1. PURPOSE

To provide a Risk Management system giving guidelines and practical advice to all Working for Water Programme work operations to ensure effective and proper management of high risk areas.

The Risk Management system consists *of Written Safe Work Procedures, Planned Job Observations, Job Specifications as well as a Workplace Risk Assessments* for all job categories.

2. SCOPE

This document provides guidelines to all Working for Water Programme work operations in order to eliminate or minimize hazards and risk in the workplace.

3. LEGISLATIVE PROVISION/REQUIREMENTS

Occupational Health and Safety Act, 1993 (Act 85 of 1993): *(Section 8(2)(d))*

Occupational Health and Safety Act, 1993 (Act 85 of 1993): *(Section 13 (a)))*

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***General Administrative Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***General Safety Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Driven Machinery Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***General Administrative Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Construction Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Hazardous Chemical Substance Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Driven Machinery Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***General Machinery Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Electrical Machinery Regulations***

Occupational Health and Safety Act, 1993 (Act 85 of 1993): ***Noise Induced Hearing Loss Regulation***

SANS as stipulated in WfW systems documents (Element standards)

4. RELATED SYSTEMS DOCUMENTS BUT NOT LIMITED TO:

Element 2.41; *Working for Water Programme* ***Personal Protective Equipment***.

Element 5.32; *Working for Water Programme* ***Medical Surveillance Programme***

Element 5.50; *Working for Water Programme* ***Written Safe Work Procedure*** .

Element 2.11; *Working for Water Programme* ***Machine Guarding***

Element 2.17; *Working for Water Programme* ***Hazardous Chemical Sunstance control***.

Element 2.18; *Working for Water Programme* ***Vehicle licensing and checklist*** .

Element 2.30; *Working for Water Programme* ***Handtools***.

Element 2.31; *Working for Water Programme* ***Ergonomics***.

Element 5.02; *Working for Water Programme* ***Hazard Identification and Risk Assessment*** .

Element 5.14; *Working for Water Programme* ***Communication*** .

Element 5.15; *Working for Water Programme* ***First Aid***

Element 5.16; *Working for Water Programme* ***First Aid training***

Element 5.33; *Working for Water Programme* ***Selection and Placement***

Element 5.40; *Working for Water Programme* ***Workplace and Inspections***

Element 5.51; *Working for Water Programme* ***Planned Job Observation***

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GENERAL SAFETY PRECAUTIONS

1. Be sober at all times.
2. Do not smoke dagga or use intoxicating drugs, which might impair vision, dexterity or judgement.
3. Always wear appropriate personal protective equipment appropriate to the task.
4. Do not perform any task unless trained, competent and fit for the specific task.
5. Do not use defective equipment.
6. Warming / cooking fires / smoking in demarcated areas only.
7. Report any unsafe conditions to Health and Safety Representatives or Supervisor.
8. All incidents / near misses and accidents must be reported.
9. Beware of slippery / unstable surfaces.
10. Beware of snakes and stinging insects. Refer to Snake Bite and Bee-sting instructions.
11. Beware of lightning exposure during stormy weather – do not shelter under trees when a storm approaches.
12. Ensure that First Aid Kit, drinking water and adequate communication are available at all times.
13. No loose clothing, jewellery or hair to be allowed in and around moving machinery.
14. Be familiar with the emergency procedures in the work place.
15. Annual medicals required for all job categories
    - 6 monthly audiometric tests required when working above 105 dB
    - Annual audiometric tests required when working at 85 dB and above
    - Annual Lung function tests required when exposed to chemicals and if required to extinguish fires.
16. Always adhere to all warning signs.
17. Minors (children) should not be allowed in any operation.
18. Never modify power tools in any way, as this can result in serious injury.
19. Maintenance of Tools
    - Use the correct tools for the job.
    - Tools have to be carried next to the body with the sharp edge facing forward and down as far as possible.
    - Discard the tool when falling – do not attempt to restore balance with the tool.
    - All tools must be properly maintained by a competent person.
    - Beware of hitting feet, legs and hands with tools.
    - Recommend use of rubber / leather stopper / guard on file handles.
20. Do not use tools unless trained.
21. Ensure that Barrier tape is available in all operations at all times.
22. Never approach closer than two tree lengths to tree felling operations.
23. All new workers are to be informed of these General Safety Precautions at the start of their first work day.

SAFETY PRECAUTIONS FOR DRIVERS AND PASSENGERS

1. No vehicle may be driven if the driver is under the influence of alcohol or drugs.
2. Annual driver evaluation is required.
3. Driver must have appropriate licence and PrDP.
4. Driver trained and certified for the class of vehicle.
5. Driver to be trained as First Aider and a First Aid Kit be made available on all Labour Transport Vehicles
6. Carry legal drivers licence at all times.
7. Driver must sign safety precautions for drivers and passengers.
8. The driver is responsible for the vehicle and the load - all passengers and tools/equipment, and the trailer and equipment carried on or in it.
9. Adjust driver behaviour according to current road, weather and traffic conditions.
10. Obey the traffic ordinance.
11. Check behind before reversing.
12. Take care when driving in steep areas.
13. Any person directing loading, or manoeuvring, must be 20 meters away from the operation.
14. Check all passengers are safely on board, and that the access gates and labour safety rails are closed and latched, before moving.
15. Drivers must check that passengers do not embark / disembark while the vehicle is in motion.
16. Passengers must not embark or disembark from moving vehicles.
17. Passengers must remain inside the safety rails / sides (i.e. no hanging legs over sides).
18. Passengers must have signed the passenger safety precautions for drivers and passengers.
19. Beware of wet, slippery surfaces.
20. Act on and report unruly passengers.
21. No unauthorised passengers (non-employees) to be transported.
22. Complete daily vehicle checklist and ensure defects corrected.
23. Always embark and disembark vehicles from left-hand side.
24. Always wear safety belt if it is provided.
25. Lights to be switched on at all times while driving.
26. Do not exceed 40 km / hour on in-field roads.
27. Do not operate cell-phone unless hands free kit is used.
28. Do not operate vehicle outside the recommended working limits. Do not overload vehicle.
29. Report infield hydrocarbon spills (oil), treat on site if less than 1 m x 1 m size, if larger remove contaminated soil to the rehabilitation site.
30. Only authorised personnel may operate or drive vehicles or equipment.
31. When leaving the vehicle in-field, the driver shall wear suitable personal protective equipment (high visibility clothing, closed shoes and hard hat).
32. Driver may not exit the vehicle unless: parked on level ground, machine switched off, handbrake engaged and vehicle is in gear. Switch OFF engine and engage brake before disembarking.
33. No vehicle may be started unless: the driver is seated in the proper driving position, vehicle must be out of gear or clutch engaged and parking brake engaged.

34. In case of a runaway vehicle, do not attempt to climb on it to stop it.
35. Where infield servicing or repairs are required ensure that the driver maintains responsibility for the vehicle and its direct surroundings until the mechanic arrives. On completion of infield repairs ensure that the vehicle is in a safe working condition, all chocks, supports and locks are removed and have permission from the mechanic to proceed.
36. Switch off engine before refuelling.
37. Loose tools and equipment must be carried in properly secured tool boxes.
38. Fuel containers and chain saws must be carried separately - preferably in a lock-up trailer.
39. Do not attempt to pull start or push start the vehicle.
40. No overloading (goods or passengers) is to be permitted.
41. Vehicles must be in roadworthy condition. Annual compliance check must have been completed.
42. Tail lights and indicator lights must be kept clean.
43. Standard toolkit, first aid kit, fire extinguisher required.
44. Tarpaulins must be secured.
45. Where removable labour railings are used, these must be fitted in such a manner to ensure minimal movement in any direction.
46. All sides of the vehicle must be enclosed.
47. Sticker displaying passenger maximum carrying capacity of vehicle must be displayed at the rear.
48. Ensure regular scheduled preventative maintenance.

DRIVER - LABOUR CARRIER (LDV or MDV with or without a trailer)

1. THE TASK

Transport of personnel, tools and equipment.

2. THE HAZARDS

Weather, bad road conditions, traffic, overloading, speed, fatigue, non road worthiness, poor maintenance (daily checklist), unruly passengers, loose tools and equipment, passengers embarking and disembarking while vehicle is moving, wet slippery surfaces and hijacking.

3. PERSONAL PROTECTIVE EQUIPMENT

Approved hard hat when required, overall / two piece, raincoat and safety boots / shoes with steel toecap.

4. EQUIPMENT

Standard vehicle tool kit, vehicle first aid kit, chocks and fire extinguisher.

5. SAFETY PRECAUTIONS

5.1. Access by passengers must be from the rear or left side of the vehicle.
5.2. Only embark or disembark when the vehicle is stationery.
5.3. Passengers to be seated and safety belts to be used where fitted.
5.4. Access door to be opened and closed by the supervisor or driver.
5.5. Daily vehicle checklist to be completed before the trip starts in the morning, and short-comings addressed.
5.6. Travel at appropriate speed and to road conditions, not more than 40 kph on in-field roads, and with vehicle lights on.
5.7. No smoking while travelling.
5.8. Driver not allowed to use cell phone while driving.
5.9. Driver / Supervisor responsible for the passengers on the vehicle.
5.10. Tools to be separate from labour (in separate secured bins in the front of the load bay or underneath seats, or in a towed trailer).
5.11. Vehicle must be roadworthy and comply with the Road traffic Act.
5.12. Vehicle must be enclosed.
5.13. Use headlights on dirt roads.
5.14. Do not overload.
5.15. Tarpaulins must be secured.
5.16. Lights must be kept clean.
5.17. Fuel containers brush-cutters and chainsaws to be carried in a trailer.

WRITTEN SAFE WORK PROCEDURES

JOB: DRIVER - LABOUR CARRIER

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, high visibility clothing, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure driver has valid drivers licence, and where applicable, PrDP	Unqualified or trained driver	Check permit, license		
3	Complete daily vehicle checklist - ensure defects corrected	Defective vehicle	Correct defects		
4	Check load is secure – people, tools and equipment	Moving, falling load	Secure		
5	Ensure not over loaded, number of people	Legal implications and life, losing load	Know limit, count		
6	Put on safety belt before proceeding	Personal injury	Use equipment		
7	Switch lights on, on gravel roads	Poor visibility	Use lights		
8	Drive according to road conditions and road ordinances	Speed, other traffic, road conditions	Behave correctly		
9	No embarking or disembarking from moving vehicle	Falling, tripping, slipping	Behave correctly		
10	If towing trailers - no passengers in the trailer	Personal injury	Behave correctly		
11	If towing trailers - tow at appropriate speed	Trailer stability	Correct speed		
12	If towing trailers - allow for additional braking distance	Vehicle momentum	Correct speed		
13	If towing trailers - ensure trailer plug connected and lights working	Vehicle visibility	Maintain correctly		
14	If towing trailers - ensure reflector strips attached	Trailer visibility	Check, clean strips		
15	No unauthorised passengers	Legal claim risk if injured	Do not carry		
16	Ensure regular maintenance carried out	Defective vehicle	Correct defects		
17	Ensure compliance to WfW vehicle safety standards	Breaking rules	Know and apply		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Job Specification

Title: Driver – Labour Carrier **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	0
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	4
e.	Lifting or carrying heavy objects	0
f.	Working bent over	0
g.	Use of arms	4
h.	Standing	0
i.	Sitting	4
j.	Bending	4
k.	Waling on uneven ground	0
l.	Walking on flat, even ground	0
m.	Running	0
n.	Use of legs and feet (e.g. operation of pedals)	4
o.	Vision (distant)	4
p.	Vision (reading)	4
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	4
s.	Vision (depth perception)	4
t.	Eye / hand / foot co-ordination	4
u.	Hearing	4
v.	Talking / speech	4
w.	Smell (detect odours)	4

2. Work Load	M

3. Education		
a.	Literacy	1
b.	Numeracy	1
c.	Drivers license	4
d.	Public Driving Permit	4
Briefly describe the work done by the employee		
	Transporting labour to and from work, using Light to Medium class motor vehicles, towing a trailer containing tools and equipment	

4. Special Skills		
a.	Drive a light vehicle	4
b.	Drive a medium vehicle	4
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a computer	0

5. Working Environment		
a.	Shift work	4
b.	Outdoors	4
c.	Indoors	0
d.	Heights	0
e.	Confined spaces	0
f.	Abnormal positions	0
g.	High temperatures	3
h.	Low temperatures	3
i.	Wet	3
j.	High humidity	3
k.	Noise	3
l.	Radiation	0
m.	Vibration	3
n.	Dust	4
o.	Gasses	2
p.	Fumes	2
q.	Hazardous substances	0

6. Safety Equipment		
a.	Hard hat	0
b.	Safety glasses	0
c.	Ear plugs / muffs	0
d.	Gloves	0
e.	Safety boots / shoes	4
f.	Gum boots	0
g.	Leg protectors	0
h.	Breathing apparatus	0
i.	Other (specify) Visibility clothing	4

Hazards: Traffic, road conditions, weather conditions, people's behaviour, carrying a load, pulling a trailer
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Risk Assessment Driver – Labour Carrier (**Action List**: **A**=Immediate; **B**=Within one week; **C**=Within one month; **D**=Within six months; **E**=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
Not following correct procedures	Injury to worker	4	15	5	300/375=80% **A**	Supervisor monitoring
Road conditions	Poor road conditions, potholes, slippery surface	4	8	5	160/375=43% **C**	Training, Tool-box talk awareness
Traffic	Accident, injury or death	5	15	5	375/375=100% **A**	Training, Tool-box talk awareness
Overloading	Damage to vehicle / fine	3	15	3	135/375=36% **D**	Supervisor monitoring
Speed	Accident, injury	3	15	4	180/375=48% **C**	Tool-box talk awareness
Loose tools, equipment	Injury to people	3	3	5	45/375=12% **E**	Tool-box talk awareness
Fatigue	Fall asleep	3	8	3	72/375=19% **E**	Tool-box talk awareness
Poor maintenance	Down-time	4	3	4	48/375=13% **E**	Supervisor monitoring
Failure to complete daily checklist	Accidents, injury	4	7	5	140/375=37% **D**	Supervisor monitoring
Embarking & Disembarking of passengers	Injury to worker	5	3	5	60/375=16% **E**	Tool-box talk awareness
Hijacking	Injury to worker	2	15	3	90/375=24% **D**	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness

CHAINSAW OPERATOR

1. THE TASK

Operating the chain saw - felling, topping, de-branching and crosscutting trees

2. THE HAZARDS

Falling trees, rough terrain, slippery surfaces, moving chain, high stumps, pre-cut stumps, co workers, kickbacks, but kickbacks, refuelling, fires, wet logs, widow makers, noise, vibration, saw dust, exhaust fumes, hang ups, leaning trees, forked trees, incorrect procedures (felling), weather conditions (high wind), snakes, stinging insects & lightning

3. PERSONAL PROTECTIVE EQUIPMENT

Hard hat with visor and certified earmuffs (SABS or EU), high visibility top, operator gloves, raincoat, FESA approved chainsaw pants (eleven layers) with broad belt or braces, safety boots with steel toecap and bomb bandage.

