnel

- Disorientation

- Smoke affecting nearby public roads, pathways and railway lines; and

- Sudden wind changes causing previously safe areas to become smoke logged very quickly.

Additional risks in darkness may arise from:

- Reduced visibility. This may conceal other fireground hazards, e.g. pot holes, tree stumps, power lines or cause the isolation of personnel; and

- Colder conditions causing hypothermia.

## Terrain

### ACCESS

By their very nature, rural fires may occur in areas that have limited vehicle and equipment access. Large areas of undivided combustible vegetation, such as grass and trees, provide the potential for significant areas of burning which will impact on safe access and egress.

Access difficulties may mean it is necessary to transport equipment over large areas and potentially increase the risk of a manual handling injury. In many cases, Fire and Rescue Service personnel may have to walk considerable distances wearing personal protective equipment whilst carrying equipment.

Fire and Rescue Service personnel may become disorientated due to topography and lack of landmarks.

The distances to be covered may make command and control of the incident much more difficult to achieve.

## SURFACE TERRAIN

Hazards associated with surface terrain include:

- Difficulty in estimating the size of the incident

- Burning of the sub-organic layers, the depth being dependent on the heat generated by the burning material

- Fires travelling underground with no indication of burning, leaving voids undetectable from the surface and fires breaking out some distance from the original starting point

- The make up of vegetation. On dry grass land, the heat from the engine and hot exhaust may ignite vegetation compromising the appliance

- Man-made hazards such as barbed wire fences

- Irrigation ditches; and

- Mine workings.

The slope of ground may have a significant effect on the behaviour of fire. Fire will generally gain speed when travelling up a slope. Fire will generally reduce in speed when travelling downhill. Wind direction and speed may impact on this. Slopes may cause greater pre-heating of fuels. Production of flaming debris may start further fires.

Poor underfoot conditions such as tree roots and holes will increase the risk of slips and trips that may result in serious injuries such as fractures.

Plants and undergrowth such as nettles and brambles can also cause irritation and injury.

## SPEED OF FIRE SPREAD

The speed and persistence of a rural fire can be affected by several factors that include the wind, temperature, the initial moisture content, the type of vegetation involved and whether direct sunlight is present. The speed of fire spread can vary from quick spreading (e.g. through a tree canopy) to a slowly smouldering and deep seated peat fire.

Rapid fire spread presents a number of significant risks including:

- Fire and Rescue Service personnel being surrounded or overtaken by fire. They may get backed into areas where escape is made difficult e.g. sheer drop

- The loss of firefighting appliances

- Loss of firefighting water supplies by damage to delivery hose etc.; and

- The involvement of property, e.g. farms.

## Non-service equipment, and personnel

There are occasions when non service equipment will be used within the vicinity of operational personnel, for example earth moving vehicles. Other equipment will be outside the direct control of service personnel, for example the use of helicopters. The hazards and risk from the use of helicopters are detailed in Generic Risk Assessment 4.5 Working with helicopters.

The use of non-Service equipment in an emergency situation increases the risk not only to operators but also to any persons working nearby.

The principal risks associated with this are:

- the suitability of the equipment for the task
- lack of experience in operating the equipment in emergency situations
- lack of effective command and control systems; and
- Fire and Rescue Service personnel and members of the public close by.

## Insects and animals

Fire and Rescue Service personnel may disturb insects such as bees and wasps.

The presence of domestic and wild animals may create additional hazards to Fire and Rescue Service personnel. Risks include scratches, bites, stings, crush and impact injuries and certain diseases (zoonoses) that may be transmitted from animals to humans.

Animals may be affected by the sound and sight of the incident including flashing lights and the sounding of audible warning devices. This may cause animals to panic, bolt or stampede.

## Movement of vehicles

There is a greater risk of significant injury when moving vehicles in off road conditions. The risk of injury to both members of the public and Fire and Rescue Service personnel is more likely with increased numbers of people and vehicles on the fireground.

Caution must be exercised if moving vehicles off road as the weight of the vehicles and their design may result in the vehicle getting stuck or may result in injury. Fire and Rescue Services may have vehicles that are not suitable for reaching rural fires as some tracks will present either ground clearance issues or be too muddy.

