AP6917: CONSTRUCTION OF A PACK STORE

BASELINE RISK ASSESMENT REPORT

A baseline risk assessment focuses on the identification of risk that applies to the whole project. The purpose of conducting a baseline risk assessment is to establish a risk profile.

This is an initial risk assessment that focuses on a broad overview in order to determine the risk profile to be used in subsequent risk assessments. It is performed to obtain a benchmark of the types and size of potential hazards, which could have a significant impact on the whole project and all stakeholders.

The stakeholders need to identify the major and significant risks, then prioritise these risks and evaluate the effectiveness of current systems for risk control.

The risks for the above project which have been identified have been highlighted under the following categories: -

1. **Scope of work (what is being built?)**
   This project consists of the following elements:

   - The construction of packing facilities

2. **Location of site and elements specific to the location (municipal by-laws, weather factors, geographical factors)**

   Laingsburg normally receives about 673mm of rain per year and because it receives most of its rainfall during winter. The annual rainfall values for Laingsburg are 201mm. It receives the lowest rainfall (12mm) in February and the highest (193mm) in June. The monthly distribution of average daily maximum temperatures shows that the average midday temperatures for Laingsburg range from 15.6°C in July to 35°C in February. The region is the coldest during July when the mercury drops to 6.6°C on average during the night.

3. **Geo- technical risks (conditions of the soil, raise any concerns that may hinder the project progress)**
   The site consists of sandy soil conditions, during high rainfalls, the soil can be waterlogged.

4. **Environmental risks (This is the actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion, etc involved in the construction phase)**
   Due to the site being in an environmental area there is always the risk for soil, groundwater and surface water pollution and contamination when using mechanical

plant, fuel and pesticides. It will also not be allowed to dispose of any kind of waste by burying it on site.

5. **Risk assessments based on scope of work (Is this a high rise building in a built-up area? Is it working in a flood plain and/or river with eroded soil conditions?)**
   Due to the nature of the works, there is risk of maintaining structural stability during excavations. Dangers presented are the collapse of excavations, falling or dislodging material and falling into excavations.

   The erection of steel framework presents its own dangers on both the erection of heavy steel sections and installation of roof plastics, especially at height. Care must be taken during the erection process with mechanical equipment working in close proximity to site labour force.

   Working at height poses risks of falling, material/tools dropping down damaging infrastructure and/or personnel. People are struck by material falling from loads being lifted and material that rolls or is kicked off work platforms; others are struck or buried by falling materials. Structures under construction may also collapse, eg steel frames that have not been adequately braced, or formwork that is prematurely loaded.

6. **Equipment Risks.**
   The equipment risks associated with this project is as follows:-

   It is envisaged that this will be both a mechanised and labour job. There will be mechanised earth moving equipment in close proximity to people, infrastructure, and surrounding environment.

7. **Material Risks.**
   The following could pose risks associated with the project:-

   - Flammable materials such as diesel/petrol in a highly flammable environment.
   - Inhalation of poison or being in contact with skin
   - Care must be taken not to dispose of any material by burning

8. **Ergonomic Risks (Ergonomic hazards refer to workplace conditions that pose the risk of injury to the musculoskeletal system of the worker).**

   Cold conditions. Dangers associated with pnumonia. During winter season.

   <u>Manual handling</u>
   Lifting heavy and awkward loads causes back and other injuries. Some injuries can result from a single lift, but more commonly, long-term injury develops as a result of repeated minor injury due to repetitive lifting.

   <u>Noise and vibration</u>
   High levels of noise can cause hearing loss and repeated use of vibrating tools can cause hand-arm vibration syndrome (damage to

nerves and blood vessels – most commonly in the hands and fingers).]

Chemicals
Exposure to materials such as cement and solvents can cause skin problems such as dermatitis.