4. EQUIPMENT

Chain saw, depth gauge, files, combination spanner, guide bar cover, fuel container, fire extinguisher, file o' plate and whistle.

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Before any tree felling may commence the two tree length distance must be measured, demonstrated and communicated to the team. Ensure area is demarcated. Consider variations in tree height.

5.1.2 Check the felling area for wind throws and widow makers, hang-ups, damaged, forked and dead trees, and remove.

5.1.3 Take extra precaution when working on steep slopes and stop work in strong winds.

5.2 Machine

5.2.1 Daily Chain saw checklist to be completed including handles, chain-brake, mounting rubbers, safety locks on throttle and guard on rear handle.

5.2.2 Check bar cover is fitted during transport and storage.

5.2.3 Under no circumstances may anyone handle a chain saw unless trained, certified and authorised – wearing all required Personal Protective Equipment.

5.2.4 Do not modify chain saw from the original design.

5.2.5 Must be fitted with safety chain.

5.2.6 Idle speed and chain creep.

5.2.7 Chain tension, chain defects and correct chain fitting.

5.2.8 Test chain brake after refuelling.

5.2.9 Check guide bar and bar nuts.

5.2.10 Check handle and mounting rubbers daily.

5.2.11 Check safety locks on throttle daily.

5.2.12 Check guard on rear handle.

5.2.13 Check chain catcher stub.

5.3 Operator

5.3.1 Bi-Annual operator evaluation and refresher training.

5.3.2 Bomb bandage to be placed in hard hat.

5.3.3 Humans more important than machine.

5.3.4 Do not start felling until the felling area has been demarcated, cleared of people, and danger signs have been erected.

5.3.5 Extra precaution to be considered when working on steep slopes and in strong winds.

5.4 Refuelling

5.4.1 Refuelling area to be cleared 1 m diameter, fire extinguisher within reach.

5.4.2 Do not refuel while machine is running.

5.4.3 Do not smoke while refuelling.

5.4.4 Always fill oil tank first and then petrol mix.

5.4.5 After refuelling, ensure caps are tightened, wipe away spills.

5.4.6 Do not use unmixed fuels.

5.4.7 Always fill oil tank first and then petrol mix.

5.5 Operation

5.5.1 Move away from refuelling site before starting saw.

5.5.2 Start machine clutched between knees or held firmly on ground/stump.

5.5.3 Warm machine up before work. Do not rev motor at high speed during the warm-up period .

5.5.4 All cutting must only be started when the saw is at maximum speed.

5.5.5 Check that trees being felled cannot fall within 15 metres of power lines.

5.5.6 Make sure no other people are within a radius of (2) tree lengths of the falling trees.

5.5.7 Do not operate a chain saw with one hand.

5.5.8 Do not operate chain saw above shoulder height.

5.5.9 Do not operate a chain saw in trees or off a ladder unless qualified to do so.

5.5.10 Do not cut any material other than timber.

5.6 Felling

5.6.1 Always ensure sound footing when operating a chain saw.

5.6.2 Clear base of tree first before felling, and plan a clear escape route.

5.6.3 When chain saw jams, switch off and engage chain brake, before removing it.

5.6.4 Domino felling is prohibited.

5.6.5 Be alert to people moving in felling area.

5.6.6 No other operation may take place or person may be within two (2) tree lengths of a felling operation. This does not apply to the assistant, trainer or supervisor.

5.6.7 Beware of kick-backs while clearing butt branches.

5.6.8 Watch wind direction and strength. Adjust felling technique accordingly.

5.6.9 Take care when sawing the face and wedge cuts – they must line up neatly leaving a hinge. **DO NOT UNDER-CUT THE HINGE!**

5.6.10 Observe extreme caution when felling dead, hollow, multiple stemmed or rotten trees. **HAVE THE SUPERVISOR PRESENT!**

5.7 De-branching

5.7.1 Use 6 point system where appropriate.

5.7.2 Keep balance at all times.

5.7.3 Keep legs away from cutting area.

5.7.4 Beware of kickbacks.

- Hold chain saw with both hands, with left thumb under front handle.
- Try to cut with the base of the cutter-bar – close to the machine (safest area).

5.7.5 Be aware of branches under tension.

5.8 Cross cutting

5.8.1 Keep feet clear of falling or rolling logs.

5.8.2 Maintain a sound footing at all times.

5.8.3 When chain saw jams, switch off, engage chain brake before removing it. Get assistance if required.

5.8.4 Keep clear of moving machines and vehicles at roadside.

5.8.5 Hold saw with both hands and be aware of kickback.

5.8.6 Stand uphill of logs being cut on slopes.

5.8.7 Wherever possible, cross cutting should be done up the slope.

5.8.8 On steep slopes, no-one may work down slope below the cross cutting operation within a distance of 60 meters.

5.8.9 Be aware of logs under stress, tension or compression.

5.9 Hang ups, Windfalls, Leaning and Forked Trees

Any tree that is not standing at its normal upright position or has any other unusual form or defect must be treated with caution. These could include:

- A "hang-up" (as we generally know it in felling) where the felled tree is held up by a standing tree.
- A "leaning tree" is a standing tree still attached to its roots and could be held up by the roots or by other trees or objects (e.g. rocks) it may be leaning against. The centre of gravity of the tree has shifted, and the stem is under stress because of the lean.

- A tree that has grown with an extensive lean is still under stress. Although the roots of these trees are relatively stable, keep in mind that once trees around these trees have been removed, the lean of the tree (top heavy) combined with increased exposure to wind reduces the stability of the tree.
- Diseased or dying trees. Dead or damaged fibres are less flexible and less predictable than normal (live) fibres, and the tree could react differently than expected.
- A dead top of a dying tree being felled, could snap off and fall as soon as the tree starts to move or fall.
- Forked trees. This takes place when the tree develops more than one leader. This is a potential weak area in the tree, where one or both leaders could break off. Beware of felling all the trees around a forked tree, as this could expose the tree to new forces, which could result in a breakage.
  The chain saw operator and supervisor must identify any hung-up, leaning, damaged, dead or dying trees, or suspect forks and demarcate them for felling under supervision.

5.9.1 All hang-ups must be attended to immediately before the next tree is felled. If the tree can't be brought down immediately demarcate danger area with barrier tape, report to the supervisor, and plan a correct, safe felling procedure.

5.9.2 Get someone to assist to remove the lodged tree if difficulty is envisaged.

5.9.3 Always roll tree away from body.

5.9.4 Deal with hang-ups according to procedure.

- Roll the hang-up using a cant hook.
- Lever or pull the hang-up using a pole or hand winch.
- Use a machine or other mechanical winch.

5.9.5 No work may take place under hang-ups or within two tree lengths in the direction of the lean.

5.9.6 The following is prohibited:

- Fell the holding tree.
- Climbing on the hang-up.
- Cutting lengths from the butt of the hang-up.
- Fell another tree onto the hang-up to knock it down.

5.9.7 Select and clear a suitable escape route.

5.9.8 Under no circumstances may any operation take place under or within two tree lengths of a hang-up or a leaning tree.

5.9.9 Caution must be taken with trees that have grown with visible lean, and dead or dying trees. Once the trees around the tree have been felled, no activity may take place under or close to a tree with a visible lean.

5.9.10 Always respect the two tree lengths rule!

5.9.11 Approach each tree with caution and deal with them individually with careful planning and under supervision.

5.9.12 The chain saw operator must inspect the crown of every tree to be felled and the surrounding trees to ensure that there are no overhead dangers (dead or loose branches, leaders or tops) or dead trees close by.

5.9.13 In cases of leaning trees being hung up in another tree, treat the same as a hang-up. Caution: these trees could be more dangerous than a normal hang-up, as the tree is still connected to its roots.

5.9.14 Special precautions for trees with double leaders (forked trees)

- Supervisors to mark all forked trees before felling. These trees must be identifiable from all directions.
- If a falling tree strikes or touches a tree with a double leader, the chain saw operator must inspect the tree with the double leader to ensure that it is not damaged. •
- Double leaders could be unstable when many surrounding trees have been removed.
- Regular toolbox talks must highlight the potential dangers associated with forked trees.

5.10 Salvaging Storm Damaged Trees (FESA 2000)

Normal hazards are multiplied by the presence of broken or shattered trees and varying degrees of tension due to trees being interlocked, bent or partially fallen. Approach each tree with caution and deal with them individually with careful planning and under supervision. The following situations require special precaution:

5.10.1 **Uprooted trees -** Begin with the top tree if trees are on top of each other. De-branch, ensuring good visibility and logical reduction of stress, tension and compression. Plan all cuts and escape routes, predict and anticipate stem movement.

5.10.2 Stems or crowns broken but still attached:

- If the crown is resting on the ground but still attached to the stem. Cut away the crown tip, working in towards the upright stem up to shoulder height. Use a cant hook to twist the broken crown off. Always stand on the opposite side of the intended fall and never pull the broken crown towards yourself. Should this not work, the broken crown should be pulled with a hand winch or extraction machine. If it is still firmly attached, cut the crown off where it rests on the ground and fell the standing part of the stem at a right angle to the crown direction using felling aids or a winch.
- Crowns not touching the ground pose a threat, and should only be felled under supervision.

5.10.3 **Leaning trees -** Do not attempt to change the felling direction. As per 5.2.6.

5.10.4 **Hang-ups** - As per 5.2.6

5.10.5 **Trees without tops** / **crowns** - As per 5.2.6

5.11 Servicing

5.11.1 Do not clean saw with petrol.

5.11.2 Move away from fuelling / cleaning area before starting machine.

5.11.3 Do not smoke when cleaning machine.

6. FELLING TREES next to NATIONAL, PROVINCIAL and DISTRICT roads and other SMZ's (Special Management Zones), TELEPHONE LINES and POWER LINES

6.1 Who to Inform

6.1.1 <u>Roads</u>

- Inform Road Traffic Inspectorate of the date, place and approximate time period felling will be taking place.
- Place warning signs of tree felling 100 metres either side of operation facing on-coming traffic. These signs must be clearly visible to road users.
- Place a person at felling board with red flag. While felling is taking place, ensure traffic is made aware to reduce speed by flagging down traffic. These people must wear reflective vests.
- Stop / Go signs must be available at the felling site. However, only the Road Traffic Inspectorate can regulate traffic if a tree falls across the road.
- Contractor and supervisor must be present before and during felling. Suitable communication must be available with the Road Traffic Inspectorate.
- The WfW Manager must be informed of the operation taking place.

6.1.2 Telkom

- Inform Telkom of the date, place and approximate time period felling will be taking place.
- Do not proceed to fell until lines have been dropped.
- The WfW Manager must be informed of the operation taking place.

6.1.3 Eskom

- Inform Eskom of the date, place and approximate time period felling will be taking place. Discuss with Eskom any safety measures required.
- The WfW Manager must be informed of the operation taking place.

6.2 Rigging the tree

Use only recognised methods of ascending trees:

- All climbing equipment must be properly constructed of sound material and must be maintained in a safe working condition and inspected before use.
- All climbing operations fewer than 6 meters, use of aluminium ladders must be of a recognised make with acceptable safety features. These ladders must be recorded in a register as per OHS ACT.
- All climbing operations over 6 meters, steel spurs, climbing belt and suitable climbing ropes should be used.
- If rigger works at a height of more than three meters, the stepladder must be tied to the tree and the rigger must be secured against falling by means of a climber's safety belt and rope. Remember the Golden Rule regarding working at heights, whereby the person must have a harness if working at heights greater than 2 meters.
- The ladder must be held on the ground at all times while the rigger is busy.
- If cable is used, fasten the cable using Crosby clamps.
- If rope is used, a durable rope of no less than 100 meter is to be utilised. The rope must be securely attached to the tree.

- The cable or rope must be secured to the highest point of leverage in accordance with the tree size.

6.3 Manual Assisted Tree Pulling

- Before work commences, discuss with all people involved what is intended to be done.
- As many people as required to pull the tree; position themselves at the end of the rope (at least 100 meter away). Labour to take up the slack in the rope.
- Only the operator is to enter the area to fell the tree. Operator and supervisor to ensure that the safe distances are maintained.
- The co-ordination of the pulling team and operator is to be managed by the supervisor.
- Chain saw operator to make directional notch as per standard felling technique.
- Tension rope to hold the tree in position.
- Make the felling cut ensuring an adequate hinge is retained.
- Chain saw operator to retire to safe position and supervisor to signal the pull to commence.
- De-branching, stripping and crosscutting starts after all tree pulling has been completed.

