





Unit:	Electricity Unit – HV Lines
Document type:	Risk Assessment
Title:	Project Baseline Risk Assessment
Reference number:	PBRA01/12/2023
Version:	2.0
Effective date:	01 December 2023

Project name

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Compiled by:	Approved by:
Mrs Akona Shezi Senior Safety Officer: SHERQ and Training  Date: 2023-12-01	Mr Thokozani Kunene Senior Manager: HV Lines  Date: 2023-12-01

Project Baseline Risk Assessment

Introduction

The Electricity Unit has a legal and moral obligation to ensure the safety of its employees and any other persons who may be affected by its acts or omissions at the workplace. Invariably, workplace safety also has financial implications for the Unit, as additional avoidable costs negatively impact on the financial resources of the Unit. This risk assessment is for Bush and Trees Maintenance, Clearing and Eradication of Overgrown Vegetation on Access Routes and in Close Proximity to HV Lines and Structures during a thirty-six months period.

work may include:

- (a) Bush Clearing
- (b) Tree cutting and felling
- (c) Removal and disposal of waste

Section 5(1) (a) of the Construction Regulations requires a baseline risk assessment for an intended construction work project. In so doing, the Unit and contractor is mandated with identifying hazards attached to construction work, and to implement measures to mitigate the risks, as far as is reasonably practicable.

In order to determine the extent of reasonableness, the following needs to be considered:

- severity of the outcome,
- likelihood of the occurrence of the identified risk,
- rate of exposure to the risk,
- potential seriousness of the harm to be guarded against,

The risk evaluation method requires risks to be ranked in terms of severity of outcome, frequency of occurrence, and probability of exposure to the risk.

The Electricity Unit is responsible for the distribution of electricity, including the construction of electrical infrastructure and/or maintenance of electrical equipment within its vast area of supply. Infrastructure to supply electricity is developed in accordance with best practices within the industry in order to ensure a safe and reliable supply to consumers across a broad voltage spectrum.

In order to achieve the above responsibility, employees and contractors are required to perform construction work. There is a probability that persons undertaking construction work i.e employees, contractors or agents of eThekweni Electricity might experience injuries or be exposed to various risks associated with overgrown vegetation on the access routes and near HV Lines and Structures.

This risk assessment aims to quantify and rank the hazards and risks which could be experienced when performing construction work, so that management is able to exercise their responsibility and duties in terms of Section 8 of the Occupational Health and Safety Act (85 of 1993).

Glossary of Terms

Severity (S):	extent of potential harm/loss/damage
Exposure (E):	percentage of a workforce exposed to a hazard/risk and/or duration of exposure
Frequency (F):	how often and/or how long persons may be affected within a defined time period
Hazard:	source of or exposure to danger
Raw risk:	risk without taking any mitigation or control into account, i.e. $S \times F \times E$
Residual risk:	risk that remains after considering the effectiveness of controls
Risk:	probability that an injury and/or damage will occur

Risk Assessment: process of evaluating risks arising from hazards, taking into account adequacy of existing controls, and deciding whether or not the risk/s is acceptable

Objective

To provide a uniform methodology whereby risks are evaluated and ranked and record proof of the analysis of the risks associated with specific tasks.

Scope

The following should be considered:

- workplace
- all operational activities
- tasks being performed
- legal requirements

1. Severity, i.e. extent of potential harm/loss/damage	Value
Catastrophic	5
Serious	3
Negligible	1

2. Frequency, i.e. how often and/or how long persons may be affected within a defined time period	Value
Frequent	5
Occasional	3
Rarely	1

3. Exposure, i.e. percentage of a workforce exposed to a hazard/risk and/or duration of exposure	Value
Extensive	5
Significant	3
Negligible	1

