GUIDELINES FOR SLASH BURNING IN THE KARRI FOREST

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1. INTRODUCTION

Slash burning for karri regeneration requires specialised lighting and logistics. These guidelines outline the principles involved and the methods to be used.

2. OBJECTIVES

The objectives of slash burning are:

- To produce a receptive seed bed for natural or artificial regeneration;
- To induce seed-fall from seed trees;
- To reduce accumulations of logging debris;
- To reduce fire hazard in the early years of regeneration; and
- To reduce competition from the understorey vegetation.

3. FACTORS AFFECTING SLASH BURN PERFORMANCE

Factors which influence slash burn intensity are:

3.1 Fuel Quantity and Arrangement

The weight, distribution and arrangement of fine, flash fuels and heavy, woody fuels govern whether a fire will ignite, spread and be sustained. The amount of fine fuels determine the likelihood of igniting the heavier fuels and of spread from one heap to another. The arrangement and distribution of heavy fuels affect the amount of fuel consumed. Rough-heaped or windrowed fuels burn hotter and more completely than scattered, broadcast fuels.

3.2 Fuel Moisture Content (F.M.C.)

3.2.1 Fine Fuels Moisture Content

The fine fuels must be dry enough to ensure ignition of the heavier fuels. The F.M.C. of flash fuels varies within a heap, and unless the lower sheltered fuel is dry enough the burn will fail. The sheltered fine fuels M.C. at which ignition will or will not occur, are:

FINE FUEL M.C.%*	IGNITION SUCCESS	REMARKS
23-26	Very Low	Will not sustain fire
19-22	Poor	Patchy result; requires heaping and strong winds.
10-19	Good	Fires sustained
7-9	Very Good	Hot fires, difficult to suppress
Less than 6	Excellent	Very high intensity fire; erratic fire behaviour.

* Measured by Moisture Meter, immediately before lighting commences. Results of 10 samples pooled.

Providing the heavy log and branch material is dry, a satisfactory burn will be achieved if fine sheltered fuels do not exceed 18 per cent moisture content.

3.2.2 Fine Fuel Moisture Differential

Drying on cut-over areas is more rapid than under adjacent forest. If a day can be selected when the fine slash is dry, but the surrounding forest is damp, then a satisfactory burn can be conducted with minimum risk of suppression problems.

An adequate *moisture differential* occurs when the sheltered slash moisture content is below 18 per cent and the surrounding forest is 25 per cent or higher at the peak of the day.

Measurement of fuel M.C. in the forest must be made at least 30 m in from the boundary of the coupe to avoid edge drying effects.

3.2.3 Heavy Fuels Moisture Content

Success of ignition of large woody fuels varies with the period since logging, the drought factor as indicated by the Soil Dryness Index (S.D.I.), the time of the year, and the species. Under the same conditions karri logs will ignite and burn before marri, jarrah and tingle logs, in that order. Logs with M.C. below 30 per cent will ignite satisfactorily if fine fuels are abundant and dry.

3.2.4 Burn Rating and Fuel Moisture Content

Soil Dryness Index	Burn Success Rating				Success Rating	Minimum Required For
1 500-2 000	G	VG	EX	EX	EX—Excellent	Seed Tree Regeneration or Direct Seeding (EX, VG)
1 000-1 500	M	G	VG	EX	VG—Very Good	
500-1 000	P	M	G	G	G—Good	Areas for planting
250-500	VP	VP	P	M	M—Moderate	Only for windrowed or heaped areas where reburning is planned. (M, P, VP)
0					P - Poor	
					VP—Very Poor	
M.C. of fine Sheltered fuels	20%-25	15%-20	10%-15	5%-10		

3.3 Weather Conditions

Temperature, relative humidity and wind strength affect the drying rate and final minimum values of the fine fuel M.C.

Wind is the most variable and least predictable factor. Surface winds are affected by the topography and by local heating and cooling. Wind is also influenced by local synoptic changes and by the stability of the atmosphere. Controller and Fire Boss need a sound understanding of local wind behaviour supported by wind monitoring by local towers or spotter aircraft, during slash burns.

3.4 Topographic Effects

Topography affects wind speed, turbulence and direction.

Topography also influences the rate of drying of fuels through the influence of aspect and slope or the degree of exposure of fuels to sun and wind.