9. **Controls specific to client requirements (two day induction, pink overalls, entrance to existing premises, etc).**
N/A

RISK OVERVIEW CHART FOR PROJECT:

RISK CATEGORY	RISK FACTOR	ASSOCIATED RISK	RISK PROBABILITY FACTOR (1-5) 1 being low 5 being very high
LOCATION	Cool temperatures	Pnemonia	2
GEOGRAPHICAL	Very loose sandy soil	Windstorms and risk of collapse of ground when excavating or open excavations	3
ENVIRONMENTAL	Dust pollution	Dust will affect both neighboring & current farmers crops	3
	Soil contamination	Risk of pollution to ground by contaminants	3
	High winds	Risk of damage to construction materials and risk of being blown off structure	4
SCOPE OF WORK	Structural stability	Risk that people be killed or seriously injured by collapses and falling materials while working in excavations	3
	Working at Heights	Risk of falling material and/or personnel	5
	Site enclosure	Risks to public if not managed and implemented	4
EQUIPMENT	Mechanised plant working with labour	Risk of injury to labour force due to close proximity	5
MATERIAL	Flammable material	Dangerous to work with	3

		and to store	
ERGONOMIC	Manual handling	Lifting of heavy equipment	4
	Noise/Vibration	High noise levels	4
	Chemicals	Exposure to chemicals	4
	Heat	Heat exhaustion	4
CLIENT REQUIREMENTS	Working times	No work is to be done after 17h00 at night	3

Please find below risk assessment template which can be used by the contractor to manage the above identified risks.

Risk assessment							
Title:							
Company name:				Date assessment was carried out:			
Assessment carried out by:				Date of next review:			
Risk assessment Activity or area	**What are the hazards?**	**Who might be harmed and how?**	**What are you already doing?**	**What further action do you need to take?**	**Who needs to carry out the action?**	**When is the action needed by?**	**Done**

For office use only	**Version no: 2**	**Date: 20 October 2014**	
To be signed upon appointment of winning bidder to form the agreement between the parties			
Signature for **Casidra**		Signature for Contractor	

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OCCUPATIONAL HEALTH & SAFETY SPECIFICATION

In terms of the Construction Regulations 2014 Regulation 5, a baseline risk assessment for the intended works is required to be done by the Client for each specific construction site.

This risk assessment will inform the site-specific Occupational Health and Safety specifications that must be supplied to the designer, who will supply any design specifications to be added and then supplied to the prospective Contractor (Bidder) as part of the tender documents. This specification must be translated into actions and preventative risk management measures by the Contractor that will form part the Occupational Health and Safety Plan of the Contractor.

This specification forms an integral part of the contract, and the Contractor is required to use it at pre-tender phase to make sufficient provision for related costs for risk management and after award of tender for the purpose of drawing up its project-specific construction phase health and safety plan.

It is the responsibility of the Contractor in the bidding process to:

- ensure that he include adequate provision for the cost for health and safety measures in his bid and
- Provide proof and include in his cost the necessary competencies and resources to perform the work safely.

The risks for the above project which have been identified, evaluated and resulted in the following specifications that are highlighted under the following categories: -

This specification does not replace the requirement of the Contractor to comply to all relevant legislation and the regulations of the Occupational Health and Safety Act, but just highlight the specific identified and relevant risk factors that need special mention and attention by the Contractor in his bid.

1. General administrative requirements

Designation	Name	Contact No's	Address	Responsible Person
Project Client	Casidra SOC	021 863 5000	22 Louws Avenue Southern Paarl 7624	N/A
Municipality	Laingsburg Municipality	023 551 1019 (tel)	2 Van Riebeeck Street, Laingsburg, 6900	N/A
Department of Labour	Department of Labour Cape Town	021 466 7160 (tel)	120 Plein St, Western Cape, 8001	N/A

2. **Scope of work (what is being built?)**

This project consists of the following elements:

- The construction of packing facilities

3. **Location of site and elements specific to the location (municipal by-laws, weather factors, geographical factors)**

What is the risk?	Cold and rain
Hazard Identification?	High temperatures together with high wind factor.
Who will be injured & mechanism of injury?	All personnel working on site. Possible injury will vary from pneumonia and or broken ankles from muddy soil.

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
• Monitor weather for worsening soil conditions on daily basis. When conditions underfoot do not assist with mechanical and/or personnel, call site off until conditions improve • Ensure for shade and sufficient water onsite for high temperatures. • Ensure temperature is monitored and call site off with WGT of 40 and higher	Risk reduction/ control

What is the risk?	Wind
Hazard Identification?	High winds are experienced in the area and danger of falling off temporary and/or permanent structures
Who will be injured & mechanism of injury?	All personnel working at height. Possible injury will vary from dislocation, broken bones to death by falling.