WRITTEN SAFE WORK PROCEDURES

JOB: CHAINSAW OPERATOR – TREE FELLING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat and hearing protection, visor, approved trousers, high visibility clothing, chainsaw gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Check safety features and complete checklist	Defective machine	Chain brake, chain catcher, AV rubbers, hand guard, throttle guard		
3	Safe distances adhered to	Falling trees	Surrounding workers aware		
4	Start machine	Not following procedure	Clutched between knees / flat on the ground		
5	Clean tree base	High stumps, branches, obstacles	Clear obstacles, debris		
6	Check escape route	Tree falling	Clear obstacles		
7	Check lean & wind direction / speed	Incorrect fall	Correct cutting method		
8	Check felling area	Persons in area	Alert, clear away		
9	Cut top-cut	Cutting too deep			
10	Cut bottom-cut	Cutting too deep	Don't cut through hinge		
11	Cut back-cut	Cutting too deep / low	Don't cut through hinge		
12	Retreat sideways and back = 45 degrees	Butt kick-back	Move away swiftly		
13	Dress the butt	Spikes / protrusions	Trim off		
14	Check the stump for sharp hinge and dress	Spikes / protrusions	Trim off		
15	Refuel when necessary	Spilling, combustion	Switch off, then re-fuel		
	Check chain and cutter-bar for defects and sharpness	Breaking, chain kick-back	Repair, replace, maintain		
	Sharpen chain correctly	Poor cut, kick-back	Correct tools, sharpen teeth and file depth-gages		
16	Check chain brake and chain catcher	Guide bar kick-back, chain break	Inspect, repair		
17	Clean machine	Machine defect	Housekeeping		
18	Complete chainsaw daily check and ensure defects corrected	Machine defect	Repair defects		
19	Hazardous situations managed	Hang-ups, pinched saw blade, leaning / tangles / dead / storm-damaged trees etc.	Demarcate, alert supervisor, get help		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: CHAINSAW OPERATOR – DE-BRANCHING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat and hearing protection, visor, approved trousers, high visibility clothing, chainsaw gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Check safety features and complete checklist	Defective machine	Chain brake, chain catcher, AV rubbers, hand guard, throttle guard		
3	Safe distances adhered to	Falling branches	Surrounding workers aware		
4	Start machine	Not following procedure	Clutched between knees / flat on the ground		
5	Check if the butt is dressed	Spikes / protrusions	Trim off		
6	Walk to the first branches	Tripping, falling	Step with care		
7	Take up cutting position	Unbalanced stance	Stand firm		
8	Rev chainsaw to max	Noise, moving chain	Ear-muffs, safety features		
9	Start de-branching using the base of the cutter-bar as much as possible	Kick-back	Firm grip, safety features		
10	Move to next branch, repeat the sequence from Step 7.	Tripping, falling	Support saw on tree trunk		
11	Refuel when necessary	Spilling, combustion	Switch off, then re-fuel		
	Check chain and cutter-bar for defects and sharpness	Breaking, chain kick-back	Repair, replace, maintain		
	Sharpen chain correctly	Poor cut, kick-back	Correct tools, sharpen teeth and file depth-gages		
12	Check chain brake and chain catcher	Guide bar kick-back, chain break	Inspect, repair		
13	Clean machine	Machine defect	Housekeeping		
14	Complete chainsaw daily check and ensure defects corrected	Machine defect	Repair defects		
15	Hazardous situations managed	Branches under stress, pinched saw blade, leaning / tangled / dead / damaged branches etc.	Correct cutting sequence		

EXPLAINED BY: _____ DATE: _____

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SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: CHAINSAW OPERATOR – CROSS-CUTTING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat and hearing protection, visor, approved trousers, high visibility clothing, chainsaw gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Check safety features and complete checklist	Defective machine	Chain brake, chain catcher, AV rubbers, hand guard, throttle guard		
3	Safe distances adhered to	Falling branches	Surrounding workers aware		
4	Start machine	Not following procedure	Clutched between knees / flat on the ground		
5	Check if the butt is dressed	Spikes / protrusions	Trim off		
6	Walk to cutting point on tree stem	Tripping falling	Support saw on tree trunk		
7	Take up cutting position	Unbalanced stance	Stand firm		
8	Assess the stresses in the stem for compression and tension	Unreleased stress – compression / tension	Choose the correct cut sequence		
9	Rev chainsaw to max	Noise, moving chain	Ear-muffs, safety features		
10	Start X-cutting using the base of the cutter-bar as much as possible	Kick-back, bar-pinch	Firm grip, safety features		
11	Move to next X-cut point, repeat sequence from Step 7.	Tripping, falling	Support saw on tree trunk		
12	Refuel when necessary	Spilling, combustion	Switch off, then re-fuel		
	Check chain and cutter-bar for defects and sharpness	Breaking, chain kick-back	Repair, replace, maintain		
	Sharpen chain correctly	Poor cut, kick-back	Correct tools, sharpen teeth and file depth-gages		
13	Check chain brake and chain catcher	Guide bar kick-back, chain break	Inspect, repair		
14	Clean machine	Machine defect	Housekeeping		
15	Complete chainsaw daily check and ensure defects corrected	Machine defect	Repair defects		
16	Hazardous situations managed	Branches under stress, pinched saw blade, leaning / tangled / dead / damaged branches etc.	Correct cutting sequence		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Job Specification

Title: Chainsaw Operator **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	1
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	4
p.	Vision (reading)	3
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	2
s.	Vision (depth perception)	4
t.	Eye / hand / foot co-ordination	3
u.	Hearing	4
v.	Talking / speech	4
w.	Smell (detect odours)	3

2. Work Load	H

3. Education		
a.	Literacy	2
b.	Numeracy	1
c.	Chainsaw operators certificate	4
d.		
Briefly describe the work done by the employee		
	Fell, de-branch, X-cut trees Maintain chainsaw Wear and maintain protective clothing	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a chainsaw	4

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	0
e.	Confined spaces	2
f.	Abnormal positions	4
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	4
l.	Radiation	0
m.	Vibration	4
n.	Dust	4
o.	Gasses	0
p.	Fumes	2
q.	Hazardous substances	2

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses / visor	4
c.	Ear plugs / muffs	4
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	0
g.	Leg protectors (C-saw trousers)	4
h.	Breathing apparatus	0
i.	Other (specify) High visibility clothing	4

Hazards:
Falling objects, moving cutters, noise, fumes, fuel, vibration, splinters, sawdust, dust, spores, pollen
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……

Risk Assessment Chainsaw Operator (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

	Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
	Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
	Not following correct procedures when starting machine	Injury to operator	3	7	4	84/375=22% **D**	Supervisor monitoring
	High stumps / branches	Injury to operator	3	7	4	84/375=22% **D**	Supervisor monitoring
	Top, bottom and back-cut (falling tree)	No control over tree	4	13	4	208/375=55% **C**	Supervisor monitoring
	Blade kick-back (moving chain)	Injury to operator	4	11	4	176/375=47% **C**	6 month refresher training
	Butt kick-back	Injury to operator	3	7	4	84/375=22% **D**	6 month refresher training
	Noise	Hearing loss	5	10	5	250/375=66% **B**	Interim medical evaluation
	Clearing debris, slash, rough terrain, stumps	Tripping and falling	5	4	5	100/375=27% **D**	Tool-box talk awareness
	Fires	Injury to people	2	6	2	24/375=6% **E**	Tool-box talk awareness
	Wet logs, bark	Injury to people	4	3	5	60/375=16% **E**	Tool-box talk awareness
	Failure to complete daily checklist	Defective equipment	4	4	5	80/375=21% **D**	Supervisor monitoring
	Vibration	Injury to the body	5	4	5	100/375=27% **D**	Daily maintenance, wear gloves
	Sawdust	Injury to the eyes	5	4	5	100/375=27% **D**	Wear visor
	Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
	Snakes	Being bitten	2	7	5	70/375=19% **E**	Tool-box talk awareness
	Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness
	Refuelling	Injury to worker	4	10	4	160/375=43% **C**	Supervisor monitoring
	Hang ups, leaning & forked trees	Injury to worker	2	13	2	52/375=13% **E**	Supervisor monitoring
	Exhaust fumes	Health risk	4	10	4	160/375=43% **C**	Daily maintenance
	Sharpening	Injury to worker	4	6	5	120/375= 32% **D**	Tool-box talk awareness
	Cleaning of equipment	Injury to worker	4	6	5	120/375= 32% **D**	Supervisor monitoring

BRUSH-CUTTER OPERATOR

1. THE TASK

Cutting grass, unwanted growth, shrubs, bushes, small diameter trees and similar materials.

2. THE HAZARDS

Steep & rough terrain, slippery surfaces, weather conditions, dust, snakes, bees, cutting tool, noise, vibration, re-fuelling, exhaust fumes, moving objects, stones, glass, pieces of metal or any other hidden obstacles, stumps & branches, fires, poor maintenance, falling trees, kick out, other brush cutter operators working close by, snakes, insects & lightning.

3. PERSONAL PROTECTIVE EQUIPMENT

Hard hat with hearing protectors and visor, thorn proof trousers, high visibility top, overalls, leather gloves, rainwear, leg protectors and safety boots with steel toecap.

4. EQUIPMENT

Brush cutter, harness, cutting blade, circular saw, deflector guard, screw-driver spark plug spanner (combination spanner), flat file, sharpening template and depth-gage, suitable container for fuel and lubricant, cloth / brush for cleaning saw, trimming line.

5. SAFETY PRECAUTIONS

5.1. General

5.1.1 Keep a fire extinguisher available in the demarcated area.

5.2. Specific

5.2.1. Extra precaution to be considered when working on steep slopes and in strong winds.
5.2.2. Cutting must only start when saw is at maximum speed.
5.2.3. Ensure that bystanders are at least 15 meters away, before operations starts.
5.2.4. Always stop the engine and disconnect the spark plug boot before doing any maintenance, repairs or cleaning the machine.
5.2.5. Bystanders, especially children and animals should not be allowed in the area where a brush cutter is in use as the operator is responsible for avoiding injury to third parties and damage to their property.
5.2.6. Ensure all features are operational (Daily checklist to be completed)
5.2.7. Only approved combinations of cutting tool, deflector, handles and harness may be mounted to the brush cutter. The cutting tool must be suited to the task.
5.2.8. When felling trees maintain 2 tree lengths from next operation.
5.2.9. Cutting edge must stop when you let go of the throttle trigger. Idle settings must be correct.
5.2.10. Check the deflector and rider plate for damage or wear before starting to work.

5.2.11. At regular intervals the cutting tool mounting to be cleaned. Turn off the engine and make sure the cutting tool has stopped before cleaning.
5.2.12. Metal cutting tools to be sharpened regularly as specified.
5.2.13. Never repair damaged or cracked cutting tools by welding, straightening or modifying the shape.
5.2.14. Always shut off the engine before leaving the unit unattended.
5.2.15. Do not smoke while operating or standing near power tool.
5.2.16. Do not run the engine unnecessarily; accelerate the engine only for cutting.
5.2.17. Do not work alone-keep within calling distance of others in case help is needed.
5.2.18. If you get tired, take a break
5.2.19. Always hold the unit firmly with both hands on the handles. Make sure you have a firm and sound footing at all times.
5.2.20. Do not operate using the starting throttle lock, as you do not have control of the engine speed.
5.2.21. Operate only with nylon lines of the correct length and diameter.
5.2.22. Carry the unit suspended from harness or properly balanced by drive tube. If unit is carried while detached from the harness, cover the metal cutting tool with the transport guard to reduce the risk of accidental contact.
5.2.23. Transporting in a vehicle:
- Properly secure unit to prevent turnover, fuel spillage, damage and fit blade cover.
- Transport separate to labour.

5.2.24. When the unit is not in use (work break) put it down so that it does not endanger others.
5.2.25. Always shut off engine before refuelling.
5.2.26. Remove the fuel filler cap on the unit carefully so as to allow any pressure build up in the tank to release slowly.
5.2.27. Fuel unit only in well-ventilated areas. Wipe off any spilled fuel before starting and check for leakage.
5.2.28. Take care not to get fuel on your clothing if change immediately. Ensure that the refuelling area is on bare soil, 1 m² clean. Do not start the machine where it has been refuelled. Shake the mixture thoroughly before refuelling.
5.2.29. Check area ahead for rocks and other objects
5.2.30. Keep hands and feet away from cutting edge.
5.2.31. Ensure bolts and nuts are securely tight.
5.2.32. Check the blade fastening after every refuelling.

5.3. Operator

5.3.1. Bi-Annual operator evaluation and refresher training.
5.3.2. Bomb bandage to be placed in hard hat.
5.3.3. Humans more important than machine.
5.3.4. Do not start cutting until the area has been cleared of people.
5.3.5. Extra precaution to be considered when working on steep slopes.

5.4. Refuelling

5.5. Refuelling area to be cleared 1 m diameter, fire extinguisher within reach.

5.6. Do not refuel while machine is running.

5.7. Do not smoke while refuelling.

5.8. Always fill oil tank first and then petrol mix.

5.9. After refuelling, ensure caps are tightened, wipe away spills.

5.10. Move away from refuelling point before starting engine.

WRITTEN SAFE WORK PROCEDURES

JOB: BRUSH-CUTTER OPERATOR

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat with hearing protection and visor or safety glasses, approved tear proof trousers, high visibility clothing, leather gloves, raincoat, safety boots with steel toecap, leg protection					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Check safety features and complete daily brush-cutter checklist	Defective machine	Blade guard, AV rubbers, handles, throttle control		
3	Safe distances adhered to	Falling stems, flying debris	Surrounding workers aware		
4	Check area for hidden obstacles	Rocks, poles, wires, holes	Mark and avoid		
5	Start machine	Not following procedure	Hold firm on the ground Do not start in refuelling section		
6	Take up cutting position (attach to harness)	High stumps, branches, obstacles	Clear obstacles, debris		
7	Rev machine and start to operate	Tree falling	Clear obstacles		
8	Start cutting, sweeping the brush-cutter from left to right	Incorrect fall	Correct cutting method		
9	Refuel when necessary and tighten caps & blade	Spilling, combustion Flying objects	Switch off, then re-fuel Switch off, tighten blade		
10	Check cutting tool and deflector from time to time	Guide bar kick-back, chain break	Inspect, repair		
11	Clean machine	Machine defect	Housekeeping		
12	Complete chainsaw daily check and ensure defects corrected	Machine defect	Repair defects		
13	Hazardous situations managed	Hang-ups, pinched saw blade, leaning / tangles / dead / storm-damaged trees etc.	Demarcate, alert supervisor, get help		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Job Specification

Title: Brush-cutter Operator **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	1
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	4
p.	Vision (reading)	3
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	2
s.	Vision (depth perception)	4
t.	Eye / hand / foot co-ordination	3
u.	Hearing	4
v.	Talking / speech	4
w.	Smell (detect odours)	3

2. Work Load	H

3. Education		
a.	Literacy	2
b.	Numeracy	1
c.	Brush-cutter operators certificate	4
d.		
Briefly describe the work done by the employee		
	Brush-cutting grass, bush, saplings and similar materials Maintain brush-cutter Wear and maintain protective clothing	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a brush-cutter	4

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	0
e.	Confined spaces	2
f.	Abnormal positions	4
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	4
l.	Radiation	0
m.	Vibration	4
n.	Dust	4
o.	Gasses	0
p.	Fumes	2
q.	Hazardous substances	2