SLASH BURN PREPARATION

The more input a regeneration burn receives in terms of preparation, the greater the chances of success. The following sequence of operations should be followed:

4.1 Optimized Cutting and Burning Boundary

The Regeneration Officer and treemarker should plan the most suitable coupe boundary before cutting commences. They should consider:

- Symmetrical shape burns.
- Cut to type boundaries.

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- Avoid steep, rocky and/or wet areas.
- Use existing roads.
- The location of stream, amenity reserves and research areas must be double checked at the planning stage.

4.2 Scrub Roll

Scrub rolling is the use of a bulldozer to flatten tall dense scrub which would otherwise be difficult to walk through and to light. This flattened scrub provides a fine, flashy fuel for easy ignition.

Due to the size of material involved, it is best done with heavy bulldozers (D6C, and up).

Scrub rolling should not involve the "walking over" of every square metre of area, so long as adequate dead fuel for rapid fire development is prepared.

Slashing by hand may be required in certain small or wet areas on burn edges.

Heavy logging slash must be pushed clear of seed trees, particularly those with hollow butts.

Do not scrubroll when soil is wet and soil damage and/or bogging can occur.

4.3 Stag and Cull Falling

Dead trees rejected by the Industry may need to be pushed over by the bulldozer, or felled (see prescription for coupe). Dozers should clean around and prepare those trees to be felled. Where trees are too dangerous to fall, log and slash should be pushed against the base—in most cases the stag will burn down in the burn. Consider the falling of dead stags to a depth of 50 m outside the burn edge when these are classified as dangerous edges and the risk of burn escape is high. Care must be taken to avoid unnecessary damage to stream, river reserves from stag falling operations.

4.4 Perimeter Tracks

Every slash burn must have a trafficable fire line around its perimeter. These should avoid steep, rocky or wet areas, and be positioned on the cutting edge. Slash must not occur outside perimeter tracks unless it is planned to burn the area out as a buffer. Where possible burning boundaries should be located within the driest forest types (e.g., Jarrah). Tracks should be 1½ dozer blade width to allow passing of vehicles and heavy trucks. They should be flat formed. Gravel only in difficult area. Where steep gullies have to be crossed a temporary earth log fill will be satisfactory. This may mean removal and permanent piping at a later date. Tracks on steep slopes where extensive side cutting is involved may be reduced to one blade width, but provision for "turn arounds" should be made every 100 metres. *Attention must be paid to all requirements for dieback pegging and hygiene and to erosion control and stream protection when selecting and constructing perimeter tracks.*

4.5 Water Points

The provision of water points at each slash burn is essential. The number of water points required will depend on the size of the burn, the proximity of a reliable water source, and season. As a guide, at least 1 water point will be required for every 40 ha of burn.

4.6 Advance Mop-Up

"Advance mop-up" is the pushing of logs and other heavy debris away from the perimeter into the burn *before* burning commences. This saves the need for massive mop-up after burns are lit.

Advance mop-up must be carried out on the entire perimeter, except where the edge adjoins buffer areas or recent burns. The depth of pushing in is generally 20 metres, but may be increased to 30 metres on particularly dangerous edges, e.g., adjacent to unburnt tops or karri regrowth.

Pushing-in should be done by dozers equipped with a rake blade to avoid movement of valuable topsoil. Wherever possible logs should be speared into the burn at right angles to the perimeter and balancing logs restacked.

4.7 Internal Tracks

Internal access is vital, particularly at large slash burns, to enable:

- A break-up into cells so that systematic firing can take place, consistent with prevailing wind conditions. Maximum cell size should not exceed 50 ha.
- Access into the area by lighting crews for convection firing methods.
- Internal inspection.
- The formation of sub-boundaries, if the burn must be halted prematurely.
- Future access for planting, fertilizing or regeneration assessment.

Old log roads usually suffice, however extra internal roading may have to be provided, often through the flat blading of a convenient snig track.

4.8 Installation of Buffer Strips

Ideally, slash burns should be surrounded by a burnt strip of 100 metres in depth. As most slash burns are lit on SW-SE winds, the northern edge is the most important. Where an edge is considered particularly dangerous, it is advisable to install an additional track 100 to 200 metres in depth, parallel to the first. Fire escapes into adjacent bush, downwind, have elevated fire behaviour to a depth of about 50 metres, due to open winds off the coupe and the radiant heat generated by the slash burn. Beyond this distance predicted forest fire behaviour becomes established.

Buffer strips may be considered for burning in two ways:

(i) Burn out prior to the slash burn on a mild day and mop-up. This situation would apply where a moisture differential was not expected. This requires advance planning to ensure maximum use of suitable burning weather.