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
• All temporary structures to be designed and erected to withstand high winds. All fall protection must be in place before workers can access platforms	• Risk reduction/mitigation
• Subcontract temporary platform erection to a specialist and they then bear all responsibility of erected temporary platforms	• Risk transfer
• All people working at heights must have a harness.	• Risk control
• Install wind meter on site with siren warning for wind speeds above 40km/h. Work at heights will stop until wind subsides	• Risk avoidance

4. **Geo- technical risks (conditions of the soil, raise any concerns that may hinder the project progress)**

What is the risk?	Soil conditions

Hazard Identification?	Sandy soil conditions and soggy when wet
Who will be injured & mechanism of injury?	Infrastructure damage, damage to earthmoving equipment and personnel injury will vary from dislocation, broken bones to death

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
This is specialized work that requires competent human resources that are adequately skilled in working with locating unknown services and dealing with them when located. Heavy and dangerous machinery in loose sandy soil conditions when also require skill set.	Risk control

5. Environmental risks (This is the actual or potential threat of adverse effects on living organisms and environment by effluents, emissions, wastes, resource depletion, etc involved in the construction phase)

What is the risk?	Soil contamination
Hazard Identification?	Risk of pollution to ground and river by its contaminants
Who will be injured & mechanism of injury?	Environment and this invariably falls over to communities, which then in affect the members of the public

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Maintenance and service areas should be demarcated during site establishment and all maintenance and service activities contained so as to avoid any contamination of soil and / or water. All vehicles, equipment, fuel and petroleum services and tanks should be maintained in a good condition that prevents leakage and possible contamination of soil or water supplies. Refueling areas should be bunded and lined to prevent spilled fuels and oils from contaminating the ground or water. It is suggested that as a minimum, sandbags should be placed surrounding the bulk fuel supply tank. The floor of the area is to be lined with plastic and a layer of sand of approximately 50mm is placed on top of the plastic. Automatic shut-off nozzles are recommended on all dispensing units. The park and service area should be treated with a suitable hydrocarbon absorption or remediation product. Absorbent spill mop-up products should to be on hand. All servicing should be done with a drip tray present to prevent accidental spillage of oils and fuels. A suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes, etc.) should be established. All spills to be immediately contained, reported to the Project Manager, and dealt with.	Risk control/ reduction

What is the risk?	Snakes
Hazard Identification?	Being bitten by snakes
Who will be injured & mechanism of injury?	Personnel working on site

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
As the work entails working in dense brush and biomass areas, the risk of disturbing a snake is very high. Make sure that all personnel are made aware of the increased risk of the presence of snakes. Wear proper protective clothing to protect against snake bites. An increased awareness and alertness is the best protection, the snake will not be looking for you, so watch for it. If a snake is seen or reported on site, note the area of the snake and work in this area stops until the hazard is removed. DO NOT approach, attack or otherwise provoke the snake as 95% of those bitten have done this. REMEMBER - IF PROVOKED IT WILL STRIKE. If bitten, the following procedures should apply: 1.Immediately apply a broad firm bandage around the limb and on the bitten area. It should be as tight as one would bind a sprained ankle. As much of the limb should be bandaged as possible. Bind from below upwards. Crepe bandages are ideal, but any flexible material can be used, eg tear up clothing or old towels into strips. Panty hose is satisfactory. 2.Keep the limb and the victim as still as possible. Splint the limb. 3.Bring transport to the victim if possible. 4.Leave the bandage and splint on until medical care is reached. Don't cut or excise the bitten area. Don't apply an arterial tourniquet. Don't wash the bitten area. The snake involved may be identified by the detection of venom on the skin.	Risk reduction/control/ avoidance

What is the risk?	Bees
Hazard Identification?	Being stung by bees
Who will be injured & mechanism of injury?	Personnel working on site