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses / visor	4
c.	Ear plugs / muffs	4
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	0
g.	Leg protectors (C-saw trousers)	4
h.	Breathing apparatus	0
i.	Other (specify) High visibility clothing	4

Hazards:
Falling objects, moving cutters, noise, fumes, fuel, vibration, splinters, sawdust, dust, spores, pollen
……
……

Risk Assessment Brush-cutter Operator (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% D	Anticipate, prepare
Not following correct procedures when starting machine	Injury to operator	3	7	4	84/375=22% D	Supervisor monitoring
High stumps / branches	Injury to operator	3	7	4	84/375=22% D	Supervisor monitoring
Front and back-cut	No control over tree	3	6	4	72/375=19% E	Supervisor monitoring
Blade kick-out (moving objects)	Injury to operator	5	6	5	150/375=40% C	6 month refresher training
Noise	Hearing loss	5	10	5	250/375=66% B	Interim medical evaluation
Clearing debris, slash, rough terrain	Tripping and falling	5	4	5	100/375=27% D	Tool-box talk awareness
Fires	Injury to people	2	6	2	24/375=6% E	Tool-box talk awareness
Wet logs, bark	Injury to people	4	3	5	60/375=16% E	Tool-box talk awareness
Failure to complete daily checklist	Defective equipment	4	4	5	80/375=21% D	Supervisor monitoring
Vibration	Injury to the body	5	4	5	100/375=27% D	Daily maintenance, wear gloves
Sawdust	Injury to the eyes	5	4	5	100/375=27% D	Wear visor
Stinging insects	Being stung	4	3	5	60/375=16% E	Tool-box talk awareness
Snakes	Being bitten	2	7	5	70/375=19% E	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% E	Tool-box talk awareness

Fumes	Health risk	4	10	4	160/375=43% C	Daily maintenance
Refuelling	Injury to worker	4	10	4	160/375=43% C	Supervisor monitoring
Obstacles (Glass, stones & broken metals)	Injury to worker	3	13	3	117/375=31% D	Supervisor monitoring
Falling branches	Injury to worker	3	13	3	117/375=31% D	Supervisor monitoring
Unsafe working distance	Injury to worker	4	13	4	208/375=55% C	Supervisor monitoring

HERBICIDE APPLICATOR

1. THE TASK

To apply herbicide to invading alien plants.

2. THE HAZARDS

Plant clearing debris, slash, chemicals, mixing of chemicals, transport and storing of chemicals, knapsack & pump, cleaning equipment, rough terrain, obstacles in spray area, stumps, holes, weather conditions, stinging insects, snakes, incorrect work procedures and visibility.

3. PERSONAL PROTECTIVE EQUIPMENT

Handling and Mixing of Concentrate

Hard hat, eye protection, elbow length PVC gloves, high visibility clothing, rain suit as per label, waterproof safety boots with steel toecap, respirator / face mask, PVC apron as per label, soap and water.

Application of Diluted Herbicide

Hard hat, eye protection, wrist length PVC gloves, high visibility clothing, rain suit as per label, waterproof safety boots with steel toecap, respirator / face mask as per label and PVC apron as per label.

Hack and Squirt or Inject

Hard hat, eye protection, wrist length PVC gloves, high visibility clothing, rain suit as per label, safety boots with steel toecap, respirator / face mask as per label and leg protection.

4. EQUIPMENT

Knapsack pumps, nozzles, herbicides, poly sprayers.

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Annual medicals and lung function.

5.1.2 Annual operator evaluations.

5.2 Specific

5.2.1 Identify the herbicide to be used and understand the precautions required when handling and applying it. Read the label.

5.2.2 No smoking or eating / drinking allowed while handling herbicides.

5.2.3 All operators to trained, competent and fit to perform the task and use equipment being used.

5.2.4 Do not spray in adverse (particularly windy) weather conditions.

5.2.5 Work must proceed in the direction of the wind (where possible).

5.2.6 Do not work in own or other operator's spray drift.

5.2.7 Ensure that the spray does not contaminate non-target areas (e.g. water bodies, neighbouring crops, dams or livestock).

5.2.8 Depressurise sprayer before carrying out maintenance.

5.2.9 Clean up accidental spillage on work site. Remove contaminated soil, place in plastic bag, dispose of at approved waste disposal site.

5.2.10 Cleaning of sprayer must take place in designated area.

5.2.11 Turn off spray and release pressure before carrying out any work on nozzle.

5.2.12 Do not suck or blow through the nozzle to clear blockages.

5.2.13 Do not take gloves off when removing the nozzle.

5.2.14 Never use other containers such as cool drink bottles as herbicide containers.

5.2.15 Keep food, personal equipment and tobacco away from the area to be sprayed.

5.2.16 During transport, separate herbicides and equipment from people and food.

5.2.17 Store herbicides in original containers.

5.2.18 All herbicide containers must be labelled.

5.2.19 Triple rinse empty container then return to the store controller.

5.2.20 No damaged or rusted containers should be stored.

5.2.21 Never leave herbicides open and unattended.

5.2.22 Herbicides must be mixed in well ventilated areas.

5.2.23 Operators / handlers must wash hands and face before eating, drinking or smoking.

5.2.24 Pregnant women should not be included in the herbicide application team.

5.2.25 Use only plastic containers for mixing herbicides.

5.2.26 Wash contaminated clothing daily.

5.2.27 Spillage on the skin should be immediately washed off with soap and plenty of water.

5.2.28 Check all application equipment for correct functioning with clean water before starting work.

5.2.29 Apply product at registered rate.

5.2.30 Herbicide concentrate should not be left or stored in the sun.

5.2.31 When mixing follow label instructions.

5.2.32 Ensure drift is minimised through correct pressure settings and selection of equipment.

5.2.33 First-aider and box must be present at the operation. MSDS forms for herbicide being applied must be on site.

5.2.34 Do not re-use containers for any other purpose than to hold the same product.

WRITTEN SAFE WORK PROCEDURES

JOB: HERBICIDE APPLICATOR

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, respirators / face mask, high visibility clothing, gloves, raincoat / apron, safety boots / gum boots					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Equipment, mixing, filling and calibration to be checked	Spillage, wastage, defective equipment	Follow procedures		
3	Ensure that nozzles are not blocked	Wastage, defective equipment	Inspect, repair		
4	Proceed to the area to be sprayed	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
5	Commence spraying	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
6	Check nozzles regularly	Wastage, defective equipment	Repair		
7	After spraying, de-pressurise the equipment	Spillage, wastage, injury by contamination	Follow procedures		
8	Clean equipment	Defective equipment	Inspect, repair		
9	Store in appropriate storage area	Spillage, leakage, theft	Suitable secure area		
10	Wash hands and face with soap and clean water	Contamination of skin	Wash		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Job Specification

Title: Herbicide Applicator **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	4
f.	Working bent over	0
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	3
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	0
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	3
p.	Vision (reading)	3
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	3
s.	Vision (depth perception)	2
t.	Eye / hand / foot co-ordination	2
u.	Hearing	2
v.	Talking / speech	2
w.	Smell (detect odours)	2

2. Work Load	M

3. Education		
a.	Literacy	1
b.	Numeracy	1
c.	Herbicide applicators course	4
d.		0
Briefly describe the work done by the employee		
	Mixing herbicides and applying them to invasive alien plants	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a knapsack pump	4

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	0
f.	Abnormal positions	0
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	0
l.	Radiation	0
m.	Vibration	0
n.	Dust	0
o.	Gasses	0
p.	Fumes	3
q.	Hazardous substances	4

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses	4
c.	Ear plugs / muffs	0
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	4
g.	Leg protectors	0
h.	Breathing apparatus	4
i.	Other (specify) Visibility clothing	4

Hazards: Herbicides – contamination, inhalation, absorption

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Risk Assessment Herbicide Applicator

(Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
Not following correct procedures	Injury to worker	5	3	5	75/375=20% **D**	Supervisor monitoring
Clearing debris, slash, rough terrain, stumps	Tripping, falling	4	3	5	60/375=16% **E**	Tool-box talk awareness
Herbicides	Worker contamination, incorrect mixing	4	6	5	120/375=32% **D**	Supervisor monitoring
Herbicides	Spillage	4	5	5	100/375=27% **D**	Supervisor monitoring
Herbicides	Non-target areas treated	4	6	5	120/375=24% **D**	Supervisor monitoring
Handling and mixing concentrate	Spillage	3	5	5	75/375=20% **E**	Supervisor monitoring
Knapsack pumps	Incorrect lifting	4	3	5	60/375=16% **E**	Tool-box talk awareness
Cleaning of spraying equipment	Non-target areas contaminated	4	6	5	120/375=32% **D**	Supervisor monitoring
Storage of herbicides	Containers unmarked, unattended, used incorrectly, poisoning	4	5	5	100/375=27% **D**	Supervisor monitoring
Transport of herbicides	Contamination of equipment and food	3	3	5	45/375=12% **E**	Supervisor monitoring
Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
Snakes	Being bitten	2	7	5	70/375=19% **E**	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness

FIELD WORKER

1. THE TASK

Removal of invasive plants, unwanted stems, lower branches and undergrowth.

2. THE HAZARDS

Incorrect work procedures, operators, steep or uneven terrain, rocky areas, slippery surfaces, clearing residue, surrounding undergrowth, branches, stumps, holes, sharp equipment, sharpening, stinging insects, snakes, animals and weather conditions.

3. PERSONAL PROTECTIVE EQUIPMENT

Hand pulling, hoeing - Hard hat, gloves, high visibility overalls / vest, safety boots with steel toecap.
Cutting, coppice brashing, frilling and ring-barking – Hardhat, eye protection, high visibility overalls / vest, gloves, safety boots with steel toecap, shin guards, foot guards.

4. EQUIPMENT

Hoeing - Hoe with standard length handle (minimum 1.2m).
Coppice-brashing, frilling, ring-barking – Hatchet, axe.
Cutting – Pruning saw, bow-saw, lopper, slasher, cane knife, file with handle and rubber / leather stopper. Sharpening stone or file.

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Safe working distance of two (2) tool-reach lengths between workers.
5.1.2 Safe working distance of two (2) tree lengths from felling operators to be observed and maintained if trees are being cut.
5.1.3 On steep terrain work in staggered formation.
5.1.4 Beware of bounce-back from tools.
5.1.5 Beware of hitting legs and feet with the cutting edge of tools.
5.1.6 Beware of tools snagging on surrounding vegetation.
5.1.7 Spare tools to be available.
5.1.8 Carry and store tools properly.
5.1.9 All tools must be properly maintained by a competent person.
5.1.10 Sharpening method – two pegs in ground, tool in between, sharpen away from the body, against the cutting edge – ***use the file guard!***
5.1.11 Maintain good footing on poor terrain.
5.1.12 Keep a lookout for snakes and stinging insects.
5.1.13 Beware of dead branches, loose crowns and widow makers

5.1.14 Beware of sharp stumps

5.1.15 Watch out for co-workers

5.1.16 Be sober at all times

5.1.17 Always wear PPE

5.1.18 Only perform task if trained

5.1.19 Keep hands well away from cutting target area

5.1.20 Report unsafe conditions to SHE rep

5.2 Hand Pulling

5.2.1 Wear gloves.

5.2.2 Take up a stable position to avoid back strain.

5.2.3 Clear pulled plants away from the work site and press the loose soil back down.

5.3 Hoeing

5.3.1 Hoe down into the soil.

5.3.2 Avoid hoeing too close to the feet.

5.3.3 Clear hoed debris away from the work site.

5.4 Cutting with a pruning saw

5.4.1 Wear gloves.

5.4.2 Hold the plant stem with the free hand while cutting away from the body with the pruning saw.

5.4.3 When cutting thicker stems, make a wedge style front-cut.

5.4.4 Ensure co-workers are clear away over two tree lengths of the plant being cut.

5.4.5 Clear cut debris away from the work site.

5.4.6 Treat the cut-stump surface with herbicide.

5.5 Cutting with a bow-saw

5.5.1 Wear gloves.

5.5.2 Hold the plant stem with the free hand while cutting away from the body with the bow-saw.

5.5.3 When cutting thicker stems, make a wedge style front-cut.

5.5.4 Ensure co-workers are clear away over two tree lengths of the plant being cut.

5.5.5 Clear the cut debris away from the work site.

5.5.6 Treat the cut-stump surface with herbicide.

5.6 Lopping

5.6.1 Wear gloves.

5.6.2 Hold the tool at an angle so that the blades cut into the stem toward each other.

5.6.3 Clear the cut debris away from the work site.

5.6.4 Treat the cut-stump surface with herbicide.

5.7 Slashing

5.7.1 Slash down and clear of the feet.

5.7.2 Strike stems as low as possible to prevent whipping of the top.

5.7.3 Clear the cut debris away from the work site.

5.8 Coppice brashing

5.8.1 Cut stems from inside to outside.

5.8.2 Bend coppice down with one hand (not lower than shoulder) cut with other hand.

5.8.3 Clear the cut debris away from the work site.

5.9 Frilling

5.9.1 Keep a safe working distance of two (2) tool-reach lengths apart.

5.9.2 Chop into the bark through to the wood, all the way around the trunk as low as possible, and lever it open to form a furrow to receive the herbicide.