## Military ranges and hunting/shooting areas

The hazardous nature of military ranges means extra care should be taken if attending incidents within the training establishment. Unknown objects must not be handled and should be brought to the attention of staff within the military training establishment at the earliest opportunity.

There may be risks to crews from entering areas used for hunting/shooting.

## Open water

Open water may be present and present a risk of drowning, hypothermia or infection.

Water hazards may include:

- depth
- temperature; and
- rate of flow.

## Pylons/overhead power lines

When a fire occurs under or near to pylons or overhead power lines, there could be the danger of Fire and Rescue Service equipment or vehicles coming into contact with them. Such contact could result in personnel being electrocuted or receiving burns and/or damage to Fire and Rescue Service equipment. Dense smoke can increase the potential for contact. Electrocution or burns can occur without direct contact through arcing.

## Manual handling and heavy physical work

An enhanced risk of injury from manual handling and heavy physical work to rural fires arises from such activities as:

- carrying equipment over rough terrain and large areas
- creating fire breaks
- beating of the fire; and
- making up large quantities of equipment.

## Stacked materials

Stacked materials may be present, which are unstable and may collapse during firefighting.

Stacked materials can also present a heat source and produce flammable gases through decomposition of organic matter.

# Key control measures

## Planning

Planning is key to ensuring the safety of firefighters and others likely to be affected by Fire and Rescue Service operations. A Fire and Rescue Service's integrated risk management plan will set standards and identify the resources required to ensure safe systems of work are maintained.

Each Fire and Rescue Service should assess the hazards and risks in their area relating to this generic risk assessment. The assessment should include other Fire and Rescue Service's areas where 'cross border' arrangements make this appropriate.

Site-specific plans should be considered for locations where the hazards and risks are considered significant and plans should take into account and specify any variation from the normal operational capability of personnel, appliances and equipment. In particular, recognition should be given to the physical effort and psychological pressures that an operational incident may apply to Fire and Rescue Service personnel.

Site specific plans should include:

- levels of response
- relevant standard operating procedures

- tactical considerations, including rendezvous points, appliance marshalling areas, access points as well as specific hazards; and

- identification and where necessary, the formal notification to person(s) responsible for the site of any Fire and Rescue Service operational limitations.

Planning is underpinned by information gathering, much of which will be gained through inspections or visits by Fire and Rescue Service personnel – for example, those covered by section 7(2)d and 9(3)d of the *Fire and Rescue Services Act 2004*.

Information should also be gathered and used to review safe systems of work from sources both within and outside the Fire and Rescue Service, including:

- fire safety audits

- incident de-briefs

- health and safety events

- local authorities; and

- local resilience fora.

Involving others in planning is an effective way to build good working relations with partner agencies and other interested parties, such as site owners.

Fire and Rescue Services should ensure systems are in place to record and regularly review risk information and to ensure that new risks are identified and recorded as soon as practicable.

Fire and Rescue Services must ensure that the information gathered is treated as confidential, unless disclosure is made in the course of duty or is required for legal reasons.

Fire and Rescue Services should consider the benefits of using consistent systems and formats to record information from all sources. In order to support decision making, consideration should be given to the efficiency and effectiveness of information retrieval systems.

Specific planning for this generic risk assessment should include:

- Water supplies should be identified and enhanced where necessary, for example with the use of high volume pumping units and water carriers

- Good topographical knowledge and effective liaison with other partners is essential for the identification of appropriate access and egress routes. Clear and concise information needs to be provided for attending crews

- Ensure that habitats that are susceptible to fire have appropriate fire management plans that cover prevention and operations

- Encourage landowners to engage with the Fire and Rescue Service to ensure partnership working

- The Forestry Commission and many larger landowners prepare fire plans for their forests. In newly planted forests, the fire plan will begin with the layout of the planting to ensure adequate fire breaks are included at the beginning. Fire and Rescue Services may be consulted during the development of these plans

- Use of wildfire prediction systems. These can take account of factors such as slope, wind and aspect

- Consideration should be given to the establishment of a strategic reserve of vehicles with 4 x 4 capability to transport personnel, equipment and for the evacuation of casualties

- Liaison with the military so that where possible Fire and Rescue Service personnel can be accompanied by military personnel who can advise on any objects found in respect of army ranges. These advisors can be available to the Fire and Rescue Service personnel but kept clear of the firefighting front

- Identifying sites of specific scientific interest and with heritage considerations

- Fire and Rescue Services should make arrangements for control and supervision of non Fire and Rescue Service personnel (eg supporting agencies), equipment and vehicles in the risk area.