Preventative action recommended	
Description	**Category: Reduction / transfer / control /**

	avoidance
Upon finding a bee hive/nest, do not try to get rid of the nest or hive yourself. Each type of insect or situation will likely need different removal methods. It is best to call pest control professionals for this service. Upon being stung, most people experience local effects like pain, swelling, itching, and redness around the sting site. In rare cases, a **severe allergic reaction** can occur. This situation is serious and can cause "**anaphylaxis**" or anaphylactic shock. Symptoms of anaphylaxis can appear immediately (within minutes) or up to 30 minutes later. Symptoms to watch for include: • hives, itching and swelling in areas other than the sting site, • swollen eyes and eyelids, • wheezing, • tightness in the chest and difficulty breathing, • hoarse voice or swelling of the tongue, • dizziness or sharp drop in blood pressure, • shock, • unconsciousness or cardiac arrest. Although most deaths result from severe allergic reactions, some are caused by direct toxicity of the insect venom. Of those who die from a severe allergic reaction to a sting, half die within 30 minutes, and three-quarters within 45 minutes. If you see any signs of reaction, or even if you are not sure, call or have a co-worker call emergency medical services right away. Also, get medical help if the sting is near the eyes, nose or throat. People who have been stung multiple times (such as when fleeing from a swarm or nest) can sometimes suffer serious health effects. While rare, death may occur. Employers should be notified if a worker, especially one who works outdoors, has allergies to insect stings. Co-workers should be trained in emergency first aid, be aware of the signs of a severe reaction, and know how to use the bee sting kit (self-injectable epinephrine). Always carry a cellular phone in case you need emergency medical help. The best way to prevent stings is to avoid the insects. Leave the area, if possible. If there is a travelling swarm, they will likely leave within a few days. Note that insect repellent ("bug spray") does not affect these stinging insects. Avoidance and awareness are the keys to not being stung. Before working at a site: • Take a look around. Check to see if there are any visible signs of activity or a hive or nest. If you see a number of insects flying around, check to see if they are entering/exiting from the same hole or place. If so, it is likely a nest or a source of food. • Wear long sleeve shirts, and long pants. If you cannot avoid working near bees or wasps, wear a bee-keepers style hat with netting to cover your head, neck and shoulders. Tape your pant legs to your boots/socks, and your sleeves to your gloves. You may also wish to wear an extra layer of clothing since wasp stings are long enough to reach through one layer of clothing.	Risk avoidance/control/reduction/transfer

• Power tools such as lawnmowers, weed eaters and chainsaws will aggravate the insects. When using these tools, be aware that the tools may provoke the insects or in some cases, cause the insects to swarm. If you find you are working near stinging insects, here are some tips. • Most bees and wasps will not sting unless they are startled or attacked. Do not swat at them or make fast movements. The best option is to let the insects fly away on their own. If you must, walk away slowly, or gently "blow" them away. The only exception is if you have disturbed a nest and hear "wild" buzzing. Protect your face with your hands and run from the area immediately. • Wear light-colored clothes such as khakis, beige, or blue. Avoid brightly coloured, patterned, or black clothing. • Tie back long hair to avoid bees or wasps from getting entangled in your hair. • Be careful when shaking out clothing or towels as the insects could be inside the folds. • If you find a bee or wasp in your car, take a thick cloth and cover the insect before it gets frightened. Carefully, let the insect back outside through an open window. DO NOT • Do not wear perfumes, colognes, scented soaps, or powders as they contain fragrances that are attractive. • Do not go barefoot or wear sandals, especially in areas where there is clover or other flowering plants that attract bees.	

6. Risk assessments based on scope of work (Is this a high rise building in a built-up area? Is it working in a flood plain and/or river with eroded soil conditions?)

What is the risk?	Structural stability
Hazard Identification?	Unstable working platforms could cause risk of collapse on trenches. Risk of excavations collapsing and burying or injuring people working in them; material falling from the sides into any excavation; and people or plant falling into excavations
Who will be injured & mechanism of injury?	Risk that people be killed or seriously injured by collapses and falling materials while working in excavations

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
<u>COLLAPSE OF EXCAVATIONS</u> **Temporary support** – Before digging any trench pit, tunnel, or other excavations, decide what temporary support will be required and plan the precautions to be taken. Make sure the equipment and precautions needed (trench sheets, props, baulks etc) are available on site **before** work starts.	Risk reduction/avoidance

Battering the excavation sides – Battering the excavation sides to a safe angle of repose may also make the excavation safer.

In granular soils, the angle of slope should be less than the natural angle of repose of the material being excavated. In wet ground a considerably flatter slope will be required

FALLING OR DISLODGING MATERIAL

Loose materials – may fall from spoil heaps into the excavation. Edge protection should include toeboards or other means, such as projecting trench sheets or box sides to protect against falling materials. Head protection should be worn.