4. Risk Classification	Values
Low risk	0 – 24
Moderate risk	25 - 74
High risk	75 - 125

Client Baseline Risk Assessment: Vegetation Management											
Activity: Tree/Vegetation overgrowth risks											
Created on: 01.12.2023 Compiled by: SHERQ Division Revision: Number 2											
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Tree species Structurally unsound or diseased trees Poor branch structure Fungi Growth Root damage Split trunk Unstable land conditions Climbable limbs Direct tree contact Location of tree Inside or outside the Growth Limit Zone with respect to the lines Wet areas with shallow soil	Windblown debris Detached or hanging branches Dead /Dying branches Leaning or falling over trees Complete tree collapse Fire Electrocution	S	3	3	3	27	1) Pre-Task risk assessment to be undertaken before work commences 2) Specifically Trained Persons who comply with Code of Practice – The training and duties of Handymen (Line clearance), may carry out these duties 3) Tree cutting/vegetation maintenance carried out on routine cycle	1) Employees to be issued with appropriate PPE: Overalls, hi-visibility reflective vests, chainsaw pants, Safety shoes, hard hat, protective eyewear, leather gloves, safety belt and insulating rubber gloves	0.6	10.8	1) Contractor employees to adhere to Clearance distance stipulated in the tender document
Poisonous plants and trees Tree sap Foreign bodies Dust and debris entering the eyes	Allergic reactions Eye Irritations Skin irritations Eye injury	S H	3	1	3	9	1) Pre-Task risk assessment to be undertaken before work commences	1) Employees to be issued with appropriate PPE: Overalls, hi-visibility reflective vests, chainsaw pants, Safety shoes, hard hat, protective eyewear, leather gloves, safety belt and insulating rubber gloves	0.6	3.6	1) Employees are advised to immediately wash eyes with water if tree sap enters the eye

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Falling branches Flying objects	Lines breakage Overhanging lines Sway or sag of lines Head injuries Fire	S H	3	5	3	45	1	1) Pre-Task risk assessment to be undertaken before work commences	1) Employees to be issued with appropriate PPE: Overalls, hi-visibility reflective vests, chainsaw pants, Safety shoes, hard hat, protective eyewear, leather gloves, safety belt and insulating rubber gloves	0.5	18	1) Employees must be cognizant of all overhead work being undertaken and the risk that items may fall to the ground
------------------------------------	--	--------	---	---	---	----	---	--	---	-----	----	---

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Client Baseline Risk Assessment: Vegetation Management

Created on: 01.12.2023
 Compiled by: SHERQ Division
 Revision: Number 2

Activity: Use of chemicals (Tree stump poisoning)

Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Bitumen Paint herbicide application Inhalation Ingestion Skin contact Eye contact High temperatures	Respiratory tract irritations Narcosis Dermatitis Skin cancer Eye irritations Fire Explosion	S H	3	3	3	27	1) Employees are required to undergo periodic medicals and be deemed medically fit before being allowed to work with brush cutters and chainsaws – lung function tests are conducted as part of these medicals 2) Pre-Task risk assessment to be undertaken before work commences 3) Employees to be trained in the safe use and handling of all chemicals that they may be exposed to 4) MSDS for all chemicals to be available for employees to familiarize themselves with	1) Employees to be issued with the appropriate PPE e.g. respirators, solvent resistant gloves, boots, aprons, face shield	0.6	10.8	1) Wear face shield to protect against splashes to face and eyes 2) Wear solvent resistant gloves, boots and aprons 3) Must be stored or used away from all heat sources 4) Always wash hands before breaks and immediately after handling the product 5) Chemicals must only be decanted in approved containers which must be clearly labeled to indicate what chemical is inside the container 6) After use the chemicals must be either poured back into the original container or disposed of as per manufacturers recommendations

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Contaminated work site	HCS, methane, hazardous waste, etc.	H	3	1	1	3		<p>1) Medical surveillance conducted by Occupational Health Practitioner</p> <p>2) Material Safety Data Sheets (MSDS) of possible HCS that can be found on site</p> <p>3) Pre-Task risk assessments to be undertaken before work commences</p> <p>4) Site survey to done on site for possible contaminated land</p>	<p>1) Employees to be issued with suitable PPE (eye protection, gloves, masks, respirators, etc)</p>	0.6	1.2	
------------------------	-------------------------------------	---	---	---	---	---	--	---	--	-----	-----	--