## Competence and training

When formulating a competence and training strategy, a Fire and Rescue Service should consider the following points:

- To enable a Fire and Rescue Service specific risk assessment of this incident type, the Service must ensure those tasked with carrying out this assessment and developing procedures are competent

- Ensure their personnel are adequately trained to deal with hazards and risks associated with rural fires. Attendance at rural fires in some Fire and Rescue Services may be rare and this lack of experience should be considered and addressed

- The level and nature of training undertaken should be shaped by an informed training needs analysis that takes account of Fire and Rescue Service guidance on the competency framework, national occupational standards and any individual training needs

- Training and development programmes should:

  – follow the principles set out in national guidance documents

  – should generally be structured so that they move from simple to more complex tasks and from lower to higher levels of risk

  – will typically cover standard operational procedures as well as ensuring knowledge and understanding of equipment and the associated skills that will be required to use it; and

- should consider the need for appropriate levels of assessment and provide for continuous professional development to ensure maintenance of skills and to update personnel whenever there are changes to procedure, equipment, etc.

- should also involve personnel involved in other processes that support the emergency response such as planners devising procedures and people procuring equipment.

Specific training requirements for open rural location fires will include the standard operating procedure and the equipment to be used.

Training outcomes should be evaluated to ensure that the training provided is effective, current and that it meets defined operational needs as determined by the Fire and Rescue Service integrated risk management plan.

## Command and control

The Incident Commander should follow the principles of the current national incident command system.

Prior to committing personnel into any hazard area, the Incident Commander must take account of the actual information available regarding the incident at the time. This will assist them in making effective operational decisions in what are recognised as sometimes dangerous, fast moving and emotionally charged environments.

A thorough safety brief prior to deployment of personnel within the hazard zone should be carried out.

Communication of new or changed risks should continue throughout the incident.

Consideration should be given to the positioning of appliances to ensure that hot engines and the exhaust do not ignite vegetation.

## Safety Officer(s)

The early appointment of one or more competent Safety Officer(s) will help ensure that risks are either eliminated or reduced to an acceptable level.

The Incident Commander should confirm that the Safety Officer understands:

- their role and area of responsibility

- allocated tasks

- current information about on site hazards and risks; and

- lines of communication.

Those undertaking the Safety Officer role should:

- be competent to perform the role

- ensure Fire and Rescue Service personnel are wearing appropriate breathing apparatus /personal protective equipment

- monitor the physical condition of Fire and Rescue Service personnel and/or general or specific safety conditions at the incident, in accordance with their brief

- take any urgent corrective action required to ensure safety of personnel

- update the Incident Commander or senior safety officer regarding any change in circumstances; and

- not be engaged in any other aspect of operations, unless required to deal with a risk critical situation.

The role of a Safety Officer can be carried out by any of the fire service roles, but the complexity of the task, size of the incident and scope of responsibility should be considered by the Incident Commander when determining the competency level required.

Safety Officers should wear nationally recognised identification to indicate they are undertaking the 'Safety Officer' role.

Fire and Rescue Service should ensure that training and other measures (such as aide-memoires) are in place and available to support those staff liable to undertake this role.

## Personal protective equipment

Fire and Rescue Services must ensure that any personal protective equipment provided is fit for purpose and meets all required safety standards. When choosing suitable protective garments, the standard of clothing worn beneath the specialist personal protective equipment should also be taken into account. Consideration should also be given to the selection of suitable sizes and gender specific requirements of personal protective equipment.

Personal Protective Equipment should also take account of the need for rescuers to be clearly visible against the operational background including night working and for the Incident Commander and other managerial and functional roles (defined in the national incident command system) to be distinguishable.

All Fire and Rescue Service personnel must use appropriate levels of Service provided personal protective equipment and respiratory protective equipment as determined by the safe system of work.