Undermining other structures – Check that excavations do not undermine scaffold footings, buried services or the foundations of nearby buildings or walls. Decide if extra support for the structure is needed before you start. Surveys of the foundations and the advice of a structural engineer may be required.

Effect of plant and vehicles – Do not park plant and vehicles close to the sides of excavations. The extra loadings can make the sides of excavations more likely to collapse.

FALLING INTO EXCAVATIONS

Prevent people from falling – Edges of excavations should be protected with substantial barriers where people are liable to fall into them.

To achieve this, use:

- Guard rails and toe boards inserted into the ground immediately next to the supported excavation side; or
- fabricated guard rail assemblies that connect to the sides of the trench box
- the support system itself, eg using trench box extensions or trench sheets longer than the trench depth.

INSPECTION

A competent person who fully understands the dangers and necessary precautions should inspect the excavation at the start of each shift.

Excavations should also be inspected after any event that may have affected their strength or stability, or after a fall of rock or earth.

A record of the inspections will be required and any faults that are found should be corrected immediately.

Who will be injured & mechanism of injury?	Public will be injured and/or killed
Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Construction work should be fenced off and suitably signed. This will protect people (especially children) from site dangers and the site from vandalism and theft. Site access should be monitored and controlled and all access routes should be clearly demarcated. A constant regard must be taken to safety and dangerous areas and should be adequately cordoned off to prevent accidental injury. Temporary fencing/hoarding with appropriate warning signs must be in place. Make sure there is a system to ensure necessary precautions are kept in place during working hours and that night-time and weekend protection is put in place as required before the site closes	

What is the risk?	Working at heights
Hazard Identification?	Risks of falling material, tools & personnel
Who will be injured & mechanism of injury?	People/Infrastructure being struck by falling material & tools causing injury or even death. The same for personnel falling from heights.
Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Avoid working at heights where you can. Use work equipment to prevent falls where work at height cannot be avoided. Where the risk of a fall cannot be eliminated, use work equipment to minimize the distance and consequences of a fall should one occur. Always consider measures that protect all those at risk, ie ■ collective protection measures (scaffolds, nets, soft landing systems) before measures that only protect the individual, ie personal protection measures (a harness). Ensure work is carried out only when weather conditions do not jeopardise the health and safety of the workers. Suitable precautions must be taken to prevent falls. General access scaffolds provide a means of working at height while preventing falls and should be provided whenever practicable. Scaffolds should be designed, erected, altered and dismantled only by competent people and the work should always be carried out under the direction of a competent supervisor. Ensure the scaffold is based on a firm, level foundation. The ground or foundation should be capable of supporting the weight of the scaffold and any loads likely to be placed on it. Ensure it is braced and tied into a permanent structure or otherwise	Risk reduction/avoidance/control

stabilised.	

7. Equipment Risks

What is the risk?	Heavy Mechanized equipment
Hazard Identification?	Close proximity to labour force on ground working together in combined operations gives risk of collision
Who will be injured & mechanism of injury?	Infrastructure damage, damage to plant equipment/constructed items and personnel injury will vary from dislocation, broken bones to death

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
This is specialized work that requires competent human resources that are adequately skilled in working with heavy and dangerous equipment. Guidelines and practical advice to all work operations to ensure effective and proper management of working with mechanical plant must be in place. Toolbox talks MUST make all personnel aware of the dangers. Equipment must be checked for proper working controls such as reverse warning sirens, etc. Make sure equipment is in good working order each and every day and before every single operation. All workers should wear bright protective clothing and signs that are highly visible.	Risk Control

8. Material Risks.

What is the risk?	Storage of materials
Hazard Identification?	Tripping/ Flammable materials igniting
Who will be injured & mechanism of injury?	Material/Infrastructure & personell

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Designate storage areas for plant, materials, waste, flammable substances (eg foam plastics, flammable liquids and gases such as propane) and hazardous substances (eg pesticides and timber treatment chemicals). Flammable materials will usually need to be stored away from other materials and protected from accidental ignition. Do not store materials where they obstruct access routes or where they could interfere with emergency escape, eg do not store flammable materials under staircases or near to doors or fire exits. If materials are stored at height (eg on top of a container or on a scaffold gantry), make sure necessary guard rails are in place if people could fall when stacking or collecting materials or equipment. Keep all storage	Risk Control

areas tidy, whether in the main compound or on the site itself. Try to plan deliveries to keep the amount of materials on site to a minimum. Waste materials also need storing safely before their removal from the site and make sure that you allow sufficient space for waste skips and bins.	