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Client Baseline Risk Assessment: Vegetation Management										Created on: 01.12.2023	
Activity: Operating power equipment (brush cutters, aerial pruners, chain saws)										Complied by: SHERQ Division	
										Revision: Number 2	
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Incorrect operation of machinery	Muscular skeletal injuries Slips, trips and falls Entanglement Entrapment Crushing and pinching Cutting and stabbing Abrasions Splinters	S	3	1	3	9	1) Contractor to ensure all necessary guards and safety devices are in place to protect operators 2) Pre-Task risk assessment to be undertaken before work commences 3) Only employees that have been trained and deemed competent on the safe use and operation of aerial pruners, brush cutters or chainsaws may operate this equipment 4) All portable equipment to be regularly maintained 5) Employees are to be trained on safe use of equipment/machinery before operating	1) Employees to be issued with the appropriate PPE (Overalls, chain saw pants and jacket, leather gloves, safety boots, spats, shin and knee guards, etc.).	0.8	1.8	1) Ergonomic Regulations (2019) to be adhered to
Unexpected movement Kickback Pull-in Push-back	Serious body injuries	S	3	3	3	27	1) Equipment to be fitted with guards, top handle and effective brake mechanisms 2) Only employees that have been trained and deemed competent on the safe use and operation of aerial pruners, brush cutters or chainsaws may operate any of this equipment	1) Employees to be issued with the appropriate PPE (Overalls, chain saw pants and jacket, Leather gloves, safety boots, spats, shin and knee guards, etc.)	0.8	5.4	

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Exhaust fumes	Inhalation of carbon dioxide and carbon monoxide leading to respiratory problems	H E	3 3 3	3 3 3	27			1) Employees are required to undergo periodic medicals and be deemed medically fit before being allowed to work with brush cutters and chainsaws – lung function tests are conducted as part of these medicals 1) Employees to be trained on appropriate lifting techniques	1) Employees to be issued with the appropriate PPE for the task (Overalls, gloves, respirators, eye protection, safety boots, etc.)	0.6	1.2	
Ergonomic hazards Lifting/carrying of tree branches, Loading/offloading of equipment, etc.	Musculo-skeletal injuries Fatigue Strains and sprains Hand injuries Lacerations Broken bones	S	3 3 1 3	3 1 3	9		1) Equipment is fitted with handles and heat shields 1) Contractor to use equipment is fitted with rubber engine mounts and rubber handles to limit the transmission of vibration to the user	1) Employees to be trained on appropriate lifting techniques 1) Employees to be issued with the appropriate PPE for the task (Overalls, gloves, respirators, eye protection, safety boots, spats, etc.)	1) Ergonomic pre-task risk assessment to be completed before commencement of work - Ergonomic Regulations (2019) to be adhered to 2) Use lifting equipment where possible 3) Improve workplace layout to increase efficiency 4) Reduce the amount of twisting and stooping 5) Alternate personnel performing repetitive handling 6) Approximate weight of equipment is within the limits of manual handling 1) Alternate personnel performing repetitive handling. 2) Operator to follow safe work procedures	0.8	1.8	
Vibration (Hand-Arm Vibration)	Vibration-induced disease (White finger syndrome)	S H	3 3	1 1	3		1) Contractor to use equipment is fitted with rubber engine mounts and rubber handles to limit the transmission of vibration to the user	1) Employees to be required to undergo periodic medicals and be deemed medically fit before being allowed to work with brush cutters and chainsaws 2) Employees to be trained on safe use of equipment/machinery before operating	1) Employees to be issued with the relevant PPE when they are handling or working	0.8	0.6	
Noise	Noise induced hearing loss	S H	3 3	3 1	9		1) Contractor to ensure the equipment used is fitted with exhaust mufflers to limit the noise generated by the machinery	1) Pre-Task risk assessments to be undertaken before work commences 2) Employees are required to undergo periodic medicals and be deemed medically fit before being allowed to work with noise generating equipment 3) Baseline and periodic audiometric examinations are conducted by the	1) Employees to be issued with the appropriate PPE for the task (Overalls, gloves, respirators, eye protection, safety boots, spats, leggings, hearing protection.)	0.8	1.8	1) Noise Induced Hearing Loss regulations to be adhered to 2) Alternate personnel performing repetitive handling 3) Operator to follow safe work procedures 4) Keep bystanders away from work area