(ii) Leave unburnt, but carry out slash burn on a day where a moisture differential exists. Then burn out buffer on first succeeding suitable day. This alternative is dangerous and should rarely be used.

The proper use of buffer strips can create many advantages as they eliminate the need for advance mop-up, allow men to work on the perimeter away from smoke and heat, and reduce the risk of subsequent escapes.

Buffer strips, even if pre-burnt and mopped up, must never be considered 100% safe on the day of the burn, particularly at intense fires. Constant patrolling must always be carried out.

Burn prescriptions must be drawn up and adhered to in order to meet fuel reduction objectives with minimum fire damage.

In all track construction or maintenance, strict adherence to dieback hygiene and erosion control rules must be observed.

4.9 Other Preparatory Work

Other desirable work is:

Clear a Control Point area.

Establish a marshalling area.

Consider adjacent high risk/value areas, e.g., karri regrowth stands, private property, etc. which must not be burnt under any circumstances. The slash burning prescription form will allow you to select the correct preparatory treatment for these areas.

4.10 General Comments

Consider:

- If a combination of contract and F.D. machines are to be used, leave heavy scrub rolling and track work to the contractor, and F.D. machines for control work on the day of the burn.
- Always prepare wet and difficult areas under dry conditions. If the working of a wet area risks bogging the machine, leave or slash by hand. Avoid soil damage during the preparation of regeneration areas.
- Always prepare burns from the north of the coupe southwards. This enables a cut-off to be made if the entire coupe cannot be burnt, or is not ready.
- It is advisable to install all perimeter tracks and then complete remaining preparation cell by cell, north to south.

- Acceptable production rates should be set at 1 ha/machine hour, all up. Dozers should always work through tea and lunch breaks. A swamper, capable of operating the machine, is therefore required.
- Where possible, machines should work in tandem. If the availability of large machines is limiting, the input of a D4 can dramatically lift production. For example:

Combination	All Up Production Rate
D6C/D4D	1.5 ha/machine hour
D6C/D6C	2 ha/machine hour

4.11 Grading

All internal and external tracks should be flat graded.

4.12 Aerial Photographs

Aerial photographs of each burn should be organized through I & P Branch. These are of value with regard to track and buffer locations, and planning of lighting techniques.

A final photograph should be taken just before logging. All key personnel, including spotter pilots should be supplied with a copy. The photo should be annotated to show:

- Job/coupe name and number.
- North pointer.
- Road names
- Water points
- Rough scale
- Control point and marshalling yard
- Cell numbers
- Adjoining high value areas, reserves, private property etc.

4.13 Road Signs

Temporary road signs which identify perimeter and internal roads are installed before lighting. Signs are removed when mopping up is completed.

4.14 Burn Prescriptions

A prescription (see Appendix I) must be prepared for every slash burn. It will be compiled by the Divisional Regeneration Officer and fully discussed with the D.F.O. prior to the burn. A PAFSOU form must also be drawn up for each burn.

All items on the prescription must be completed.

5. BURNING TECHNIQUES

Behaviour of slash burns depends on the lighting pattern used. Lighting pattern may vary according to:

- Aim of burn
- Wind strength and direction
- Size and shape of coupe
- Terrain
- Fuel arrangement, distribution and flammability
- Presence and fuel condition of surrounding and intruding forest fuels, and other factors.

Lighting pattern can influence fire behaviour, for example through the deliberate creation of a convection column to draw fire from the burn perimeter.

Three basic patterns of lighting are used for slash burn operations. These are:

Strip lighting
Convection lighting (centre firing or moving column)
Simultaneous area ignition

5.1 Strip Lighting

Firing in progressive strips is the most commonly practiced method in W.A. It is the most versatile for the range of weather and topographic conditions. The procedure involves the consolidation of the most vulnerable edge (e.g. downwind edge or upper edge) by back burning into the coupe, followed by the progressive stripping out of the remaining area.

With this technique, light-up time is slow and therefore the burn is vulnerable to changes in weather conditions, particularly wind. The technique should only be adopted if the controller and fire boss have confidence in the forecast, a sound understanding of the influence of local conditions, and can contain the burn to cell boundaries.

Because of the downwind edge must be patrolled constantly, crews must work in smoke and heat. Likelihood of fire whirlwinds and hop-overs is high.