What is the risk?	Flammable material
Hazard Identification?	Dangerous to work with and store for prevention of fires
Who will be injured & mechanism of injury?	Infrastructure damage and injury or death to all persons

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Fuels and flammable materials should be stored in suitably equipped storage areas demarcated within the Contractor's camp. These areas must comply with general fire safety requirements. No fuel may be stored within drainage lines or areas. Impervious lining materials should be used in these storage areas to prevent contamination of the ground in the event of spillages or leaks, and automatic shut-off nozzles should be used on all dispensing units. Quantities of fuels and flammable/hazardous materials stored on site should be appropriate to the requirement for these substances on site. Fuels and oils should be safely located out of harm's way from the elements. No fuel / oil containers may be left unattended within drainage areas. All open containers containing used oil, etc., should be kept under roof or have adequate water tight lids. All spills to be immediately contained, reported to the Project Manager and dealt with. Adequate fire fighting equipment should be available on site, in good working order, and according to the fire hazard present during construction activities of at least one type ABC all-purpose 12.5kg extinguisher and a water cart with a minimum capacity of 1000 litres for the duration of the contract. Any welding, gas cutting or cutting of metal should only be permitted inside the demarcated working areas for this purpose and these areas should be approved by the Project Manager.	Risk control

What is the risk?	Fire
Hazard Identification?	Flammable materials are always evident on construction site and danger of fire is always constant
Who will be injured & mechanism of injury?	Material/Infrastructure & personnel

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Fire can be a particular hazard in refurbishment/new work when there is a lot of dry timber and at the later stages of building jobs where flammable materials such as adhesives, insulating materials and soft furnishings are present. Many fires can be avoided by careful planning and control of work activities. Good housekeeping and site tidiness are important not only to prevent fire, but also to ensure that emergency routes do not become obstructed. Making site rules can help.	Risk reduction/transfer/ control/avoidance

9. Ergonomic Risks (Ergonomic hazards refer to workplace conditions that pose the risk of injury to the musculoskeletal system of the worker).

What is the risk?	Health
Hazard Identification?	On-site injuries due to physical construction work taking place
Who will be injured & mechanism of injury?	Personnel suffering ill-health

Preventative action recommended	
Description	**Category: Reduction / transfer / control / avoidance**
Construction workers are likely to suffer ill health as a result of their work in the industry after exposure to both harsh working conditions and hazardous substances. Assess both immediate risks, eg being overcome by fumes in a confined space, and longer-term health risks. Materials like cement can cause dermatitis. Sensitizing agents like isocyanates can make people using them have sudden reactions, even though they may have used the substance many times before. If harm from the substance is possible, the first step to take is to try and avoid it completely by not using it at all. try and control exposure. Some of the ways this could be done include: Keep containers closed except when transferring; using cutting and grinding tools and blasting equipment fitted with exhaust ventilation or water suppression to control dust; ensuring good ventilation in the working area by opening doors, windows and skylights. The need to provide personal protective equipment (PPE) is also a must and will contribute in minimizing exposure risks. Respirators can protect against dusts, vapours and gases. Ear plugs for noise, etc. Where protective clothing is provided (such as overalls and gloves), it must be of the right type to protect the wearer against the particular hazard they	Risk reduction/transfer/ control/avoidance

are going to encounter. All manufacturers offer advice on the most suitable gloves for specific types of hazard. When using gloves to help prevent dermatitis, users must avoid getting contaminants inside the gloves when putting them on and taking them off. It is also essential to provide washing facilities, with a supply of hot and cold (or warm) running water, soap and a means of drying the hands, to help prevent dermatitis. First aid can save lives, reduce pain and help an injured person make a quicker recovery. Provide adequate and appropriate equipment, facilities and personnel to enable first aid to be given to your employees if they are injured or become ill at work. The minimum provision for all sites is: • a first aid box with enough equipment to cope with the number of workers on site; • an appointed person to take charge of first-aid arrangements; • information telling workers the name of the appointed person or first aider and where to find them.	