Working at height	Fall from height Unconsciousness Fatality Fractures Lacerations Soft tissue injuries	5	3	3	3	27	1) Use of MEWP e.g. Bucket truck, cherry picker	Occupational Health practitioners 1) Suitably trained persons who comply with Code of Practice – The training and duties of Handymen (line clearance) may carry out these duties 2) Employees to be trained on the appropriate Height Safety courses 3) Training to include emergency procedures for rescuing and administering first aid for persons falling from height 4) All staff working at height to undergo medicals 5) A Competent Person/Person in Charge is to ensure that a Pre-Task Risk Assessment is undertaken and inform the team of all hazards before any work is undertaken	1) Employees to be issued with the appropriate PPE for the task	0.8	5.4	1) Employees work under constant personal supervision when climbing up and/or descending structures 2) Employees must be cognizant of all work being undertaken at height and the risk that items may fall to the ground
-------------------	---	---	---	---	---	----	---	--	---	-----	-----	---

Client Baseline Risk Assessment: Vegetation Management									
Task: Working within close proximity to Electrical infrastructure, lives mains and apparatus									
Created on: 01.12.2023									
Compiled by: SHERQ Division									
Revision: Number 2									
Hazards	Associated Risk	Effect	Pure Risk before rating	Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
Contact with live electrical mains and/or apparatus Breaking close proximity to live HV mains and/or apparatus	Burns Electric shock Electrocution			1) Electrical protection relays and OHM circuit breakers and isolators which trip out and isolate part of the circuit affected by fallen branch and/or tree, or any other fault conditions on which may occur on the OHM	1) Suitably trained persons who comply with Code of Practice – The training and duties of Handymen (line clearance) may carry out these duties 2) Training to include safety measures to prevent contact with or breaking close proximity to live mains and/or apparatus 3) Training to also include emergency procedures rescuing, removal and administering First Aid to persons who come in contact with live mains and/or apparatus. 4) All OHM circuits are inspected on planned cycle by Electrical Inspectors 5) Any vegetation clearing required addressed via Work Orders for the appropriate Maintenance branch	1) Employees to be issued with appropriate PPE (Overalls, safety boots, hard hat, protective eyewear, leather gloves, safety belt and insulated rubber gauntlets)	0.8	1.8	1) All mains and/or apparatus to be treated as alive until proven to be isolated, tested and earthed (where necessary) 2) Avoid contact with any wire or metal installations as they may be part of illegal circuits e.g. wire fencing, armco barrier, etc. 3) In the case of HV/MV OHM, adherence to the requirements as set out in the Safety Rules and System Operations Regulations 4) Clearing of vegetation must be done under constant supervision of the Competent Person/Person-in-Charge 5) Ensure that vegetation close to and in contact with mains and/or apparatus is cleared and trimmed in accordance with tables in OHM Code of Practice (Sect. 11.1 – Vegetation control and management) 6) Staff to be aware of surroundings and look out for any illegal wiring running through trees and bushes. 7) Persons performing clearing of vegetation must not cut any part of the vegetation vertically above any OHM whilst it is alive. 8) In the case of ABC where bare terminations are present, clearance dimensions for bare MV OHM will apply. 9) Except in case of emergencies permission must be obtained from owner on private properties (Safety Rules – Sect. 22)

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Risk Assessment: Vegetation management									
Created on: 01.12.2023									
Compiled by: SHERQ Division									
Revision: Number 2									
Hazards	Associated Risk	Effect	Pure Risk before rating	Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
Uneven ground/ rough terrain and slippery underfoot conditions	Slip, trips and falls				1) Pre-Task Risk Assessment is undertaken and inform the team of all hazards before any work is undertaken	1) Employees are issued with steel toe capped safety footwear with ankle support 2) Person-in-Charge to scout the work site/access routes for presence of underfoot hazards using scouting sticks 3) Underfoot hazards hidden by overgrown vegetation such as holes to be identified and marked with danger tape 4) Fall protection equipment (Lifelines and FAS) to be used when working on steep	0.6	10.8	1) Employees to exercise caution when walking in unpaved areas, uneven terrain and bushes 2) Employees to be cautious and be cognizant of underfoot conditions 3) PPE must be worn at all times when walking and working in unpaved areas, uneven terrain and bushes 4) All laces must be fastened securely with aglets tucked into safety shoes
Driving on steep gradients	Loss of control of vehicle Overturning of vehicle	S 3 3 3	27	1) 4x4 all-terrain construction vehicles utilized 2) Seat belts worn by all drivers and passengers	1) Pre-Task risk assessments are undertaken before work commences		0.8	0.6	1) All drivers to attend 4x4 (off-road) driving course

