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GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

BASELINE RISK ASSESSMENT FOR PROJECT

Client	**Gauteng Department of Education**
Project title	**CONSTRUCTION OF MOHLAKENG SECONDARY SCHOOL**
Contract Number	**RFP206/2026**
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RISK MATRIX

1. RISK MATRIX		**Potential consequence of harm**		
		1 – Minor Injury (e.g. hazard can cause illness, injury or equipment damage but the results would not be expected to be serious)	**2 – Significant Injury** (e.g. hazard can result in serious injury and/or illness, over 3-day absence)	**3 – Major Injury** (e.g. hazard capable of causing death or serious and life threatening injuries)
Likelihood of harm	**1 – Unlikely** (injury rare, though possible)	**1 – Low**	**2 – Low**	**3 – Medium**
	2 – Possible (injury could occur occasionally)	**2 – Low**	**4 – Medium**	**6 – High**
	3 – Probable (injury likely to occur, can be expected)	**3 – Medium**	**6 – High**	**9 – Extreme**

L = LIKELIHOOD **C = CONSEQUENCES**

NO	HAZARD/ITEM	RISK ASSOCIATED WITH HAZARD	RR	HOW IS HAZARD TO BE DEALT
1.	Site Establishment			
1.1	Incompetent persons Uncontrolled site establishment activities Incorrect stacking procedures	• Injuries during off loading • Cuts and burns • Rushed activities • Incorrect supervision • Management team not identifying existing services • Trip and fall • Cuts • Collapsing of stacks • Incorrect manual handling – back injuries	Medium	• The contractor must ensure that site is established at the correct location as identified by the Client. • Contractor OHS file must be approved prior to site establishment begins – aligned to New Construction Regulation 2014 • All workers on site must be declared medically fit by an Occupational Health Practitioner. (Annexure 3) • Site –induction must be given to all employees to make them aware of the specific hazards • The contractor must declare all employees competent in writing. • Before the commencement of this phase a site-specific risk assessment must be conducted by a competent risk assessor. • All the employees involved must be inducted in the risks; proof of this would be signing off on these risks. • Site specific safe work procedures must be followed during these activities. • Relevant toolbox talks must also be held with employees. • The contractor must ensure that the correct serviceable tools are available during this phase. • Employees must be issued with correct PPE before work begins
1.2	Offloading heavy equipment and containers with mobile cranes.	• Defective mobile crane can cause accidents • Damage lifting tackle • Unsecure offloading area could cause accidents	Medium	• All lifting equipment including the mobile crane must be checked before allowed on site. • Ensure that the correct mobile crane to be used for the offloading process. • Safe Working Load must be clearly displayed on the crane. • Load test certificate will be submitted to the client. • Rope and or sling certificates must be submitted to the client. • Only competent operators will be allowed to operate the mobile crane. • Daily checks as per checklist by operator. • Lifting tackle to be inspected daily. • Material to be stacked on firm and level ground. • Stacking to be supervised by a competent supervisor. • Adequate storage area to be provided • All unstable stacks to be dismantled and stacked over, in pre-determined area

1.3	Site security and fencing: — Fence with lockable gates — 24 hour security deployed — Fire prevention — All required OHS signage — Accommodation of offices	• Theft of property • Fires • Unsafe conduct by visitors • Unauthorized entry • Violence against workers	Low	• All visitors must report to site office. • All visitors must also be inducted. • Checklist signed by supervisor and filed by safety officer • No working after hours
1.4	Housekeeping:	• Inadequate storing facilities. • Damage to material and equipment. • Accumulation of waste. • Environment pollution. • Facilities for employees. • Electrical installations	Medium	• Use site establishment checklist to ensure compliance with all items • Toilet facilities & staff welfare as per Construction Reg 2014 • Toilets 1:30(regular service) • Correct storing facilities for hazardous chemicals. • Correct signage for all storage of hazardous materials Proper storing facilities for tool and equipment. • Adequate waste bins are available. • Regular cleaning of these bins • Waste recycling is encouraged. • A COC certificate for temporary electrical installations by a register competent electrician.
2.	Public entering the work area	• Injuries • Fatalities • Trip, slips and falls • Coming into contact with construction equipment	High	• Install proper barricade / fending around the construction site • Single entry-controlled access and egress point.
3.	Site Clearance Work In General	• Possible trip & fall into open trenches • Possible shock from old electrical cables • Other potential land hazards • Insect bites etc.	Medium	• Existing services must be identified before the task can begin. • Pre-site inspection • Full time supervision • Safety Rep & Construction Supervisor • No work or clearing of site permitted during nighttime • Proper survey of work area • Potential hazards to be identified & Mitigated • These risks must be communicated with employees involved with this task