5.2 Convection Ignition

Convection ignition aims to create a strong convection column near the middle of the burn area. When heavy fuels such as logging slash are burned, the convection column stabilizes and acts as a chimney toward which ascending warm air is drawn. In this way flames and smoke are drawn back from the fire perimeter. Thus, the burn is easier to control, and working conditions are safer and more pleasant. The two forms of convection ignition are central ignition and moving column ignition.

5.2.1 Central Ignition

Centre ignition is employed on level areas (up to 10° slope) and with light winds. This sytem will work under negative slopes (gullies). A cluster of fires is started in the centre of the prepared area and allowed to develop until an active convection column forms. More fires are lit 20 to 40 metres from the central fires as soon as indraught winds are established. Sequential lighting continues in concentric circles to the burn perimeter. A variant is to light from the centre in a spiral pattern.

Once the convection column is established, follow-up lighting *must proceed immediately*. Delays will mean that the indraught influence of the central fire is lost.

To ensure success the following factors should prevail:

- Central fires should be near to the geographical centre, preferably on a hill and near heavy fuel accumulation.

TABLE 1

SUMMARY OF LIGHTING TECHNIQUES

Lighting Technique	Most Suitable Conditions	Constraints	Disadvantages	Advantages
Strip	Winds constant, but can be up to 25 kph. Suitable for steep, irregular areas. Fuel M.C. can be reasonably high (up to 22%).	Normal control restraints. Must secure downwind flank first. Cannot be started until the afternoon when winds likely to be constant.	Slow light up time. Vulnerable to unexpected weather changes. Possibility of fire and smoke blowing over lines. Crew discomfort and safety at risk.	Versatile as it can be used in all conditions and for awkward, steep areas.
Convection	Calm winds only. Flat terrain up to 10°. Regular shaped cells.	Winds less than 10 kph. Total cell area less than 40 ha. Fuels must be dry i.e. well below 18%. Need for more careful preparation and greater expertise.	Greater chance of hopovers after burn out. Not suitable under marginally moist conditions.	Rapid light up time. Heat sparks and smoke drawn into burn and away from perimeter. Working conditions more comfortable and safer. Permits more crews available for ignition.
Area or Simultaneous	Suit areas of less than 20 ha, particularly where surrounded by high risk/value areas. Suitable for lighting central core in convection lighting.	Size limitation. Intense convection column may carry fire brand and lead to long range spotting. Requires simultaneous multispot ignition.	Requires time consuming preparation and may be expensive. Size limitations mean this is suitable in very special cases only.	Rapid, intense lighting ensures good result. Permits more crew for suppression. Safe and comfortable for crews.

- Ground winds should not exceed 15 kph.
- Slopes, other than those running up to the centre, should not exceed 10 degrees.
- Follow-up lighting *must* be completed before central fires burn out.

The central ignition system does not guarantee freedom from suppression problems. As soon as the convection column breaks up, normal precautions are needed on the downwind edge of the burn.

5.2.2 Moving Convection Column

The moving convection column is a combination of the strip and central ignition methods. In this method, lighters walk through the burn in arrowhead formation. Lighting should be intense at the central head so that a convection column is formed.

Moving column ignition is employed on areas that are considered too large or narrow for the central firing technique. Like the central ignition method, this technique should not be employed where open winds exceed 15 kph or slopes exceed 10 degrees.

5.3 Area Ignition

Area ignition involves the use of simultaneous multispot ignitions to produce an intense fire through the full use of junction zones and convection column.

This method is sometimes used when fuels are at a marginal moisture content level (e.g. 19-20%). Electrical, or aerial techniques can be used.

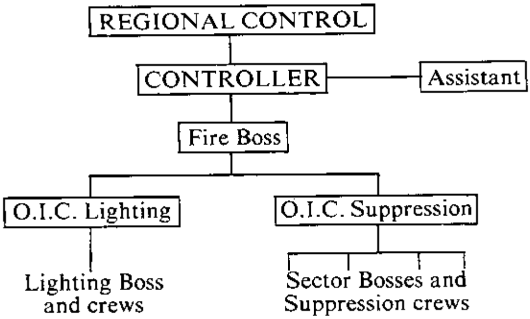
6. SLASH BURN ORGANISATION

High intensity slash burns require special organisation and discipline.

Each officer at the job should perform a specific task, where his duties, area of responsibility and resource allocation (men and machines) are fully understood. All officers must then combine to form an efficient team, which, through the agency of good communications, can react quickly to changing circumstances.

6.1 Staffing Structure

The following control structure is required for slash burns:



6.2 Duties and Responsibilities

6.2.1 Regional Control

- Plan each day's programme and monitors progress of operation through the day.
- Allocates jobs to Controllers and resources to jobs.