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Traffic (motor vehicles/pedestrians)	Being run over Broken bones Unconsciousness Death Branches/trees falling on pedestrians and/or moving vehicles	S H	3 3	3 3	27	1) Any work undertaken where vehicular traffic is affected, shall be carried out in accordance with the requirements of the OHM Code of Practice – Sect. 13.4	1) Employees to be issued with appropriate PPE (Overalls, Hi-visibility reflective vests, safety boots, hard hat, protective eyewear, etc.)	0.6	10.8	1) All staff to wear hi-visibility reflective vests 2) Work area to be adequately barricaded, any moving parts of vehicles, falling branches, debris, etc. must be within the barricaded area 3) A safe pathway/passage must be made available for pedestrians
--------------------------------------	--	--------	--------	--------	----	---	---	-----	------	--

Client Baseline Risk Assessment: Vegetation Management												
Task: Working near energized sources or live circuits												
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed	
			S	F	E							R
Electromagnetic induction	Burns Electric shock	S	5	3	3	45	1) Employees are issued with the appropriately rated portable earthing equipment 2) A written procedure is documented in the Operation Regulations - 6.1.3.2 3) Equipment is inspected and maintained as per the planned maintenance schedule	1) Employees are trained on how to apply the portable earthing equipment 2) A written procedure is documented in the Operation Regulations - 6.1.3.2 3) Equipment is inspected and maintained as per the planned maintenance schedule	1) Employees are issued with the appropriate PPE for the task	0.8	9	1) Work is undertaken by Competent Persons who have been trained to deal with electromagnetic induction 2) Non-Competent Persons are constantly supervised by a Competent Person – high risk areas are demarcated and barricaded 3) Pre-task risk assessments are conducted prior to work being undertaken to ensure that all employees are aware of the hazards and risks of electromagnetic induction
Overhead Power lines	Electric shock Electrocution Electrical fires Electrical arcing Electric burns	S	5	3	3	45	Remote switching will be implemented when possible	1) Maintain safety clearance 2) PTRA 2) Only Authorized Persons to undertake switching 3) All employees to adhere to the OHM COP, Safety Rules and Operating Regulations when undertaking work	1) Employees issued with the appropriate PPE when working on OHM - safety footwear, gloves, rubber gloves for Electricians, arc rated Conti- suits, Arc flash suit for Authorized Persons	0.8	9	1) Never to use conductive material near live mains

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Line Ladders Mass of the ladder Securing chains and hooks	Breaking safety clearances Musco-skeletal injuries and strains	S	5	3	3	45	1) Pulley block/ lifting tackle used to manipulate and hoist equipment up to the working surface 2) Tag lines or guide ropes to be used	4) Work permit and competency cards 1) Employees have been trained on the safe handling and use of line ladders 2) Where possible all equipment near the line ladder is isolated 3) Employees to ensure that a Pre-Task Risk Assessment is completed by the Person-in-Charge before any work is undertaken	1) Employees are issued with the appropriate PPE such as Arc Rated Conti-Suits, gloves for handling the ladders which might have burrs and sharp edges	0.6	18	1) Placing line ladders should be classified as a high-risk activity and as such employees handling these ladders must be under personal constant supervision until the task is effectively completed
Hoisting equipment up to the working level Over-exertion Substandard Ergonomics	Equipment falling from height Employees falling from height Overexertion when lifting equipment	S	5	3	3	45	1) Employees trained on the appropriate technique for lifting equipment up to the working surface 2) Only employees who have attended the appropriate training courses are allowed to work at height	1) Employees to exercise caution when hoisting equipment 2) Employees are to stand clear of the area where tools and equipment are being hoisted up the tower 3) All lifting tackle should be examined at intervals not exceeding 3 months by a competent lifting tackle inspector	4) Employees are issued with the appropriate PPE in the form of gloves, leather boots and hard hats	0.8	9	