## Post incident

Depending on the nature and scale of the incident the following measures should be considered to help eliminate or control risks after an incident,:

- Any safety events that may include personal injuries, exposure to hazardous substances, avoidable equipment damage or near-misses should be recorded, investigated and reported in line with legislative requirements such as *Reporting of Injuries Diseases and Dangerous Occurrence Regulations 1995*, etc

- Arrangements should be in place to either remove all contamination from personal protective equipment or to ensure it's safe and appropriate disposal.

- Procedures should also be in place to ensure that personal protective equipment maintains the agreed levels of integrity and protection for the wearer throughout its lifecycle

- When necessary, occupational health support and surveillance follow up including counseling and support services

- Conduct a debrief to identify and record any 'lessons learned' from the incident. Debriefs will range in complexity and formality, proportionate to the scale of the incident and in line with individual Fire and Rescue Service' procedures

- Consider any changes required to safe systems of work, appliances or equipment in the light of any lessons learned from debriefs or from safety events

- Consider the need to review existing information held on risks, or the need to add a new risks into future planning, e.g. by adding them to the visit or inspection programme; and

- When necessary, consideration should be given to arranging for staff to make a contemporaneous written record of their actions. This information may be used to assist in any internal or external investigations or enquiries that follow any incident e.g. coroners court, public enquiry, etc.

## Standard operating procedures

Fire and Rescue Services should prepare, communicate and implement a standard operating procedure for rural fires using this generic risk assessment and other relevant guidance documents. The operating procedures should identify the necessary control measures, resources and tactics to be adopted.

When communicating the standard operating procedure, Fire and Rescue Services should ensure personnel receive, read and understand the information.

Fire and Rescue Service personnel should approach the incident up wind of any smoke being given off and identify a safe area to park taking into consideration the speed of fire spread and risk of entrapment.

Full firefighting personal protective equipment and breathing apparatus, where necessary, should be worn. Where Fire and Rescue Service personnel are not at risk of being burned, the Incident Commander may need to balance the need for protective clothing against the risk of heat stress and undue exhaustion. If appropriate and safe to do so, it may be possible to relax the wearing of personal protective equipment. This should only be done after a risk assessment.

Consideration may be given to allowing a fire to burn out if difficult access is encountered that place Fire and Rescue Service personnel in a dangerous situation. Account must be taken of the likelihood of the fire spreading and endangering life and property.

Effective communication methods and systems should be in place especially where crews are dispersed over a wide area.

Measures should be in place to ensure crews are relieved, rested, re-hydrated and refreshed at regular intervals.

Fire and Rescue Service personnel close to water hazards should wear, where necessary, approved personal flotation devices or work restraint. This will be influenced by proximity to and the nature of the water hazard.

It may be necessary to seek assistance should the movement of animals be needed.

In the circumstances of dense smoke, or where flames rise to high voltage power lines, Fire and Rescue Service personnel should avoid positioning themselves or their equipment within a 'corridor' 10 metres either side of overhead lines. Contact with power lines is not necessary to cause an injury as there may be a risk of arcing. Extreme circumstances may justify switching out the circuit. Any such request should be made to the National Grid Control Centre.

During the hours of darkness, crews may need to be withdrawn or numbers reduced to a minimum to reduce the risks from night time working. Some Fire and Rescue Services may decide to undertake night time working due to the lack of sunlight, lower temperatures and reduced thermal stress on fire crews. Where this takes place, consideration should be given to areas such as competency, communication, personal protective equipment and lighting.

Some Fire and Rescue Services make use of a LACES safety protocol (lookouts, awareness, communications, escape routes and safety zones).

## Specialist equipment

Fire and Rescue Services should identify the need for any specialist equipment, e.g. to assist with manual handling over large distances, and vehicles including off road capability.

Working at height equipment and working near water equipment, such as fall arrest or work restraint systems and personal flotation devices, should be provided where necessary.

Some personnel may need to carry medication if they are sensitive to certain stings or bites.

Consideration should be given to tasking helicopters for aerial command and control of personnel and to monitor the fire front. Thermal image equipment may be utilised to locate missing teams/personnel.

If helicopters are used for water bombing, a standard operating procedure and good communication and briefing of Fire Rescue Service personnel should be implemented. This is particularly important as there is a risk of a fatal accident.