10. Controls specific to client requirements (two day induction, pink overalls, entrance to existing premises, etc).
No work after 17h00 and only on weekdays

11. Personal Protective Equipment (PPE) and Clothing

The principal contractor and other contractors shall ensure that all workers are issued with protective clothing free of charge and make use of the equipment and protection provided such as to wear hard hats, protective footwear, overalls, etc. The Principal Contractor and all Contractors shall make provision and keep adequate quantities of SABS approved PPE on site at all times. The Principal Contractor shall clearly outline procedures to follow when PPE or Clothing is:

- Lost or stolen;
- Worn out or damaged

The above procedure applies to Contractors and their Sub-contractors, as they are all employers in their own right, as per section 37 (2) of the Act.

(The general PPE requirements are attached under Annexure A to this document as well as an additional list of PPE for biomass removal is also attached as Addendum B to this specification).

12. Occupational Health and Safety signage

The Contractor shall provide and maintain adequate on-site OHS signage. Including but not limited to: ‘no unauthorised entry’, ‘report to site office’, ‘beware of overhead work’, ‘hard hats, overalls, safety boots, respirators, etc’. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations

13. Fences and access

Construction sites in built-up areas or adjacent to public roads must be suitable and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorised persons.

14. Admittance to site

A notice must be posted up at every entrance to a building site prohibiting the entry of unauthorised persons to such workplace and no person shall enter such a site without the permission of the employer or user as the case may be. In no circumstances may the wording “Enter at Own Risk” be used

15. Speed Restrictions, construction vehicles and Protection

The Principal Contractor shall ensure that all persons in its employment, all Contractors, and all those that are visiting the site are aware and comply with the site speed restriction(s) and route identification for construction vehicles only. Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced.

16. Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant Contractors shall provide the necessary training
and information regarding the use, transport, and storage of HCS. The Principal Contractor shall ensure that the use, transport, and storage of HCS is carried out as prescribed by the HCS Regulations. The Contractor shall ensure that all hazardous chemicals on site have a Material Safety Data Sheet (MSDS) on site and the users are made aware of the hazards and
precautions that need to be taken when using the chemicals. The First Aiders must be made
aware of the MSDS and how to treat HCS incidents appropriately.

The below acts are relevant regarding the transporting, storage and application of these agricultural chemicals:-

- Fertilizers, farm feeds, agricultural remedies and stock remedies act, 1947 (Act no. 36 of 1947)
- Hazardous Substances Amendment Act, No. 53 of 1992
- The South African National Pesticide registration authority registrar: Act no. 36 of 1947

17. Public and Site Visitor Health and Safety

The Principal Contractor shall ensure that every person working on or visiting the site, as well
as the public in general, shall be made aware of the dangers likely to arise from site activities,
including the precautions to be taken to avoid or minimise those dangers. Appropriate health
and safety notices and signs shall be posted up, but shall not be the only measure taken.

The Principal Contractor has a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected
by the construction activities.

Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these 'inductions' must be kept on site in accordance with the Construction Regulations.

18. Occupational Hygiene

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and all contractors must ensure that proper health and hygiene measures are put in place to prevent
exposure to these hazards. Prevent inhalation, ingestion, absorption, and noise induction.

Contractor must identify site-specific health risks for construction. e.g. cement dust, wet cement, wood-dust, noise, etc.

19. Welfare Facilities

The Principal Contractor must supply the following clean, hygienic and maintained facilities:

- Shower facilities, after consultation with employees or employee representative (1 shower for every 15 persons).
- Sufficient toilets (1 toilet per 30 workers) and hand washing facilities. Separate toilets needed for both males and females. Toilet paper must be provided.
- Changing facilities for each sex
- Sheltered eating areas
- Waste bins must be strategically placed and emptied regularly.

Workers who are far removed from their homes, reasonable and suitable living accommodation for the workers must be provided and adequate transportation between sites and homes where suitable living accommodation is not available.

20. Alcohol and other Drugs

No alcohol and other drugs will be allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith.
Any person suffering from any illness/condition that may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suspected of being under the influence of alcohol

or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. A full disciplinary procedure must be followed by the Contractor concerned and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records.

21. Other compliance requirements

Notwithstanding the Occupational Health & Safety Act, the contractor must also confirm to the following acts:

- Basic conditions of employment act 75 of 1997
- National Road Traffic Act 93 of 1996
- National Environmental Management: Biodiversity Act, no 10 of 2004
- National Veld and Forest Fire Act, no 101 of 1998.
- Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Amendment act

22. Management control measures and review

23. Risk assessment of the site must be reviewed at least every 30 days. Based on the effectiveness of the existing measures, the safety plan must be adjusted to meet the new or existing identified deficiencies.