6.2.2 Controller

Prior to the burn:

- Ensures all logging completed before lighting commences
- Ensures that any log stockpiles are adequately protected
- Ensures adequacy and completion of preparatory work
- Ensures all notification and placement of signs
- Ensures complete burn prescription compiled
- Ensures adequate water supplies
- Nominates control point and marshalling yard

On the day of the burn:

- Consults with Regional Control on manpower and machine requirements and suitable start time.
- Has overall responsibility for the job.
- Ensures personnel safety.

- Assesses forecast and prevailing weather, fuel moisture, and danger points.
- Sets strategy for lighting and suppression.
- Briefs staff.
- Maintains liaison with D.H.Q.
- Monitors burn performance to ensure objectives are met.
- Reports to the Regional Controller on completion of the job.

6.2.3 Fire Boss

- Implements the burning prescription.
- Controls and co-ordinates O.I.C. lighting and O.I.C. Suppression.
- Controls placement and subsequent movement of all crews (lighting and suppression) and plant.
- Modifies lighting pattern or ignition rate consistent with weather variations during burn.
- Responsible for specific crew briefing.
- Continuously liaises with Controller.
- Responsible for "on the ground" familiarisation of all crews.
- Responsible for the issuing of plans or aerial obliques to all staff and overseers.
- Responsible for the suppression of all fire escapes.

6.2.4 O.I.C. Lighting

- Responsible for ignition of burn.
- Nominates lighting crew.
- Ensures all lighters fully equipped.
- Reports to fire boss.
- Responsible for precise briefing and crew formation during lighting.
- Directly responsible for all aspects of lighting crew safety.

6.2.5 O.I.C. Suppression

- Responsible for the direct placement and movement of vehicles and other plant on the burn edge.
- Directly responsible for the suppression of all fire escapes.
- Responsible for the co-ordination of all suppression sector bosses.
- Ensures all trucks are fully equipped particularly with regard to the use of retardants.
- Directly responsible for safety of suppression crews.
- Reports to fire boss.

6.2.6 Sector Boss

- Responsible to O.I.C. Suppression as required.

6.2.7 Assistant to Controller

- Responsible to Controller as required.
- Monitors fuel moisture content as directed.
- Mans control point radio as directed.
- Marshalls incoming persons or resources as directed.
- Keeps a diary of events.

6.3 Briefing

As no two slash burns are ever the same, all officers, overseers and crews must be thoroughly briefed before lighting commences.

6.3.1 Pre-Briefing

This is carried out by the Controller to his senior staff and overseers.

6.3.2 Briefing

This is performed by the Fire Boss, following a brief introductory comment from the Controller, on matters such as Safety and Communications. Other points to cover:

- Description of the area
- Discussion of the lighting method to be used
- Officer responsibilities
- Crew functions and responsibilities
- Discussion of water points
- Discussion of probable danger areas
- Safety
- Communications
- Use of retardants
- Dozer disposition

After the briefing O.I.C. Lighting and O.I.C. Suppression will nominate their respective crews, and an inspection of boundaries and internal tracks will be made.

7. SLASH BURN CONTROL

To produce the best seed bed, slash burns should be as intense as possible within limits set by safety and ease of control.

Factors the Controller must consider are:

7.1 Prescription

The slash burn prescription (see Appendix I) must be consulted before lighting commences. Check whether expected weather conditions on the day match those prescribed. If variation occurs, then a new strategy may be required, tailored to expected weather conditions, or the burn may be cancelled.

7.2 Timing for the day

This depends on:

- Fine fuel moisture contents inside and outside the burn.
- Expected weather.
- Known and anticipated commitments elsewhere.
- Weather conditions as prescribed.

7.3 Timing on the day

Each job should be burnt out as rapidly as possible, so as to avoid the problems of variations in weather or of unsuitable conditions developing overnight.

The ignition process may take from one to six hours, depending on technique used, slash quantity and size of burn.

It may be necessary to terminate an incomplete burn. If so, all burning must cease on a mineral earth break, mop-up of exposed flanks carried out before leaving that night, and early morning or overnight patrols arranged.

The maximum burn size that can be completed within daylight hours by ground ignition methods is about 200 ha.