5.9.3 Beware of falling bark and falling branches of tall trees.

5.10 Ring-barking

5.10.1 Safe working distance of two (2) tool-reach lengths apart.

5.10.2 First, chop into the bark through to the wood, all the way around the trunk as low as possible.

5.10.3 Second, chop another round, 500 mm above the first, as above.

5.10.4 Remove all bark and cambium residue from the exposed wood surface between the two cuts.

5.10.5 Beware of falling bark and falling branches of tall trees.

5.11 Stacking

5.11.1 Watch your footing when carrying logs.

5.11.2 Select a suitable area to stack.

5.11.3 Build stacks against stumps on slopes.

5.11.4 On slopes, always stand above stacks when placing logs.

5.11.5 Ensure that logs are parallel in the stack.

5.11.6 When lifting heavy logs, keep your back straight and use your legs.

5.11.7

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – HAND PULLING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct hand pulling method	Injury, cuts to hands – pulling the plant	Use correct method		
7	On steep terrain work in staggered formation.	Rolling, falling objects	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – HOEING (skoffeling)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap, shin guards, foot guards					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts – sharp blade	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands – sharp blade	Use correct method and file guard		
7	Strike target stems as low as possible, into the ground	Blade bounce-back, stems whipping	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – CUTTING (pruning saw)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts – sharp blade	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands – sharp blade	Use correct method and file guard		
7	Cut target stems as low as possible	Blade pinch	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – CUTTING (bow-saw)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap, shin guards, foot guards					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts – sharp blade	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands – sharp blade	Use correct method and file guard		
7	Cut target stems as low as possible	Blade pinch	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER - LOPPING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts – sharp blade	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands – sharp blade	Use correct method and file guard		
7	Cut target stems as low as possible	Blade pinch	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER - SLASHING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap, shin guards					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts – sharp blade	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping, slipping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands – sharp blade	Use correct method and file guard		
7	Strike target stems as low as possible	Blade bounce-back, stems whipping	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – BRASHING (of coppice growth)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands	Use correct method and file guard		
7	Strike target stems as low as possible	Blade bounce-back, stems whipping	Use correct method		
8	Clear cut material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – FRILLING (of stems / stumps)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands	Use correct method and file guard		
7	Strike the stem firmly, through the bark into the wood	Blade bounce-back, deflection	Use correct method		
8	Apply herbicide to the filled cut	Spillage	Use correct method		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – RING-BARKING (of stems)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure equipment is in good condition	Defective equipment	Repair		
3	Carry the tool correctly	Falling, injury, cuts	Carry blade low, facing down and away		
4	Proceed to work area	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Use the correct sharpening method	Injury, cuts to hands	Use correct method and file guard		
7	Strike the stem firmly, through the bark into the wood	Blade bounce-back, deflection	Use correct method		
8	Clear cut bark material away from the work area	Obstacles	Clear away		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

JOB: FIELD WORKER – STACKING (of logs)

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Ensure suitable area for stacking	Steep slopes	Use flat areas for stacking		
3	Carry logs correctly	Falling, injury, cuts	Keep back straight and use legs.		
4	Proceed to work area	Obstacles, injury by tripping and falling	Observe path to follow, tread surely		
5	Ensure a safe working distance apart – two (2) tool-reach lengths between tools and two (2) tree lengths from any chainsaw operations	Swinging tools, falling trees	Aware of surrounding workers and operations		
6	Place logs on stack	Stack can collapse	Use correct method of stacking		
7	Ensure logs are parallel in stack	Stack can collapse	Use correct method of stacking		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Job Specification

Title: Field Worker **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	2
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	2
p.	Vision (reading)	2
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	0
s.	Vision (depth perception)	0
t.	Eye / hand / foot co-ordination	1
u.	Hearing	2
v.	Talking / speech	2
w.	Smell (detect odours)	2

2. Work Load	M

3. Education		
a.	Literacy	1
b.	Numeracy	1
c.		0
d.		0
Briefly describe the work done by the employee		
	General field work, hand pulling, hoeing, slashing, brashing, frilling, ring-barking	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a knapsack pump	0

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	0
f.	Abnormal positions	0
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	0
l.	Radiation	0
m.	Vibration	0
n.	Dust	4
o.	Gasses	0
p.	Fumes	0
q.	Hazardous substances	4

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses	4
c.	Ear plugs / muffs	2
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	4
g.	Leg protectors	0
h.	Breathing apparatus	4
i.	Other (specify) Visibility clothing	4

Hazards: Sharp tools, rough or uneven ground conditions

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Risk Assessment Field Worker (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
Not following correct procedures	Injury to worker	4	7	5	140/375=37% **D**	Supervisor monitoring
Clearing debris, slash, rough terrain	Tripping, falling	4	3	5	60/375=16% **E**	Tool-box talk awareness
Tools	Injury to individuals, self, bounce-back, deflection injuries	4	7	5	140/375=37% **D**	Tool-box talk awareness
Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
Snakes	Being bitten	2	7	5	70/375=19% **E**	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness
Sharpening	Injury to worker	4	6	5	120/375= 32% **D**	Tool-box talk awareness
Unsafe working distance (operators)	Injury to worker	4	13	4	208/375=55% **C**	Supervisor monitoring

FIRE PROTECTION

1. THE ACTIVITY

Extinguishing of incidental unwanted fires.

2. HAZARDS

Weather conditions, rough terrain, dense scrub, swamps, slope, wind, smoke, fire, visibility at night, transport, tools, equipment, stinging insects, animals and reptiles fleeing from fire, low flying aircraft / water bombers.

3. PERSONAL PROTECTIVE EQUIPMENT

Labourers – Approved head protection, eye protection, high visibility overall, gloves, safety boots with steel toecap.

4. EQUIPMENT

Whistle for leader, knapsack pumps, fire beaters, rakes, hoes, spades, axes, hatchets, bow saws, first aid kit.

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Know and practise the emergency procedure – small fire attack and safe evacuation.
5.1.2 Rapid assessment by team leader when arriving at the fire to assess where point of attack will be.
5.1.3 Attack the fire decisively with water, beaters and soil if it is small.
5.1.4 Plan for safe evacuation if it is too big to control.
5.1.5 Be alert – listen for instructions, warnings and appeals for help – watch for problems.
5.1.6 Remain calm.
5.1.7 Work in a team – never alone. (Buddy system) Individual effort is seldom of great value.
5.1.8 Team to have a radio or cell-phone for communication.
5.1.9 Use the radio only when necessary but listen to all transmissions as it may relate to your safety.
5.1.10 When walking to or back from a fire-line, do it in single file 2 metres apart.
5.1.11 Watch where and how you walk.
5.1.12 Watch out for branches and other obstacles.
5.1.13 Do not stand beneath old dead trees as burning branches may fall off.
5.1.14 Be on the alert for rolling rocks or logs when working or walking on slopes.
5.1.15 Do not step in burned out stump holes. These are usually full of hot coals.
5.1.16 Avoid dense scrub / brush where it is difficult to move and where the fire will advance quickly.
5.1.17 Avoid steep slopes above fires as they are very dangerous:

- Fires advance more rapidly;
- The heat is most intense above the fire and very active for long distances in advance of the fires
- Oxygen above the fire has been burned and the air cannot support life.

5.1.18 Avoid being caught between two fire lines. They draw together very quickly.
5.1.19 Avoid being driven into a corner above or below cliffs.

5.1.20 Swamp areas hamper movement and produce dense smoke.

5.1.21 Be aware of changes in wind direction and strength.

5.1.22 Always be aware of other persons / teams in vicinity.

5.1.23 Listen to your supervisor. Beware of low flying aircraft use whistle to warn others.

5.2 Tools

5.2.1 One person to hand tools down from a vehicle.

5.2.2 Walk in a single file two (2) metres apart when carrying tools.

5.2.3 Never leave tools lying around, especially at night, as someone could trip over or step on them.

5.2.4 Store tools in a safe manner.

5.3 Fire beaters

5.3.1 Never lift fire beater higher than shoulder height as sparks could be flung over.

5.3.2 With flaps overlapping, maintain a regular synchronised beating rhythm.

5.4 Survival

5.4.1 Crouch low on the ground for fresh air due to smoke and lack of oxygen higher up.

5.4.2 Keep to low ground, i.e. bottom of gullies and valleys.

5.4.3 Gauge fire front and break through thin point if cut off.

5.4.4 Stay together as a team always, never leave the team without permission.

5.4.5 Identify and assist weaker team members to safety, let no-one lag behind.

WRITTEN SAFE WORK PROCEDURES

ACTIVITY : FIELD WORKER – Fire Protection

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS JOB: ***A** = Hard hat, eye protection, high visibility clothing, gloves, raincoat, safety boots with steel toecap					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Wear Personal Protective Equipment	Personal injury	***A**		
2	Follow instructions – Tools to be carried with both hands in front of body	Personal injury	Control tools		
3	Rapid assessment by team leader when arriving at the fire to assess where point of attack will be.	Personal injury	Determine whether to attack or retreat		
4	Beater - With flaps overlapping, side-by-side, maintain a regular synchronised beating rhythm	Flying sparks, broken handles	Keep back straight, stand firm and work together		
5	Knapsack – Filled with water, filler cap firmly shut, purposefully spray burning material at the base of the flame	Obstacles, injury by tripping and falling	Observe path to follow, tread surely, stand firm		
6	Cutting tools – slashers or axes - Ensure a safe working distance apart – two (2) tool-reach lengths, to clear a break in the undergrowth	Swinging tool	Surrounding workers aware, keep safe distance		
7	Walk in a single file two (2) metres apart when carrying tools	Falling tree	Be aware of position of team members		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Activity Specification

Title: Field Worker – Fire Protection **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	2
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	2
p.	Vision (reading)	2
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	0
s.	Vision (depth perception)	0
t.	Eye / hand / foot co-ordination	1
u.	Hearing	2
v.	Talking / speech	2
w.	Smell (detect odours)	2

2. Work Load	H

3. Education		
a.	Literacy	1
b.	Numeracy	1
c.		0
d.		0
Briefly describe the work done by the employee		
	General field work, hand pulling, hoeing, slashing, brashing, frilling, ring-barking	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a knapsack pump	2

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	0
f.	Abnormal positions	0
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	0
l.	Radiation	0
m.	Vibration	0
n.	Dust	4
o.	Gasses	0
p.	Fumes	0
q.	Hazardous substances	4

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses	4
c.	Ear plugs / muffs	0
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	0
g.	Leg protectors	0
h.	Breathing apparatus	2
i.	Other (specify) High Visibility clothing	4

Hazards: Fire, smoke, ash, sparks, sharp tools, rough or uneven ground, poor visibility
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Risk Assessment Field Worker – Fire Protection (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
Not following correct procedures	Injury to worker	4	7	5	140/375=37% **D**	Supervisor monitoring
Clearing debris, slash, rough terrain	Tripping, falling	4	3	5	60/375=16% **E**	Tool-box talk awareness
Tools	Injury to individuals, self, bounce-back, deflection injuries	4	7	5	140/375=37% **D**	Tool-box talk awareness
Fire, smoke, sparks, ash	Injury to worker, burns, smoke inhalation	4	7	5	140/375=37% **D**	Tool-box talk awareness
Rough or uneven ground with obstacles	Injury and accident	4	7	5	140/375=37% **D**	Tool-box talk awareness
Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
Snakes	Being bitten	2	7	5	70/375=19% **E**	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness
Water bombers	Injury to worker	2	13	2	52/375=14% E	Supervisor monitoring

CAMPING

1. THE ACTIVITY

Overnight camping of teams in-field.

2. THE HAZARDS

Weather (hot or cold), sunburn and snow, snakes, insects, rodents, malaria, tent ropes, gas bottles, drainage water, fire, improper sanitation, personal hygiene inadequate, poor sleeping facilities.

3. PERSONAL PROTECTIVE EQUIPMENT

Overalls, high visibility clothing, rain suit as per label, safety boots with steel toecap (where applicable) and warm clothes.

4. EQUIPMENT

Enclosed tent, sleeping bag, blanket, emergency blanket, first aid kit, snake bite kit, fire extinguisher. Fire fighting equipment

5. SAFETY PRECAUTIONS

5.3 General

5.3.1 Be sober at all times.
5.3.2 Provide snake awareness courses and include in toolbox talks.
5.3.3 In case of identified animal attack in area, provide armed protection for workers as per workplace risk assessment.
5.3.4 Trained first aiders (level two).

5.4 Specific

5.4.1 Be aware of all emergency exits.
5.4.2 Provide ground sheet for all tents.
5.4.3 Mattresses to be provided.
5.4.4 Sides of tents must be buried.
5.4.5 Mosquito nets provided in malaria areas.
5.4.6 Dip for nets to be provided in malaria areas.
5.4.7 Insect repellent to be issued.
5.4.8 Areas around tents to be cleared of all grass (10m).
5.4.9 Tent ropes to be tied with visible cloth.
5.4.10 Ventilation flaps opened and tent sides opened with joining of roof.
5.4.11 Food to be stored away from sleeping area and properly sealed.
5.4.12 Emergency ration packs to be supplied in high risk areas.
5.4.13 Gas bottles to be stored away from sleeping area.

5.4.14 Gas bottles to be stored away from sunlight and in an upright position.

5.4.15 Warming/cooking/fires are not allowed. Only gas stoves may be used for cooking.

5.4.16 Gas lantern hung in strategic areas.

5.4.17 Provide adequate fire extinguishers and fire fighting equipment

5.4.18 All tools to be correctly stored at all times.

5.4.19 Areas allowing access to fire extinguishers to be kept clear.

5.4.20 Washing facilities to be away from camp and proper drainage leading away from living area.

5.4.21 Portable showers provided and proper drainage leading away from living area.

5.4.22 For toilet facilities refer to universal precaution standards.

5.4.23 Ensure provision for ablution and shower facilities separate for males and females.

5.4.24 Pick up heavy or bulky equipment using the correct procedure.

5.4.25 Note steep slopes and wet areas as identified in workplace risk assessment.

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: CAMPING

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** =Overalls, hard hat, high visibility clothing, rain suit as per label, safety boots with steel toecap (where applicable) and warm clothes.					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury	***A**		
2	Provide ground sheets for all tents and bury sides of tent.	Thermal conditions, snakes, insects, rodents and malaria.	Inspect and repair		
3	Provide mattresses/sleeping bags and blankets	Ergonomics, heat and cold	Inspect, repair		
4	Provide mosquito nets in malaria area as well as dip	Malaria	Inspect, repair		
5	Areas around tents to be cleared of all grass (10m)	Fire, snakes, rodents	Follow procedure		
6	Tent ropes to be tied with visible cloth	Falling	Follow procedure		
7	Gas containers and food to be stored (20m) away from tents in appropriate area	Explosive, fire and gas leaks, Spillage, theft.	Suitable secure area		
8	No warming and cooking fires allowed.	Veld fires	Proper Supervision		
9	Sufficient and easy access to emergency equipment.	Fire, snakes, explosion	Adequate emergency equipment		
10	Sufficient sanitation	Contamination of skin, diseases	Wash		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Activity Specification

Title: Camping **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	0
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	0
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	2
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	2
p.	Vision (reading)	2
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	0
s.	Vision (depth perception)	0
t.	Eye / hand / foot co-ordination	1
u.	Hearing	2
v.	Talking / speech	2
w.	Smell (detect odours)	2

2. Work Load	M

3. Education		
a.	Literacy	1
b.	Numeracy	1
c.		0
d.		0
Briefly describe the work done by the employee		
	Camping out in the field	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Operate a knapsack pump	0

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	0
f.	Abnormal positions	0
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	0
l.	Radiation	0
m.	Vibration	0
n.	Dust	4
o.	Gasses	0
p.	Fumes	0
q.	Hazardous substances	4

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses	4
c.	Ear plugs / muffs	2
d.	Gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	4
g.	Leg protectors	0
h.	Breathing apparatus	4
i.	Other (specify) High Visibility clothing	4

Hazards: Sharp tools, rough or uneven ground conditions

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Risk Assessment Camping (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **D**	Anticipate, prepare
Not following correct procedures	Injury to worker	4	7	5	140/375=37% **D**	Supervisor monitoring
Fires	Being caught if field fire.	4	8	5	160/375=43% **E**	Tool-box talk awareness
Tools	Injury to individuals, self, bounce-back, deflection injuries	4	7	5	140/375=37% **D**	Tool-box talk awareness
Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
Snakes	Being bitten	3	7	5	105/375=28% **E**	Tool-box talk awareness
Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness

HIGH ALTITUDE – STEEP/ELEVATED AREAS WORK

1. THE ACTIVITY

Removal of alien invasive from inaccessible areas such as cliff faces where climbing ropes are used; or from elevated positions where fall arrest techniques are used.

