

Unit EF1:**Ensure that your actions in the vegetation fire workplace reduce the risks to yourself and others****Element 1.1:**

Identify the hazards and evaluate the risks that are likely to be found in the workplace

Element 1.2:

Reduce the risks likely to be found in the workplace

Element 1.3:

Respond to health emergencies in the workplace

About this unit:

This Unit deals with the safety issues faced by individuals who are involved in assisting with the management of vegetation fires in rural areas, either in fire suppression or prescribed burning operations.

It has been developed so that it can be applied to any area of vegetation: forest, shrub, grass or peat.

This Unit is aimed at those who work in fire services, farming, forestry, game management, conservation, range land and recreation management and who have a role in assisting with vegetation fire management, either on a full-time, part-time or voluntary basis.

To achieve this Unit you must show that you are able to:

- Assess hazards and risks in a vegetation fire workplace
- Follow organisational fire procedures
- Operate safely on the fireground
- Support others operating on the fireground
- React appropriately and in accordance with organisational, legislative and environmental requirements, to a fire incident.

Key words and phrases:

For you to fully understand the content of the unit, and the activities it describes, it is important that you are able to understand the terms used within the unit. The definitions at the back of this unit should help you with this.

Control line	All constructed or natural barriers and treated fire edges used to control a fire.
Direct attack	Fire control activities applied directly on the fire.
Dynamic Risk Assessment	The continuous process of actively identifying hazards, assessing risks and taking action to eliminate or reduce the risk. All in the rapidly changing circumstances of an incident
Fire behaviour	The manner in which fire reacts to the variables of fuel, weather and topography described in terms of fire intensity and rate of spread.
Fire hazard	The potential exposure of people or assets to danger from the behaviour of the fire
Fire intensity	The pulse or rate of energy release, that travels upwards from the fire, often linked to flame length
Fire risk	The potential for a fire to start
Fire Support Office	Forest District Office, Estate Office, or company office where non-fire service support for fire control effort is organised
Fire Shed	Place where fire control equipment is stored
Fire type	Ground fire, surface fire or crown fire, most common type is surface fire.
Fire Weather	Predicted climatic conditions covering period of burn, especially wind, air temperature and relative humidity,
Flame length	The distance between the flame tip and the middle of the base of the flame (generally the ground surface), an indicator of fire intensity
Flank	The sides of the fire
Flanking attack	Most common direct attack strategy, that starts control activity from an anchor point, then progresses along flanks to head.
Fuels	The type, quantity, arrangement, distribution, & moisture content of the vegetation. Can be: ground (peat, roots), surface (plant litter, grass, shrubs) or aerial (trees) fuels.
Hazard	Anything that may cause harm, such as vehicles, chemicals, electricity, equipment, working from ladders, etc;
Head	The front of the fire showing the greatest rate of spread
Heel	The rear of the fire near the origin
Hotspot	A small area of smouldering or glowing combustion located on or within the fire perimeter; a term commonly used during the mop-up stage of a fire
Indirect attack	Fire control activity away from the fire edge e.g. backburning
LACES	Lookouts, Awareness, Communications, Escape routes & Safety zones
Origin	The place where the fire starts
Rate of spread	The speed the fire is expanding at the head of the fire
Risk	The chance, high or low, that somebody could be harmed by a hazards, together with an indication of how serious the harm could be.
Topography	Shape of the land, especially slope and aspect
Wildfire	A fire that is not being controlled

What you must be able to do:

- 1 Correctly name and locate the person/s responsible for safety in the workplace
- 2 Identify the hazards that may be found in any part of your job role which could harm yourself or other persons
- 3 Assess and prioritise the risks that could be caused by the hazards found in your workplace
- 4 Report any hazards which present a high risk to team mates, supervisors and the person/s responsible for safety
- 5 Deal with any hazards which present a low risk in accordance with your organisations policies, legal and environmental requirements
- 6 Assess the fire environment logically and predict local fire behaviour
- 7 Apply dynamic risk assessment techniques

This element covers:

- A Identify hazards that could include:
 - (i) the natural environment including topography, plants and animals
 - (ii) the fire environment and fire behaviour
 - (iii) non-fire hazards relating to fuels and weather, equipment, vehicles and aircraft
 - (iv) operations
 - (v) above ground/underground services

- B Asses and evaluate risks resulting from: -
 - (i) Environmental conditions
 - (ii) The use and maintenance of equipment or machinery
 - (iii) Unsafe behaviour or working practices
 - (iv) The use of materials and other substances
 - (v) Accidental spillages

What you must know and understand:

- a The basic geography and ecology of the area
- b The fire triangle and the methods of extinguishment using a variety of vegetation fire tools
- c Hazards indicated by heat transfer mechanisms, the types of combustion and fire types.
- d The effect of the fire environment on fire behaviour and personal safety
- e The use of smoke and flame length as a guide for the safe application of tools, tactics and strategies
- f The tools, techniques, tactics and strategies used to control vegetation fires
- g How to work safely in the vicinity of: brushcutters, chainsaws, vehicles, tractors, bulldozers, helicopters and aircraft.
- h How to work under instruction, as part of a team, with a variety of tools, techniques and strategies in combined attack

Reduce the risks likely to be found in the workplace**What you must be able to do:**

- 1 Carry out actions safely as instructed, in accordance with organisational policies and procedures, manufacturers and legal requirements
- 2 Progress your objectives, safely and within organisational procedures
- 3 Rectify safety and health risks within your capability and the scope of your job responsibilities
- 4 Pass on any suggestions for reducing risks to the safety and health within your job role to the responsible persons
- 5 Pro-actively monitor the effects of the activity on the health, hydration and fatigue of the people around you and yourself.
- 6 Identify lookouts role, be aware of the situation at all times and use escape routes and safety zones as necessary
- 7 Prepare, maintain and put on personal protective equipment correctly

This element covers:

Protective measures in the context of:

- A Personal issues:
 - (i) Pre-existing medical issues
 - (ii) Physical fitness
 - (iii) Fatigue
 - (iv) Stress
 - (v) Heat stress, heat exhaustion or heat stroke
 - (vi) Hypothermia
 - (vii) Sunburn / windburn

- B Personal protective equipment (PPE):
 - (i) Helmet/Face shield/Goggles
 - (ii) Fire resistant clothing
 - (iii) Gloves
 - (iv) Heat resistant boots
 - (v) Drinking Water
 - (vii) Hearing Protection

- C Fire behaviour:
 - (i) Radiant heat and super-heated air
 - (ii) Smoke and dust
 - (ii) Rapid changes in direction or speed of the fire
 - (iii) Rapid changes in flame length and fire intensity

- D Equipment:
 - (i) Noise and hearing protection
 - (ii) Moving parts
 - (iii) Moving vehicles
 - (iv) Chemicals, fuel and other hazardous substances

- E Workplace policies:
- (i) The use of safe working methods and equipment
 - (ii) The safe use of hazardous substances
 - (iii) Smoking, eating, drinking and drugs
 - (iv) Rest breaks
 - (v) Emergency procedures

What you must know and understand:

- a. Understand the hazards in the vegetation fire workplace and the ways of eliminating and minimising their effects
- b. Understand the importance of physical fitness
- c. The priority of firefighter and public safety, along with the values and assets that you are trying to protect
- d. The role of lookouts, the importance of being aware of the fire situation and being able to communicate with team members and your supervisor at all times. Knowing where your escape routes are, as well as when to use them and how long it will take to reach your designated safety zones (LACES)
- e. The efficiency and safety of different fire control tools and techniques applied in a variety of situations

Element 1.3:

Respond to health emergencies in the workplace

What you must be able to do:

- 1 Summon assistance immediately for any health emergency and initiate action appropriate to the condition and situation
- 2 Give assistance with ongoing care as required
- 3 Provide the individual with the health emergency with suitable verbal support
- 4 Make the immediate vicinity as private and safe as possible once the intervention has been taken over by an appropriate person
- 5 Offer support to any others involved in the incident once any initial danger is passed
- 6 Keep records which are accurate, legible and complete

This element covers:

- A Situations where:
- (i) there is no immediate access to a person competent to deal with the situation
 - (ii) there is immediate access to a person competent to deal with the situation
 - (iii) the individual with the health emergency is in a dangerous place

What you must know and understand:

- a. The required action to take for the health emergency concerned
- b. Your own competence in dealing with the health emergency
- c. The reasons for calling for assistance Immediately
- d. The importance of not carrying out actions beyond your own capabilities
- e. The reasons why actions beyond your level of competence may further endanger life
- f. Effective ways of providing support to those suffering a health emergency and of keeping them in the best possible condition
- g. The effects of shock on individual's with a health emergency and ways of dealing with this effectively
- h. The type of verbal support which can be provided to the individual suffering the health emergency
- i. Potential health risks to others from an emergency
- j. Reasons for offering support and help to others involved in the incident and how this should be achieved
- k. Relevant legislative requirements for completing records of accidents and emergencies
- l. The location and use of first aid equipment according to organisational policies and procedures

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