Therefore, always consider start time and expected time to light the job before burning commences. Start time may be influenced by:

- Light up should only commence when the daily wind pattern has stabilized. Wind patterns established by mid afternoon generally persist for the remainder of the day.
- A burn must never be lit on the expectation of a desired wind change. Always delay start time until presribed winds are experienced.
- The safest start time each day comes just after the daily hazard has peaked (i.e. R.H. rising, temperature falling).

7.4 Cellular Lighting

On large slash burns the operation is lit systematically cell by cell. The sequence is determined by:

- The direction of the prevailing wind. The downwind cell is lit first, and then the downwind flanks are secured by burning adjacent cells. This pattern is repeated for the entire job, progressively working upwind.
- The requirement to draw fire and hence spotting potential away from a dangerous flank. By intelligent lighting of cells, pressure on dangerous flanks can be controlled.

7.5 Knowledge of Danger Points

Danger points are:

- Slash which cannot be burnt, or special high value areas adjacent to the burn.
- A sharp bend in the boundary of the burn.
- Fire whirlwinds.
- Gully winds.
- Steep, upslope topography.
- Seed trees with dead limbs near perimeter.

7.6 Lighting

Lighting must always proceed as planned. Changes can only be initiated at Controller/Fire Boss level.

In the event of fire escape or unexpected weather change, the Fire Boss may delay follow-up lighting or terminate the burn at a sub-boundary.

In a fire emergency, a raw edge burning back may be left. This type of fire will rarely spread above 40-50 m/hour as a back burn. This may only be done as a last resort, by direction from the Controller.

7.7 Suppression

The nature of the suppression force depends on the size of the burn and expected fire intensity. Minimum requirements should be:

Gangs: 2
Heavy duties: 3, with "knock down" retardant
Heavy Plant: 1D6C

Points to note with regard to suppression are:

- Never light up more than can be held with available suppression forces.
- If trouble is experienced beyond the capacity of suppression forces, the first course of action is to *stop lighting.*
- Suppression is more difficult in autumn than in summer due to the dryness of large fuel and the spotting potential of the fire.

- Suppression of escapes must take place immediately, when they are small.
- Suppression of escapes must be done with minimum damage to the forest adjoining the burn.

7.8 Mopping up

All burns must be made safe by mopping up the edges as soon as this can be done. Standard rules require that burning material must be extinguished—

- for 20 metres from the edge on the ground, and
- for 100 metres from the edge in the air.

However, since it is not desirable to fall seed trees until at least a month after the fire, other measures may have to be adopted if these light up—e.g., installation of a buffer burn in adjacent forest. In most cases spot fires in the limbs of karri seed trees go out overnight. If left standing in this hope, such trees must be checked before first light on the morning after the burn.

Regular patrols of burn edges should be made for several subsequent weeks to check for potential trouble spots from re-ignition near the edges.

8. SAFETY

The lighting and control of high intensity fires is a hazardous operation. Consequently, safety must be at the foremost in planning and foremost in the minds of all personnel involved.

The three most common injuries encountered are:

Damage to eyes from smoke.

Damage to limbs etc. from falls.

Fatigue due to radiant heat.

Smoke contains fine ash particles and prolonged exposure will cause eye irritation. This can be prevented by the use of proper protective goggles. Ordinary glasses do not seal off the eyes and are of no use as smoke protection.

Risks of falls can be minimised by:

- Careful selection of footholds amongst logs, with a maximum use of cleared ground and old snig tracks. Logging spurs may be used in very heavy fuel areas.

- Working in small teams where every member is aware of the presence and progress of his adjacent workmates.
- Presence of an experienced overseer whose only duties are the safety and supervision of his crew.
- Selected fittest and toughest crew members for this job.

Men should always work in pairs when lighting a slash burn.

Prolonged exposure to radiant heat is debilitating and leads to nausea. This can be minimised by protective clothing, such as long trousers, long sleeved woollen shirt buttoned to the neck, boots, hard hats, goggles.

Rotation of crew responsibilities between jobs ensures that no one group is excessively exposed to a particular hazard.

Safety aspects must be dealt with in detail during staff and crew pre-burn briefings, and then monitored throughout the day by each supervisor from Controller down.

9. RECORDING

The final responsibility of the Controller of each burn is to ensure full and correct records are made in the divisional office concerning each slash burn—viz

- The date of the burn
- Weather conditions
- Exact area burnt
- Completion of the post-burn appraisal

These data are transferred to HOCS records at the end of each month or burning season.

10. REVISION OF THESE GUIDELINES

Slash burn techniques evolve with time and research studies. These guidelines should be reviewed for updating every two years.

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