Risk Assessment: Client Baseline Risk Assessment										Reviewed on: 01.12.2023	
Task: Operating Construction Vehicles										Compiled by: SHERQ Division	
										Revision: 2	
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Collisions with other vehicles, fixed objects or pedestrians	Injury Property damage Fatality	S	5	3	3	45	1) Traffic management plan in operation.	1) High visibility clothing worn by all construction workers	0.8	9	
Traffic	Motor vehicle accidents Road rage incidents Collisions with pedestrians and third parties	S	3	3	5	45	1) Refer to UGM Code of Practice 11.7 - Annexure: Safety at Roadworks 2) Work sites to be barricaded so as to ensure that the entire boom is within the barricaded area 3) Specialized vehicles to be operated by trained, accredited persons with valid Certificates of Competence	1) Employees to ensure that there is adequate lighting at the worksite if work is undertaken at night 2) Employees are to exercise caution when working at night or where lighting is inadequate	0.6	1.8	1) Employees to exercise caution when parking vehicles alongside public roads - speed of vehicles must be taken into consideration 2) Employees to be cautious and be cognizant of the operating speeds of other road users 3) Flagmen and orange strobe lights to be used in order to increase visibility 4) The proper size and type of road signs must be used when demarcating the worksite - minimum size is 900mm 5) Employees are to ensure that there are safe walkways for pedestrians to use - pavements must be kept clear where possible 6) All Competent/Specifically Trained Persons are trained in road demarcation and signage layout 7) Signage is to be inspected and cleaned before use 8) Traffic cones, are to be fitted with high visibility reflective strips

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Client Baseline Risk Assessment: Vegetation Management
Task: Manual Handling
 Reviewed on: 01.12.2023
 Compiled by: SHERQ Division
 Revision: 2

Hazards	Associated Risk	Effect	Pure Risk before rating				Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E	R						
Heavy lifting	Musculoskeletal disorders <i>Work-related neck and upper limb disorders (WRULD)</i> Carpal tunnel syndrome Tennis elbow	SH	3	3	3	27	1) Lifting equipment such as, crane trucks are provided 2) Contractor employees are trained on the safe procedure for both manual and mechanical lifting 3) Assistants are made available to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads	1) PTRR 2) Contractor employees are trained on the safe procedure for both manual and mechanical lifting 3) Assistants are made available to assist when lifting or moving heavy equipment 4) Trained Riggers are available to move heavy or irregular loads		0.8	5.4	1) Use lifting equipment when possible 2) Improve workplace layout to improve efficiency 3) Reduce the amount of twisting and stooping 4) Avoid lifting from floor level or above shoulder height, especially heavy loads 5) Avoid repetitive handling 6) Push a load rather than pull a load
Repetitive tasks performed for long periods, or at high speed, without a break	Muscle fatigue increases risk of injury External injuries e.g. cuts, bruises, abrasions and crush injuries Internal injuries e.g. muscle and ligament strains back injuries	SH	3	1	3	9	1) Lifting equipment such as pallet jacks, crane trucks and overhead cranes are provided for employees to use	1) Pre-task risk assessment 2) Contractor employees are trained on the safe procedure for lifting and moving loads 3) Employees are provided with Assistants to assist when lifting equipment		0.8	1.8	1) Perform a variety of work tasks during the day or take regular breaks