## Stacked materials

Some stacked materials may need to be moved by hand and great caution is advised. Some stacked items such as baled straw may have considerable weight (up to 1 tonne).

Walking over stacked hay or straw when involved in fire should not be permitted as the fire may have burnt into the stack forming a burning hollow beneath the surface which will not take the weight of an individual.

| Technical references | |
| --- | --- |
| 1 | Communities and Local Government, IRMP Steering Group Integrated Risk Management Planning: Policy Guidance, Wildfire. |
| 2 | Manuals of Firemanship, a survey of the science of firefighting. Part 6B: Practical firemanship II |
| 3 | Health and Safety Executive Information Sheet, Working Safely Near Overhead Power Lines – Agriculture Information Sheet No 8 (revised) |

**SECTION 2**

# Summary of Generic Risk Assessment 3.4 Fighting fires in rural areas

**Task – Pre incident**

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 1 | Planning | No significant hazards identified at this stage. Local assessment should take place | No significant risks identified at this stage. Local assessment should take place | Fire and Rescue Service staff | **Prevention**<br>• Prevention through working with partners and landowners<br><br>**Organisational risk control**<br>• Produce a standard operating procedure for rural fires<br><br>• Identify and address training needs and competency requirements for rural fires and for risk assessing and developing procedures.<br><br>• Incident Commanders to be competent at gathering relevant information, processing information and making decisions about risk. This applies to Firefighters in the risk area<br><br>• Procure suitable equipment<br><br>• Procure suitable personal protective equipment<br><br>• Manual handling training. |

**Task – Initial stages of the incident**

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 2 | Vehicular and plant movement – service and non service | Vehicle accidents. Striking personnel and others<br><br>Striking tree stumps and potholes<br><br>Becoming overtaken by the fire. Vehicle overturning. Crush hazard.<br><br>Becoming bogged down | Death<br><br>Serious injury<br><br>Damage or destruction of Fire and Rescue Service equipment or appliances | Fire and Rescue Service staff<br><br>Personnel from other agencies | Driver training<br><br>The provision and use of suitable vehicles<br><br>Safe systems of work for off road manoeuvring<br><br>Fireground command and control systems<br><br>Liaison with other agencies<br><br>Pre-planning<br><br>Only drive service vehicles. |
| 3 | Moving equipment | Slips/trips on uneven ground<br><br>Musculoskeletal injuries | Serious injury | Fire and Rescue Service staff | Manual handling training<br><br>Manual handling assessments and selection of suitable equipment<br><br>Scene lighting. |

**Task – As the incident develops**

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 4 | Firefighting - from rapidly spreading fire to deep seated slowly smouldering peat fire | Exhaustion/heat stress | Death | Fire and Rescue Service staff | Site specific risk information |
| | | Fatigue | Serious injury | Voluntary helpers including military personnel | Liaison with site owners, |
| | | Environmental conditions | | | Fireground rehydration and refreshment provision |
| | | Weather patterns | | | Welfare facilities/toilets |
| | | Facility for rapid fire spread | | | Full firefighting personal protective equipment and relaxation when safe to do so |
| | | Isolation of crews | | | Reliefs |
| | | Trapped by rapidly spreading/enclosing fire | | | Effective communications |
| | | | | | Implement incident command system |
| | | | | | Implement standard operating procedure |
| | | | | | No lone working |
| | | | | | Defensive firefighting |
| | | | | | Observation and control by safety officers |
| | | | | | High volume pumping |
| | | | | | Tracking of appliances |
| | | | | | Close monitoring/supervision of any volunteers |

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 5 | Firefighting | Flying embers/air borne debris | Serious eye injury | Fire and Rescue Service staff | Implement incident command system<br>Implement standard operating procedure<br>Eye protection – safety glasses, visor down<br>Personal protective equipment. |
| 6 | Firefighting | Large quantities of heavy smoke – smoke inhalation, increased risk of slips and trips<br><br>Reduced visibility | Serious injury<br>Respiratory disease | Fire and Rescue Service staff | Implement incident command system<br>Implement standard operating procedure<br>Breathing apparatus<br>Observation and control by safety officers<br>Use of helicopter for observation<br>Helicopter procedures<br>Cordons<br>Defensive firefighting tactics. |
| 7 | Operating at the scene | Uneven rough ground – pot holes, tree stumps, slips and trips/undergrowth and vegetation<br>Ground collapse<br>Barbed wire | Serious injury | Fire and Rescue Service staff | Implement incident command system<br>Implement standard operating procedure<br>Lighting<br>Identified walk route<br>Cordons. |