2. THE HAZARDS

Falling objects from above (falling/loose rocks or tools), technicians dropping equipment or tools, working incorrectly with tools or equipment, technicians falling from heights, equipment failure, loose ropes, insecure anchor points, incorrect work procedures, rescue operations, evacuation, physical fatigue, herbicides, improper communication, insufficient training, incorrect use of personal protective equipment (PPE) and transport.

Environmental hazards: Steep slopes, sharp edges, branches, fires, weather (hot or cold), heat exhaustion and dehydration, sunburns and snow, wet, slippery, dusty, rough terrain, slope, high wind, rain, lightning storms, smoke, snakes, insects, baboons and wasps.

3. PERSONAL PROTECTIVE EQUIPMENT

Close fitting one piece overalls with reflector strips, climbing boots with steel toe cap/PVC moulded, 3 point chinstrap climbing helmet, safety goggles, face shield, mask, half hand safety gloves with reinforce leather palm, warm clothes and *Rope Access Equipment*: Ascenders, chest ascenders, back up devices, descenders, belay devices, karabiners, maillons, static ropes, dynamic ropes, rope clamp, full body climbing harness, pulleys, slings, wire sling/strops, rope protectors, connectors, anchor devices and life jacket if required.

4. EQUIPMENT

Lightweight chainsaw, loppers, axe, herbicide applicators and attachment tools and equipment. Two-way radios.

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Be sober at all times.

5.1.2 Provide snake awareness courses and include in toolbox talks.

5.1.3 Always wear appropriate and required PPE.

5.1.4 Trained first aiders (level two).

5.1.5 Team members shall only begin access work on direct authorization from the supervisor/team leader and shall first organize their equipment well back from any edge (danger zone).

5.1.6 SHE Representatives shall not partake in any rope access procedure whatsoever and shall only carry out continues safety inspections to ensure the safety of rope access technicians.

5.1.7 The principle of double protection shall always apply to the manner in which the technician is attached to the working ropes and back-up ropes, whether ascending, descending or climbing.

5.1.8 Before committing weight to the ropes the access technician shall carry out a final inspection of the access system about to be used.

5.1.9 If a rope access technician's safety is being compromised in any way, then that technician shall stop work and attain a secure position until the danger has passed.

5.1.10 Communication between members of the team shall be maintained at all times.

5.1.11 Hand or voice signals are liable to be misunderstood; therefore any special signals shall be agreed on and shall be well rehearsed before work begins.

5.1.12 Allow regular rest breaks. This will be determined by the current work stressors.

5.2 Specific

5.2.1 All team workers must have passed the required basic rope access course. (IAAF Accredited)

5.2.2 Be alert - listen for instructions, warnings and appeals for help - watch for problems.

5.2.3 All equipment must conform to SANS specifications.

5.2.4 Work in pairs - never alone.

5.2.5 Identify danger zone at anchor level that is large enough to prevent team members beyond it to be at risk of falling over.

5.2.6 Anchors must be established beyond this point.

5.2.7 No one to be allowed to enter danger zone without PPE.

5.2.8 Anchor points must be secured and not on loose rocks.

5.2.9 Anchor points must be checked by contractor before being used.

5.2.10 Anchor weight resistance (points) must be capable of not moving when subject to 5 times the load applied to it.

5.2.11 Independent lines must be used at all times.

5.2.12 Two man teams must descend parallel to each other never more than 5m apart.

5.2.13 Each two man team must have a two way radio to communicate with the contractor and other teams.

5.2.14 Do not work in wet weather. The contractor must obtain daily weather data from the weather bureau and work must not happen if rain or strong winds are forecast.

5.2.15 Beware of loose rocks.

5.2.16 Always have sufficient water with you on site

5.2.17 Warning signs must be erected when working above road cuttings or above public roads.

5.2.18 Be on the alert for rolling rocks or logs when working or walking on slopes

5.2.19 Be careful of bees' nests in cavities in rock faces.

5.2.20 Ropes must be rigged to avoid running over sharp edges.

5.2.21 Ropes must be protected when being layed over sharp or abrasive rock ledges.

5.2.22 All team members must be trained in first aid.

5.2.23 The project manager must have an arrangement with local rescue services and must be able to contact them at all times.

5.2.24 Climbers must always warn their partners or other climbers of loose rocks.

5.2.25 Team members must be in good physical condition and must have an annual physical by an occupational health practitioner.

5.2.26 A full body harness must be worn at all times for fall protection and fall arrest.

5.3 Equipment

5.3.1 All equipment harnesses, karabiners, slings, decenders, ascenders must conform to SANS standards.

5.3.2 Climbing ropes must be 11mm in diameter of the static type.

5.3.3 Carry out full inspections and keep records of equipment.

5.3.4 Ensure full traceability of all equipment.

5.3.5 Complete daily personal inspection of rope access equipment and PPE

5.3.6 Ensure equipment is fit for use before commencing rope access work.

5.3.7 Report any suspect or defective equipment to the supervisor/team leader

5.3.8 Ensure rope access equipment is used properly.

5.3.9 Ensure proper cleaning, maintenance and storage of all rope access equipment

5.3.10 Climbing ropes and equipment must be checked every two weeks by the Project manager.

5.3.11 Team members to be in contact via two-way radio.

5.3.12 Only use connectors with screw gate or self-locking methods of closure.

5.3.13 Connectors that are clip to any anchor should be of such a design and size that they are able to rotate freely in them without hindrance and without loosening the anchor.

5.3.14 Descenders must give the user suitable control over the speed of descent.

5.3.15 Descenders and ascenders must not cause undue shock loads to the working line when braking and be such that, if the user loses control, they' will stop, or allow only a slow, automatically controlled descent in the hands-off position.

5.3.16 Descenders must not cause significant abrasion, plucking or stripping of the sheath when suddenly clamped onto the working line.

5.3.17 Descenders and ascenders must be of a type that cannot be accidentally detached from the working line or become detached under any circumstances while carrying a person's weight.

5.3.18 For long descents, preferred descenders should be those with good heat dissipating properties to prevent burning of the hands and melting of the working line, and those that reduce cumulative twisting of the rope to a minimum.

5.3.19 Descenders, ascenders and connectors must be kept clean and when dry, moving parts must be lubricated.

5.3.20 Avoid lubricating areas which will come into contact with webbing fastening straps (e.g. the slide bar of a harness buckle).

5.3.21 Ropes must be resistant to wear from the descent/ascent devices and tight enough to resist the ingress of dirt.

5.4 Tools

5.4.1 Chainsaws are only to be used if there is no other alternative.

5.4.2 Only lightweight chainsaws to be used.

5.4.3 Workers using equipment must be able to position themselves and suspension equipment well away from any moving parts of the chainsaw.

5.4.4 When chainsaws are used, additional guarding must be supplied to ropes.

5.4.5 Tools must be attached to the harness by a sling.

5.4.6 Loose tools/equipment, up to a maximum of 8 kg, may be directly attached and transported by the access technician in a secure and safe fashion.

5.4.7 Equipment exceeding 8 kg shall be transported on a separate rope system.

5.4.8 Tools shall at all times be tethered, and never handled loosely.

5.4.9 When working with power tools etc., ropes shall be protected from possible damage by attaching rope protectors and by storing loose rope in rope bags.

5.5 Rope care

5.5.1 Ropes shall only be transported in rope bags (never loose).

5.5.2 Rope bags must be used to protect ropes during work operations.

5.5.3 Ropes must be checked visually for defects.

5.5.4 Rope protectors must be used to eliminate or minimise abrasion from sharp edges.

5.5.5 Loose rope shall be coiled and hung up above the floor level.

5.5.6 Old ropes and equipment must be destroyed. This must be recorded on the equipment register.

5.5.7 Avoid the spillage of herbicide on ropes.

5.5.8 Wash ropes in clean water (maximum temperature 40 degrees)

5.5.9 Dry naturally in warm room away from direct heat.

5.6 Additional worksite safety precautions

5.6.1 Communication, as discussed with the team members during tool box talks, is maintained at all times.

5.6.2 Each rope access technician is responsible for his own safety when performing access work.

5.6.3 The team leader shall ensure the safety of the team through continually monitoring of weather conditions, fatigue levels and signs of dehydration.

5.6.4 Factors are present that could adversely affect the safety of any team member, access work shall immediately stop until the situation has been resolved to the satisfaction of the team leader.

5.6.5 Rescue of any team member shall be capable of being undertaken at all times.

5.6.6 If the hazard level for rope damage warrants it, the technician shall take the added precaution of backing up with a wire sling.

5.6.7 The basic safety principles to be observed are:

a) always have a second back-up;

b) always have secure anchors;

c) always double-check everything; and

d) plan ahead and know how to correct mistakes.

5.7 EMERGENCY PREPAREDNESS

5.7.1 An on-site emergency plan must be developed and kept on site to be available and be used in the event of an emergency.
It must contain contact details of all relevant emergency response teams.

5.7.2. On-site emergency plan must address the retrieval of rope access technicians as well as the evacuation of the team as a whole.

5.7.3. Ensure that workers are conversant with the on-site emergency plan.

5.7.4 On-site emergency plan must be tested with each site and a record must be kept of this test.

5.7.5 A stand-by vessel shall always be available, for rescue purposes, when work is being carried out.

5.7.6 Communication between members of the team shall be maintained at all times through two way radios.

5.7.7 Hand or voice signals may be used in the event of failure of two way radios. Signals shall be agreed on and shall be well rehearsed before work begins. The methods by which this will be achieved shall be discussed and understood by all team members during an initial briefing.

5.7.8 Various forms of communication are suitable, and the team leader shall decide on the most suitable method depending on the nature of the particular job.

5.7.9 Rescue plan must always be on site and reviewed when required or upon changing of site.

5.7.10 Technicians must be capable of extricating themselves from difficulties.

5.7.11 If they are incapacitated and unable to help themselves, then the rest of the work team shall be able to rescue them.

5.7.12 Enough equipment shall always be immediately available at every worksite to affect a rescue.

5.7.13 Rescue techniques shall be practised at regular intervals (every 3 months).

5.7.14 The practice sessions should also include basic principles of first aid.

5.7.15 The following basic rescue procedures shall be followed:

a) Ascertain whether the casualty needs help or can proceed to safety himself.

b) If a rescue is required, one person shall stay in visual contact with the casualty, while another team member alerts the worksite safety personnel.

c) Speed is of the essence, but not to the detriment of safety. The casualty shall be rescued from the normally inaccessible environment as quickly as possible so that regular paramedic procedures can be applied.

d) Actually rescue operation procedure selected depends on the situation at hand.

5.8 Ergonomics

5.8.1 Suspension equipment selected for the work must be designed to support the technician in a comfortable working position whilst allowing unhindered operation of other devices/tools.

5.8.2 Choose suspension equipment which will reduce the physical demand of the technician.

5.8.3 Tools selected must be lightweight.

5.8.4 Tools must be fitted with power grips.

5.8.5 Minimum handle length must be 10 centimetres.

5.8.6 Select tools that can be used by either hand.

5.8.7 Select tools designed for minimum muscular effort.

5.8.8 Use static ropes for main and safety line.

5.8.9 Allow for regular rest breaks.

5.8.10 Work at a reasonable work pace. Do not rush.

5.8.11 Eliminate reaching

5.8.12 Implement regular medical testing.

Knots you should know

- Any knot tied in a rope reduces the strength of that rope. It is therefore essential that the correct knot be used for a particular application.
- A knot shall always be dressed neatly after tying, as this will ensure even distribution of stress, and maximum knot strength.

The following knots shall be used for rope access work:

Figure of eight rethreaded – Used for tying off a rope around or through an object, for example, tying a cow's tail to a harness.

Figure of eight on a bight – Same knot as above but tied in the middle of a piece of rope.

Figure of nine – An adaptation of the figure of eight. Unties more readily after loading, and is stronger than a figure of eight.

Double figure of eight – Has a double loop, which makes it a good knot to use when tying off a rope, which will be loaded, to an anchor.

Bowline – Also used to tie off the end of a rope. Must be backed up with half a double fisherman's knot.

Clove hitch – A simple knot which can easily be adjusted. Useful in tying multiple anchors (but shall not be used to tie off the last back-up anchor).

Alpine butterfly – Same usages as a clove hitch but inherently safer, although slightly more time- consuming to tie and adjust. Excellent knot for use when tying a loop in a rope which will be loaded, owing to its ability to handle directional loads.

Double fisherman's – Used for joining two ropes of a similar diameter.

Prussik knot – Used as an alternative to a conventional ascending or back-up device, in emergencies.

There are several variations, e.g. the Klemheist, the French Prussik, and the Bachman.

These are very important knots because they can be used if conventional equipment is left at the belay or dropped, damaged, etc.

Tape knot – Used to tie the two ends of a piece of tape together and so make a sling. The knot shall be checked before each usage, as it has been known to work loose when not loaded.