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Client Baseline Risk Assessment: Vegetation Management											
Reviewed on: 01.12.2023 Compiled by: SHERQ Division Revision: 2											
Task: Use of Tools											
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Handheld tools	Injuries - Cuts, splinters, abrasions, puncture impact, flying particles / objects	S	3	3	3	27	1) Contractor employees trained on basic hand skills 2) All hand tools are inspected prior to use and defects are reported for replacement 3) All hand tools are kept in safe operating condition	1) Contractor employees are issued with the appropriate PPE -- gloves, safety glasses, safety footwear and overalls	0.6	10.8	1) Contractor employees instructed to use the right tool for the job
Power Tools	Hand arm vibration White finger syndrome Puncture wounds Noise induced hearing loss	SH	3	3	3	27	1) Regular maintenance of power tools is required to ensure noise and vibration is reduced 2) All power tools to be inspected prior to use and any defects reported to the supervisor for replacement 3) Job rotation and regular breaks to reduce time exposure to vibration 4) Medical surveillance for all employees exposed to noise and vibration	1) Employees to be trained on the safe use of power tools 2) All power tools to be inspected prior to use and any defects reported to the supervisor for replacement 3) Job rotation and regular breaks to reduce time exposure to vibration 4) Medical surveillance for all employees exposed to noise and vibration	0.8	1.8	1) Contractor to supply the lowest vibration and noise emitting equipment

Client Baseline Risk Assessment: Vegetation Management										Reviewed on: 01.12.2023	
Task: General Construction - Site Conditions										Compiled by: SHERQ Division	
										Revision: 2	
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Incllement weather High wind Precipitation High humidity Lightning Temperature	Falls from height Fatality Fractures Electric shock Lacerations Soft tissue injuries	S	5	3	3	45	1) PTRAs 2) Fall protection training	1) Employees are issued with the appropriate PPE for the tasks	0.8	9	1) Contractor shall stop all persons working in elevated positions during periods of inclement weather, or if the possibility of lightning strikes is present. 2) Wet and inclement weather work needs to be defined
Extreme weather conditions (WBGT index ≥ 30)	Heat stroke Heat stress	SH	3	1	3	9	1) Medical surveillance 2) PPE is issued to employees – floppy hats, sunblock, etc. 3) ERW 2(4)(a)-(v) procedure is applied		0.6	3.6	1) Employees encouraged to monitor extreme weather conditions and take precautions
Presence of animals, insects and reptiles on site (bees, wasps, spiders, snakes and other creatures)	Allergic reaction Animal bites Insect stings Rabies Fatality	SHE	5	1	3	15	1) Employees are to be trained on First Aid training by an Accredited Service Provider 2) Employees to have emergency numbers readily available on site	Employees are issued with appropriate PPE and insect repellent	0.6	6	1) Employees are to be cautious when entering areas where it is suspected that there might be insects and pests 2) Employees to ensure they are fully clad in PPE
Working on or near water Crossing streams	Falling into water Drowning Contact with contaminated water Hypothermia Injury from submerged and floating debris and floating	S H	3	1	1	3	1) Pre-Task risk assessments are undertaken before work commences 2) Employee to work in groups (buddy system) 3) A First Aid and Rescue Plan to be implemented 4) Crossing of deep waters, streams and dams is prohibited	1) Horizontal life lines to be used when crossing streams	0.6	1.2	1) Life jackets is to be issued to employees who may be exposed to the risk of drowning

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD

Client Baseline Risk Assessment: Vegetation Management										Reviewed on: 01.12.2023	
Task: Housekeeping and General Safeguarding										Compiled by: SHERQ Division	
										Revision: 2	
Hazards	Associated Risk	Effect	Pure Risk before rating			Engineering Controls	Administrative Controls	PPE Controls	% Control	Residual Risk	Action Needed
			S	F	E						
Substandard housekeeping: On site In vehicles	Slips, trips and falls Struck by falling objects Puncture wounds Contaminants/fluid spills	SE	3	3	3	27	1) Clearing of worksite (tree branches and debris) 2) PTRAs 3) Employees conduct visual safety and housekeeping inspections regularly	1) Employees are issued with the appropriate PPE – non-slip protective footwear	0.8	5.4	Employees/Contractors are to ensure: 1) Prompt and proper disposal of waste material 2) Equipment required for use on site do not obstruct workplace access, egress, and walkways 3) Toolbox talks emphasise the importance of housekeeping

27660-5E: BUSH AND TREES MAINTENANCE, CLEARING AND ERADICATION OF OVERGROWN VEGETATION ON ACCESS ROUTES AND IN CLOSE PROXIMITY TO HV LINES AND STRUCTURES DURING A THIRTY-SIX MONTH PERIOD