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 8 | Operating at the scene | Presence of open water, sludge, lagoons, boreholes, drowning | Death<br>Serious injury<br>Drowning | Fire and Rescue Service staff | Implement standard operating procedure<br>Implement incident command system<br>Personal flotation devices<br>Cordons<br>Work restraint<br>Supervision<br>Observation and control by safety officers<br>See Generic Risk Assessment 2.8 – Rescues from ships. |
| 9 | Operating at the scene | Overhead cables, under-ground cables, pipelines, high voltage, flashover, arcing | Death by electrocution<br>Serious burn injuries | Fire and Rescue Service staff | Implement standard operating procedures<br>Implement incident command and control<br>Cable detectors<br>Cordons<br>Safe working corridor<br>Isolation<br>Liaison with electricity generating company<br>Observation and control by safety officers. |
| 10 | Operating in woodland | Eye injury.<br>Crush injury (tree falls over or branch falls).<br>Head injury – striking branch | Death<br>Serious injury | Fire and Rescue Service staff | Implement standard operating procedure<br>Implement incident command system<br>Full firefighting personal protective equipment<br>Lighting<br>Observation and control by safety officers. |

Generic Risk Assessment 3.4 – Fighting fires in open rural areas

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 11 | Operating at the scene | Animals – manual handling, bites, kicks, biological | Death<br>Serious injury | Fire and Rescue Service staff | Implement standard operating procedure<br>Implement incident command system<br>Liaison with other agencies<br>Assistance with moving animals<br>Personal protective equipment. |
| 12 | Firefighting | Poor water supplies<br>Rapid fire spread | Incident gets out of control<br>Death<br>Serious injury | Fire and Rescue Service staff | Implement incident command system<br>Implement standard operating procedure<br>Adopt defensive firefighting tactics<br>Withdraw crews. |
| 13 | Operating at the scene | Use of non-Service equipment by service or others | Death<br>Serious injury | Fire and Rescue Service staff<br>Equipment users | Implement incident command system<br>Implement standard operating procedure<br>Liaison with site owners<br>Strict control or stop activity<br>Full briefing<br>Supervision. |
| 14 | Access and pumping from open water supplies | Falling into lagoons and unguarded open water<br>Injuries going unnoticed<br>Contaminated water | Death<br>Serious injury | Fire and Rescue Service staff | Implement standard operating procedure<br>Implement incident command system<br>Avoidance of unmonitored lone working<br>Personal flotation devices<br>Work restraint<br>Observation and control by safety officers<br>Provision of lighting<br>Supervision<br>Communications<br>Personal protective equipment. |

Generic Risk Assessment 3.4 – Fighting fires in open rural areas

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 15 | Operating at the scene | Darkness<br>Cold weather | Hypothermia | Fire and Rescue Service staff | Implement incident command system<br>Implement standard operating procedure<br>Reliefs<br>Personal protective equipment<br>Withdraw crews at night. |
| 16 | Operating at the scene | Friction abrasion<br>Blisters to feet and hands | Minor injury | Fire and Rescue Service staff | Reliefs. |
| 17. | Operating at the scene | Stacked materials | Death<br>Serious injury<br>Manual handling injury | Fire and Rescue Service staff | Do not walk on stacked materials<br>Assess manual handling tasks.<br>Consider mechanical assistance. |

**Task – Post incident**

| Ref. No. | Activity | Hazard | Risk | Persons at risk | Control measures |
|---|---|---|---|---|---|
| 18 | Post incident | No significant hazards identified at this stage. Local assessment should take place | No significant risks identified at this stage. Local assessment should take place | Fire and Rescue Service staff | **Risk review and prevention**<br>• Review any safety event information<br>• Review debrief information<br>• Health surveillance if necessary<br>• Use information to develop/refine standard operating procedure<br>• Use information to review and update competency strategy<br>• Review nature and frequency of rural fire incidents and review and update prevention strategy. |