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: High Altitude – Steep Areas

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** = Close fitting one piece overalls with reflector strips, climbing boots with steel toe cap/PVC moulded, 3 point chinstrap climbing helmet, safety goggles, face shield, mask, half hand safety gloves with reinforce leather palm, warm clothes and *Rope Access Equipment.*					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN BY <u>TEAM LEADER</u> *** Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Complete a Workplace Risk Assessment.	Personal injury	Operational Specific Risk Assessment		
2	Examine worksite to identify anchor points, danger zone, length of drops or traverse.	Falling	Use secure rocks for anchor points		
3	Identify equipment required.	Incorrect equipment	Inspect and replace		
5	Identify rescue scenario's and arrange practise drills	Hazardous Environment	Adequate emergency plan		
6	Complete Rope Access Operational plan	Incorrect work method	Operational plan available.		
7	If any risk of falling objects, establish excursion below work area.	Injury to road users	Ensure excursion barrier		
8	Brief Rope Access Technicians on scope of work, hazards, risks and rescue procedures.	Incorrect work methods	Ensure communication		
9	Check validity of inspection forms for the equipment about to be used.	Defective equipment	Valid inspection forms.		
10	Complete weekly inspection to ensure equipment is fit for use.	Defective equipment	Valid inspection forms.		
11	Ensure all team members are in possession of a competency certificate.	Incompetent workers	Trained workers		
12	Ensure correct execution and implementation of rope access methods.	Injury	Ensure correct work methods		
13	Conduct routine safety checks as well safety audits	Personal injury	Legal compliance		
14	Review procedures if necessary.	Hazardous environment	Up to date procedures		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: High Altitude – Steep Areas

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** = Close fitting one piece overalls with reflector strips, climbing boots with steel toe cap/PVC moulded, 3 point chinstrap climbing helmet, safety goggles, face shield, mask, half hand safety gloves with reinforce leather palm, warm clothes and *Rope Access Equipment.*					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN BY <u>SHE REPS</u> *** Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment (IAAF specification)	Personal injury	Operational Specific Risk Assessment		
2	Examine worksite to identify risk, anchor points, length of drops or traverse.	Falling	Use secure rocks for anchor points		
3	Determine layout of ropes and set up anchor points.	Falling	Use secure rocks for anchor points		
5	Carry out safety inspection on equipment.	Defective equipment	Valid inspection forms.		
6	Use two independent ropes (work rope and safety rope) attached to two separate anchors.	Rope can break	Ensure additional rope.		
7	Must be rigged to avoid sharp edges. Use rope protectors.	Damaged ropes	Use rope protectors		
8	Anchor attachments must not be able to clip off.	Falling	Secure anchor points		
9	Before committing weight to ropes, complete a final inspection on rope access system.	Defective rope access system	Safety inspection		
10	Ensure correct execution and implementation of rope access methods.	Personal Injury	Correct work methods		
11	Carry out routine safety inspections on all rope access systems.	Defective rope access system	Safety inspection		
12	*SHE Reps shall not partake in rope access procedure*.	Hazardous environment	Ensure correct work methods and do safety inspections		
13	If a technician's safety is compromised in any way, work shall be stopped.	Personal injury	Legal compliance		

EXPLAINED BY: _____ DATE: _____

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SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: High Altitude – Steep Areas

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** = Close fitting one piece overalls with reflector strips, climbing boots with steel toe cap/PVC moulded, 3 point chinstrap climbing helmet, safety goggles, face shield, mask, half hand safety gloves with reinforce leather palm, warm clothes and *Rope Access Equipment.*					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN BY <u>ROPE ACCESS TECHNICIANS</u>** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Carry out safety inspection on equipment.	Defective equipment	Valid inspection forms.		
2	Put on Personal Protective Equipment (SANS/IAAF specification)	Personal injury	***A**		
3	Assess work site conditions (length of drop, weather, hazards and risk)	Hazardous environment	Risk Assessment		
4	All equipment conform to SANS standards	Defective equipment	Inspect and replace		
5	Ropes must be 11mm in diameter (static)	Sharp rocks	Protect ropes		
6	Ropes used for cows tail must be from dynamic material	Tension	Absorb shock		
7	Anchor points secure.	Loose rocks.	Use secure rocks for anchor points		
8	Use two independent ropes (work rope and safety rope)	Rope can brake	Ensure additional rope.		
9	Attached independent ropes to two separate anchors.	Failure of anchor point	Ensure additional anchor for safety		
10	Main line and Safety line must be different colours.	Confuse the two lines	Use red rope for safety		
11	Secure safety line when approaching edges.	Falling	Secure safely line		
12	Attach back up device to back up rope	Falling	Correct work methods		
13	Attach descender to working rope	Falling	Correct work methods		
14	Attach/secure tools to harness	Injury to workers and bystanders	Secure tools		
15	Lock of descender to prevent slippage	Falling	Correct work methods		
16	Do final safety check before descending	Falling	Safety checks		

17	Protect ropes from sharp edges.	Sharp rocks	Prevent ropes from tearing		
18	Carry additional 2 rope protectors when descending	Sharp rocks or edges	Prevent ropes from tearing		
19	Descend with rope line in a rope carry bag	Tackled and stuck rope	Protect rope		
20	Descend in pairs parallel to one another (5m).	Falling	Do not decent above one another.		
21	Have two-way radios	Misty conditions	Ensure communication		
22	Always have sufficient water	Dehydration	Allow easy access to water.		
23	Look out for animals and insects (beehives)	Hazardous environment	Observation		
24	Erect warning signs	Injury to road users	Notify all of hazards		
25	Receive competency training as well as first aid training.	Injury	Adequate emergency equipment		
26	Be in good physical condition	High altitude	Medical surveillance		
27	Emergency preparedness	Hazardous environment	Adequate emergency equipment.		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: High Altitude – Steep Areas

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** = Close fitting one piece overalls with reflector strips, climbing boots with steel toe cap/PVC moulded, 3 point chinstrap climbing helmet, safety goggles, face shield, mask, half hand safety gloves with reinforce leather palm, warm clothes and *Rope Access Equipment.*					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN BY <u>FALL ARREST TECHNICIANS</u>** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Carry out safety inspection on equipment.	Defective equipment	Valid inspection forms.		
2	Put on Personal Protective Equipment (SANS/IAAF specification)	Personal injury	***A**		
3	Assess work site conditions (length of drop, weather, hazards and risk)	Hazardous environment	Risk Assessment		
4	All equipment conform to SANS standards	Defective equipment	Inspect and replace		
5	Ropes must be 11mm in diameter (static)	Sharp rocks	Protect ropes		
6	Ropes used for cows tail must be from dynamic material	Tension	Absorb shock		
7	Anchor points secure.	Loose rocks.	Use secure rocks for anchor points		
8	Use two independent ropes (work rope and safety rope)	Rope can brake	Ensure additional rope.		
9	Attached independent ropes to two separate anchors.	Failure of anchor point	Ensure additional anchor for safety		
10	Main line and Safety line must be different colours.	Confuse the two lines	Use red rope for safety		
11	Secure safety line when approaching edges.	Falling	Secure safely line		
12	Attach back up device to back up rope	Falling	Correct work methods		
13	Always have sufficient water	Dehydration	Allow easy access to water.		
14	Look out for animals and insects (beehives)	Hazardous environment	Observation		
15	Erect warning signs	Injury to road users	Notify all of hazards		
16	Receive competency training	Injury	Adequate emergency equipment		

17	Be in good physical condition	High altitude	Medical surveillance		
18	Emergency preparedness	Hazardous environment	Adequate emergency equipment.		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Activity Specification

Title: High Altitude – Steep/Elevated Areas **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	4
d.	Operation of small knobs and switches	4
e.	Lifting or carrying heavy objects	4
f.	Working bent over	3
g.	Use of arms	4
h.	Standing	3
i.	Sitting	4
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	0
n.	Use of legs and feet (e.g. operation of pedals)	4
o.	Vision (distant)	4
p.	Vision (reading)	3
q.	Vision (fine work e.g. electronics)	0
r.	Vision (colour)	3
s.	Vision (depth perception)	2
t.	Eye / hand / foot co-ordination	4
u.	Hearing	2
v.	Talking / speech	3
w.	Smell (detect odours)	2

2. Work Load	H

3. Education		
a.	Literacy	3
b.	Numeracy	2
c.	Herbicide applicators course	4
d.		0
Briefly describe the work done by the employee		
	Remove alien vegetation from cliffs and elevated positions by using rope access and fall arrest techniques.	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	Rope Access Techniques	4

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	0
f.	Abnormal positions	4
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	2
l.	Radiation	0
m.	Vibration	2
n.	Dust	2
o.	Gasses	0
p.	Fumes	0
q.	Hazardous substances	2

6. Safety Equipment		
a.	Hard hat, with chin strap	4
b.	Safety glasses	4
c.	Ear plugs / muffs	4
d.	Gloves, half hand	4
e.	Safety boots / shoes	4
f.	Rope Access Equipment	4
g.	Fall Arrest Equipment	4
h.	Breathing apparatus/mask	4
i.	Other (specify) Close fitting one piece overall with reflector strips.	4

Hazards: Hazardous/dangerous work area

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Risk Assessment High Altitude – Steep Areas (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

	Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
	Heights	Falling	5	14	5	350/375=93% **A**	Fall Protection Training
	Falling objects from above	Injury to workers	3	11	3	99/375=26% **D**	Establish exclusion zone. Helmets to be worn Supervisor monitor
	Dropping tools	Injury to workers	4	11	3	132/375=35% **D**	Establish exclusion zone. Helmets to be worn Secure tools to harness Supervisor monitor
	Equipment failure	Falling or trapped	4	11	4	176/375=47% **C**	SANS approved equipment Safety Inspection Correct work procedure Training
	Loose ropes	Falling Injury/death to worker	4	13	4	208/375=56% **C**	SANS approved rope Safety Inspection Correct work procedure Training Supervisor monitor
	Insecure anchor points	Falling Injury/death to worker	4	13	5	260/375=69% **B**	Safety Inspection Correct work procedure Training Supervisor monitor
	Not following correct procedures	Injury/death to worker	4	13	4	208/375=56% **C**	Supervisor monitoring
	Rescue/evacuation operations	Injury/death to worker	4	13	4	208/375=56% **C**	Emergency Preparedness
	Herbicides	Injury or spillage	4	9	4	144/375=37% **D**	Correct work procedure
	Incorrect use of PPE	Injury/death to workers	4	13	5	260/375=69% **B**	Use required PPE Supervisor monitoring
	Transport	Injury/death to workers	4	13	5	260/375=69% **B**	Ensure Roadworthy vehicles. Vehicle Inspections

	Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
	Tools	Injury to individuals, self, bounce-back, deflection injuries	3	7	5	105/375=28% **D**	Tool-box talk awareness
	Physical fatigue	Injury to workers	4	8	5	160/375=43% **C**	Rest intervals Medical fitness test
	Cold / heat / rain / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **E**	Anticipate, prepare Beware of wet equipment
	Wet/slippery/tough terrain	Injury to workers	5	3	5	75/375=20% **E**	Anticipate, prepare, Required PPE
	High wind	Injury/death to worker	3	13	3	117/375=31% **D**	Stop operations
	Branches	Injury to workers	5	10	5	250/375=67% **B**	Correct work methods Use required PPE
	Steep areas/slope	Falling	5	13	5	325/375=87% **A**	Anticipate, prepare PPE
	Sharp edges	Injury/death to worker/damage ropes	5	13	5	325/375=87% **A**	Use rope protectors
	Fires	Being caught if field fire. Injury/death to worker	3	8	3	72/375=19% **E**	Tool-box talk awareness Emergency Preparedness
	Smoke	Smoke inhalation. Injury/death to worker	3	8	3	72/375=19% **E**	Tool-box talk awareness Emergency Preparedness
	Heat stroke	Dehydration. Injury/death to worker	3	8	3	72/375=19% **E**	Sufficient water Rest intervals
	Stinging insects/wasp	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
	Snakes/baboons	Being bitten or attacked.	3	11	5	165/375=44% **C**	Tool-box talk awareness Emergency Preparedness
	Lightning	Being struck, electrocution	2	12	2	48/375=13% **E**	Tool-box talk awareness Stop operations if severe
	Falling rocks	Injury to worker	4	10	5	200/375=53% **C**	Supervisor monitoring Helmets to be worn

FIRST AID

1. THE ACTIVITY

Provide immediate medical care to an ill or injured person until the person recovers or more advanced medical care arrives if required.

The following points are further responsibilities First Aid personnel are expected to undertake:

- record details of first aid given in first aid dressing book;
- maintain a first aid kit appropriate to our standard requirements;
- ensure first aid skills are maintained at an acceptable level, including attending annual refresher courses.

2. THE HAZARDS

Infectious diseases transmitted by blood and body fluids, contaminated medical waste, uncovered cuts and abrasion, not practicing good hygiene, objects, sharp objects, moving machine parts, rough and uneven ground surface, oncoming traffic, thermal conditions, snakes and insects.

3. PERSONAL PROTECTIVE EQUIPMENT

Latex gloves, eye protection, CPR mouth piece, mask, overalls, high visibility clothing, safety boots with steel toecap (where applicable).

4. EQUIPMENT

Fully stocked first aid kit as per WfW standards

5. SAFETY PRECAUTIONS

5.1 General

5.1.1 Be sober at all times.
5.1.2 Provide First Aid training courses and include in toolbox talks.
5.1.3 Assume that all blood and body substances are potentially infectious.
5.1.4 Practice good hygiene.
5.1.5 Use Personal Protective Equipment at all times.
5.1.6 Ensure appropriate handling and disposal of sharps and other contaminated or infectious waste.

5.2 Specific

***Before rendering first aid ALWAYS*:**

5.2.1 Regard all blood and body fluids or substances as a potential source of infection.
5.2.2 Wash hands with soap and water thoroughly before administration of first aid.
5.2.3 Keep your own cuts and abrasions covered with a waterproof dressing.
5.2.4 Use clean disposable gloves for procedures involving patient contact.
5.2.5 For large blood spills/bleeding double gloving is recommended.
5.2.6 Spread paper towels or other absorbent material to absorb body fluids and to wrap potentially infectious waste (e.g. gloves, swabs) for disposal.
5.2.7 Use appropriate CPR mouth piece if required.
5.2.8 Use disposable bag to dispose of medical waste.