24. Electrical Safety

All persons who carry out or arrange for work of any description for Casidra in connection with **electrical apparatus** shall make themselves acquainted with the Occupational Health and Safety Act (Act 85 1993) with particular reference to the Electrical Machinery Regulations, Regulations 1 to 23 inclusive.

The works performed under this contract shall comply in every respect with the latest relevant rules and regulations including following:

- Occupational Safety and Health Act (OSH Act)
- The South African Bureau of Standards Code of Practice SANS 10142
- Normal requirements laid down by Eskom.
- The latest requirements of the IEC and the British Standard Institute, where no SANS codes of practice exist.
- All rules and regulations issued by local and other authorities having jurisdiction over the contract.

The contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations,1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that —

(a) before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;

(b) all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;

(c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;

(d) all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and that inspection findings are recorded in a register kept on the construction site; and

(e) all electrical machinery is inspected by the authorized machine operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site

NOTE:
The Electrical Installation Regulations clause 6 (2) require electrical contractors to register annually.

"(2) Any person who does electrical installation work as an electrical contractor shall register annually in the form of Annexure 3 with the chief inspector or a person appointed by the chief inspector "

In terms of the OHS Act Electrical Installation Regulations, a Certificate of Compliance (CoC) must be issued by a registered person, defined as "a person registered as an electrical tester for single phase, an installation electrician, or a master installation electrician". Registered persons may be the owners or employees of electrical contractors. They must be currently registered with the Department of Labour (DoL), and registrations must be renewed annually, bi-annually or every three years depending on the application. No company may do electrical contracting work unless they have a permanently employed registered person as part of the company.

Department of Labour stating the certification as either 'single phase tester", "installation electrician" or "master installation electrician" with a unique licence number

Safety equipment
The following equipment required for working on electrical installations and distribution systems, must be maintained in good order and repair and must be made available:-

Safety belt, overalls, hard hat, safety shoes or boots, rubber gloves, "Men Working" notice boards, locks for locking off switches, buss bar shutters in truck-type switchgear, isolators or earthing links, rubber sheet and length of rope with short circuiting earthing-chains, earthing sticks and testing/phasing sticks rated for the voltage of the equipment to be tested.

Under no circumstances shall work be carried out on electrical apparatus unless the proper safety equipment is used

With regard to overhead linesmen, no work shall be carried out unless use is made of a non-metallic ladder and the appropriate safety belt, rubber gloves, overalls, hardhat and safety shoes or boots are worn. The buddy system must also be implemented.

Earthing

Always safety test before applying earths

Risk assessment of the site must be reviewed at least every 30 days. Based on the effectiveness of the existing measures, the safety plan must be adjusted to meet the new or existing.

At completion of the electrical installation work in the tender, a test as required must be performed to ensure safe operation of the equipment and a signed original CoC be supplied to the client.

ADDENDUM A – GENERAL MINIMUM PPE REQUIREMENTS

Subject	Requirement
*PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)
*Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
*Eye and Face Protection	Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Jack/ Kango Hammers * Angle / Bench Grinders * Electric Drills (Overhead work into concrete / cement / bricks * Explosive Powered tools * Concrete Vibrators / Pokers * Hammers & Chisels * Cutting / Welding Torches * Cutting Tools and Equipment * Guillotines and Benders * Shears * Sanders and Sanding Machines * CO2 and Arc Welding Equipment * Skill / Bench Saws * Spray Painting Equipment etc.
*Hearing Protection	Hearing Protectors (Muffs, Plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g. saws, planers, routers
*Hand Protection	Protective Gloves worn by employees handling / using: * Cement / Bricks / Steel / Chemicals * Welding Equipment * Hammers & Chisels * Jack / Kango Hammers etc.
*Respiratory Protection	Suitable/efficient prescribed Respirators worn correctly by employees handling / using: * Dry cement * Dusty areas * Hazardous chemicals * Angle Grinders * Spray Painting etc.
*Fall Prevention Equipment	Suitable Safety Belts / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: * Scaffolding * Riggers * Lift shafts * Edge work * Ring beam edges etc. Other methods of fall prevention applied e.g. catch nets
*Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)