***After rendering first aid ALWAYS*:**

5.2.9 If hands face or other body parts become contaminated with blood or body fluids, wash immediately with soap and water.
5.2.10 If eyes become splashed, rinse with running water - ideally 10 minutes is required.
5.2.11 Spills should be attended to as soon as possible.
5.2.12 Protective gloves should be worn.
5.2.13 Absorbent material must used to absorb the bulk of the blood or body substance.
5.2.14 These contaminated materials should then be disposed of in a leak-proof, sealed waste bag.
5.2.15 After this, the area should be cleaned with water and detergent and then disinfected.
5.2.16 After cleaning the contaminated area and equipment, reusable gloves and other protective clothing should be removed and disinfected.

To remove outer pair of gloves:

5.2.17 Grasp outer glove at inner aspect of wrist, pull off away from body whilst turning inside out. Drop glove on absorbent cloth.
5.2.18 Repeat on the other hand and drop second outer glove onto absorbent cloth.
5.2.19 Wrap all waste together without touching inside of bundle.
5.2.20 Place the wrapped parcel into 2 plastic bags (one inside the other)
5.2.21 Wash contaminated surfaces with water and detergent.
5.2.22 Remove inner gloves as per steps 13 and 14 and add to plastic bag.
5.2.23 Secure plastic bag with ties and dispose of as infectious waste in a biological waste bin.
5.2.24 Hands should be washed after items have been disinfected and gloves have been removed.
5.2.25 A ‘spills kit’ should be available where there is a risk of blood or body substance spills. A ‘spills kit’ should contain:

- PVC, disposable latex gloves

- cleaning agents
- disposable absorbent material, and
- a leak-proof bag.

Hygiene

5.2.26 Hand washing is an important measure in preventing the transmission of infection.

5.2.27 Hands should be washed using soap and water before and after contact with an ill or injured person.

5.2.28 Hands must be washed before and after contact with blood, body substances or contaminated items and after removal of protective gloves.

5.2.29 An alcoholic chlorhexidine hand wash (available from pharmacies) or equivalent should be used in emergency or field situations, where hand washing facilities are limited or not available.

5.2.30 Waterproof dressings must be provided to allow first aid personnel to cover cuts or abrasions. This reduces the risk of an injured person's blood or body substances coming into contact with a first aid person's broken skin.

5.2.31 First aid personnel who have skin problems, such as dermatitis, and who are exposed to blood and body substances, should seek medical advice regarding the risk of infection.

5.2.32 First aid personnel and workers should not eat, drink or smoke when working in an area where blood or body substances may be present.

Waste management

5.2.33 Contaminated waste should be placed in a leak-proof bag

5.2.34 The bag should not be overfilled.

5.2.35 Before sealing the plastic bag, expel air carefully (to ensure that the packet is not bulky) and discard in an appropriate manner.

5.2.36 Handled waste with care, to avoid contact with blood and body substances.

5.2.37 Gloves should be worn when handling contaminated waste bags and containers.

5.2.38 Waste disposal should comply with state or local government requirements.

Laundry

5.2.39 Soiled clothing should be identified as such and kept separate from other clothing.

5.2.40 PVC, latex rubber gloves must be worn when handling soiled clothing.

5.2.41 Soiled clothing should be washed as soon as possible.

5.2.42 Normal washing procedures and detergents are adequate for decontamination of soiled clothing

5.2.43 A hot water cycle should be used.

5.2.44 Heavily soiled items should be soaked in a diluted bleach solution, where possible.

First aid equipment

5.2.45 Use disposable sterile items, such as disposable splinter forceps to minimise the risk of cross infection.

5.2.46 Disposable items, used for first aid, should not be reused.

5.2.47 If the equipment is to have contact only with intact skin, for example bandage shears, then it requires cleaning.

5.2.48 If the equipment is contaminated with blood, then it should be cleaned and disinfected.

5.2.49 Equipment that is reusable and which comes into contact with broken skin, penetrates the skin, or has contact with normally sterile body tissue, should be cleaned and sterilised. Examples are reusable splinter forceps where these come into contact with wounds or are used to penetrate skin.

Cleaning is the removal of soil and the reduction of the number of germs from a surface. Thorough cleaning of all items should commence as soon as practical after use. Gloves should be worn during cleaning and care should be taken to avoid eye splashes. Gross soil should be wiped off, and the remaining soil cleaned off with warm water and detergent. After cleaning, items should be rinsed in clean water and stored dry.

Disinfection is the inactivation of bacteria, viruses and fungi, but not necessarily bacterial spores. Disinfection can be achieved by boiling. All items should be cleaned prior to disinfection.

Boiling to disinfect an item by boiling, the item should be immersed in visibly boiling water for a minimum of five minutes after the water returns to the boil. Instruments should be removed without contaminating them and placed on a clean, disinfected surface to cool down.

Storage of first aid equipment All items must be stored in a first aid box. Items should not be stored in disinfectant solutions, as this may encourage bacterial growth.

PPE

5.2.50 PPE should be provided to protect first aid personnel and ill or injured persons from the risk of exposure to biological hazards. Where PPE is used, it should be readily available, clean and properly maintained.

5.2.51 First aid personnel should be trained in the correct use of the equipment provided.

PPE could include:

Protective gloves which should be worn whenever there is a potential for contact with blood or body substances. Disposable PVC or latex gloves should not be reused.

Protective clothing such as disposable non-porous overalls or plastic aprons which should be worn in situations where there is a risk that clothing of first aid personnel may become contaminated with blood or body substances.

Eye protection such as goggles and safety glasses which should be worn where there is a risk of blood or body substance splashes entering the eyes, for example, from arterial bleeding injuries.

Safety footwear which should be worn where there is a risk of the feet being punctured by sharp or falling objects.

CPR mouth piece because expired air resuscitation may involve exposure to blood and body substances. Use of a mouth piece for mouth to mouth reduces this risk. A CPR mouth piece should only be used if first aid personnel have received instruction in its use.

What to do if a person suffers a skin penetrating injury or other exposure to blood or body substances

Management of an SPI

The following action should be taken if a person suffers an SPI:

- encourage the wound to bleed by gently squeezing
- wash the area with cold running water and soap if available, and
- apply an antiseptic if available and then cover the wound with a dressing or band aid.

Management of other exposures to blood or body substances

The following action should be taken if a person has other exposures to blood or body substances:

- wash away the blood or body substance with soap and water.
- if the eyes are contaminated, rinse eyes while open with tap water (eye wash bottle).
- if blood gets into the mouth, spit it out and then repeatedly rinse with water.

Follow up action – *A person who has been exposed to blood or body substances should be referred as soon as possible for medical assessment. The doctor can then assess the degree of exposure, and arrange blood tests and immunisation where appropriate. Access to professional counselling should also be available, where appropriate.*

Confidentiality – Records relating to a person's blood or body substance exposure and subsequent treatment should be kept confidential.

WRITTEN SAFE WORK PROCEDURES

ACTIVITY: FIRST AID.

PERSONAL PROTECTIVE EQUIPMENT NEEDED FOR THIS TASK: ***A** =Overalls, hard hat, high visibility vest, latex gloves, mask, protective eyewear, safety boots with steel toecap (where applicable).					
JOB STEPS **HEALTH AND SAFETY PRECAUTIONS TO BE TAKEN** * Indicates ***CRITICAL*** job steps		**POTENTIAL HAZARD**	**SAFETY STEPS**	**PLANNED JOB OBSERVATION**	
				YES	**NO**
1	Put on Personal Protective Equipment	Personal injury or infection	***A**		
2	Before entering situation, assess risk and hazards (dangers)	Blood, body fluids, falling objects, sharp objects, moving machine parts, rough and uneven ground surface, oncoming traffic, thermal conditions, snakes, insects, rodents and malaria.	Inspect and suitable secure area		
3	Make the area safe. Failure to do this can lead to you being injured	Personal injury or infection	Inspect and suitable secure area		
4	Ensure sufficient and easy access to emergency equipment	Insufficient medical care	First aid box, Contingency plan		
5	Assess all casualties and first attend to unconscious casualties	Insufficient medical care	Follow procedure		
6	Perform a Primary Survey on casualties	Open airway. Check breathing. Start CPR	Follow procedure		
7	Perform a Secondary Survey on casualties	Check for non life threatening conditions	Follow procedure		
8	Rest and reassure the casualty	Uneasiness of patient	Follow procedure		
9	Monitor and treat shock	Insufficient medical care	Adequate emergency equipment		
10	Send for help. Do not delay.	Possible death	Planned and effective contingency plan		

EXPLAINED BY: _____ DATE: _____

I, _____ confirm and agree that this written safe work practice and procedure was fully explained and shown to me, and that I understand it and the potential hazards, and agree to perform the job as described herein.

SIGNED: _____ DATE: _____

Activity Specification

Title: First Aid **Department:** Contractor Team

Rate sections 1, 3, 4, 5 & 6 on a scale 0 - 4 depending on Importance
Importance: **0** = none, **1** = low, **2** = average, **3** = high, **4** = very high

Rate section 2 on a scale S - V depending on Work Load
Work load: (section 2) **S** = sedentary, **L** = light, **M** = medium, **H** = heavy, **V** = very heavy

1. Physical Requirements		
a.	Climbing stairs or hills	4
b.	Climbing ladders	0
c.	Handling delicate equipment	3
d.	Operation of small knobs and switches	0
e.	Lifting or carrying heavy objects	2
f.	Working bent over	4
g.	Use of arms	4
h.	Standing	4
i.	Sitting	4
j.	Bending	4
k.	Waling on uneven ground	4
l.	Walking on flat, even ground	4
m.	Running	4
n.	Use of legs and feet (e.g. operation of pedals)	0
o.	Vision (distant)	2
p.	Vision (reading)	4
q.	Vision (fine work e.g. electronics)	4
r.	Vision (colour)	3
s.	Vision (depth perception)	3
t.	Eye / hand / foot co-ordination	4
u.	Hearing	3
v.	Talking / speech	4
w.	Smell (detect odours)	2

2. Work Load	M

3. Education		
a.	Literacy	3
b.	Numeracy	3
c.		0
d.		0
Briefly describe the work done by the employee		
	Provide first aid treatment to ill or injured workers.	

4. Special Skills		
a.	Drive a light vehicle	0
b.	Drive a medium vehicle	0
c.	Drive an heavy vehicle	0
d.	Drive a special vehicle	0
e.	First aid training	4

5. Working Environment		
a.	Shift work	0
b.	Outdoors	4
c.	Indoors	0
d.	Heights	4
e.	Confined spaces	4
f.	Abnormal positions	4
g.	High temperatures	4
h.	Low temperatures	4
i.	Wet	4
j.	High humidity	4
k.	Noise	2
l.	Radiation	0
m.	Vibration	0
n.	Dust	4
o.	Gasses	0
p.	Fumes	0
q.	Hazardous substances	4

6. Safety Equipment		
a.	Hard hat	4
b.	Safety glasses	4
c.	Mask	4
d.	Latex gloves	4
e.	Safety boots / shoes	4
f.	Gum boots	4
g.	Fully stocked first aid box	4
h.	CPR mouth piece	4
i.	Other (specify) High Visibility clothing	4

Hazards: Sharp tools, rough or uneven ground conditions

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Risk Assessment First Aid (Action List: A=Immediate; B=Within one week; C=Within one month; D=Within six months; E=monitor the situation)

Hazard	Risk	Probability	Severity	Frequency	Prioritisation	Action
Cold / heat / rain / wind / dust	Sickness, heat exhaustion	5	3	5	75/375=20% **E**	Anticipate, prepare
Infectious disease transmitted by blood and/or body fluids	Infection, sickness	5	11	5	275/375=73% **B**	Put on PPE, cover wounds, good hygiene.
Contaminated medical waste	Infection, sickness	5	11	5	275/375=73% **B**	Follow procedure
Not following correct procedures	Injury to worker, infection, sickness	4	11	5	220/375=58% **C**	Supervisor monitoring
Uncovered cuts/abrasion	Infection, sickness	4	11	5	220/375=58% **C**	Follow Procedure, cover wounds with waterproof dressing.
Not practising good hygiene	Infection, sickness	4	11	5	220/375=58% **C**	Follow procedure
Sharp objects	Injury to worker	5	11	5	275/375=73% **B**	Risk Assessment, anticipate, prepare
Moving machine parts	Injury to worker	5	9	5	225/375=60% **C**	Risk Assessment, anticipate, prepare
Rough and uneven ground surface	Injury to worker	5	6	5	150/375=40% **D**	Risk Assessment, anticipate, prepare
Stinging insects	Being stung	4	3	5	60/375=16% **E**	Tool-box talk awareness
Snakes	Being bitten	3	7	5	105/375=28% **D**	Tool-box talk awareness
Oncoming traffic	Being struck	2	12	2	48/375=13% **E**	Risk Assessment, anticipate, prepare

Definitions

- Hazard

  Is a condition, activity, object or substance that has the ability to cause harm.

- Risk

  Is the chance or likelihood of a hazard causing harm or damage.

- Frequency (rated from 1 to 5)

  A measure of the rate of occurrences of an event expressed as the number of occurrences at a given time.

- Probability (rated from 1 to 5)

  The likelihood of a specific outcome/consequence

- Severity (rated from 1 to 15)

  Degree or harm of the outcome/consequence

Determining severity of harm

- Nature of the harm, ranging from slightly too extremely harmful.
  - Slightly harmful (1 to 5)
    - Superficial injuries, minor cuts and bruises, eye irritation from dust.
    - Nuisance and irritations (e.g. headaches), ill health leading to temporary discomfort.
  - Harmful (6 to 10)
    - Laceration, burns, concussion, serious sprains, minor fractures.
    - Deafness, dermatitis, asthma, work related upper limb disorder, ill health leading to permanent minor disablement.
  - Extremely Harmful (11 to 15)
    - Amputation, major fractures, poisoning, multiple injuries, fatal injuries.
    - Occupational cancer, other severely life shortening diseases, acute fatal diseases.

Determining your prioritisation rating

Percentage	Prioritization indicator	Action
0% - 20%	E	Monitor the situation
21% - 40%	D	Within six months
41% - 60%	C	Within one month
61% - 80%	B	Within one week
81% - 100%	A	Immediate

DRAWN UP BY:

WORKING FOR WATER SAFETY, HEALTH AND ENVIRONMENTAL UNIT

FEBRUARY 2007

UPDATED: SEPTEMBER 2009

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APPROVED BY: WORKING FOR WATER DIRECTOR

OCTOBER 2009