4.	Site Levelling/ Excavation Using Heavy Equipment	• Man/Machine interface • Machinery uncontrolled could injure bystanders • Equipment toppling due to uneven surfaces / into trenches • Blind spots • No supervision could cause uncontrolled activity	Medium	• All construction vehicles must comply with all legislation, including road traffic act. • All construction vehicle operators must be trained and competent. • All operators must be appointed as per CR 2014 • All vehicles to be pre-inspected before they can start working. • Medicals for operators • Correct PPE to be issued for task • Full time supervision • Toolbox talk on potential machine/man interface • 3 Point contact induction to plant operators • Vehicles to have audible reverse horns & appoint signal man • Only the operator is allowed on the machine when on the construction site.
5.	Location Of Existing Services	• Pre-approval excavations permit not obtained could lead to damage of property & machinery or loss of life	Medium	• Pre-authorization for electronic location of services by Management • RA/DSTI for task review • Adhere to SWP to work system • Adhere to emergency procedures • SWP/SWP prior to activity
6.	Evaluation Of Stability Of Surface	• Inspections not conducted by Safety Officer could lead to damage of services not located	Medium	• Site Manager to inspect surface/access stability: Communicate acknowledge & sign for documentation
7.	Erecting Of Necessary Fixed Barricading Next To Excavations	• No proper barricading could lead to accidents & workers not protected against traffic • Uncontrolled barricading practices	Medium	• Adhere to barricading procedure as per Client Standards • Tagging of barricading • Identification barricading (signs) • Proper traffic management when erecting barricading • Flagmen to adhere
8.	Mechanical Excavation Of Cut Material With Excavator To A Depth Of 1m	• No pre-start checks • Un roadworthy machinery • No lock-out & isolation procedures could lead to potential incidents • No proper supervision could lead to fatalities	High	• PTW system • Excavation permit • S.O.P Procedures • SWP/ DSTI before each task/operation • Communication / acknowledgement & sign documentation • Qualified operators • Inspection checklists • Correct PPE for job
9.	Load Material With Excavator On Tipper Trucks To Spoil Cut To Fill/Spoil	• No proper supervision could cause injury • No pre-start checks or S.O.P communicated • No isolation & lockout • No 3-way contact communicated	Medium	• S.O.P for tipper trucks & excavator with RA – communicated to workers • Operator competency/medical • Competent Supervisor • Supervision • Correct PPE for task • Toolbox Talk • Dust control

10.	Foundation and service excavations	• Ground collapse • Burial • Falls • Undermining structures	High	• Assess stability before excavation • Provide engineered shoring or approved safe slopes as conditions require • Keep spoil, plant and loads clear of collapse influence • Provide safe access within six meters of each worker • Inspect before every shift and after rain, ground fall or support damage; record results. • Fence/protect exposed excavations, maintain warnings and prevent public access.
11.	Reinforcement, formwork and foundation preparation	• Exposed rebar • Sharp wire • Lifting strain and temporary works failure • Impalement or crushing	High	• Use effective impalement protection • Stable rebar storage • Mechanical handling where practicable and suitable gloves. • Obtain temporary works design and competent inspection • Verify support and loading
12.	Backfill and compaction	• Buried persons • Plant collision • Unstable trench edges • Noise and vibration.	High	• Inspect and release service work before covering • Confirm trenches clear of people • Backfill in a controlled sequence • Separate workers from compactors and mobile plant • Maintain edge stability and suitable access • Select lower-vibration equipment and manage exposure.
13.	Scaffolds and ladders	• Falls • Scaffold collapse • Falling objects	High	• Use competent scaffold erection and inspection • Suitable steel base plates • Ties, bracing, fully decked platforms • Guardrails and toe boards • Observe load limits • Control tower wheels and access • Inspect and secure ladders for suitable short tasks.
14.	Steel beams and Roof trusses - lifting and erection	• Suspended loads • Truss instability • Wind and falls • Fatal crushing/falls	High	• Plan lifting and erection with the designer • Verify lifting plant/support conditions, lifting points, competent personnel and exclusion zones • Brace trusses to the design sequence before releasing support or loading • Provide collective fall protection and safe access • Stop in hazardous weather
15.	Temporary site electricity and generators	• Damaged leads • Wet areas • Accessible distribution boards • Inadequate protection and generator exhaust • Electrocution • Fire	Medium	• Have competent electrical personnel design/check the supply • Protective devices and earthing arrangements • Use lockable protected boards, suitable cables and protected routes • Inspect and remove defective equipment • Keep equipment clear of water • Locate generator exhaust away from occupied/enclosed areas

				• Control fuel and prevent backfeed.
16.	Drainage and water-supply trenches	• Collapse • Falls • Services damage • Flooding and plant contact	High	• Apply controls to every drainage/water trench • Verify tie-in points and ground conditions • Provide suitable protection and access • Inspect before each shift and after triggering events. • Secure open ends and chambers • Prevent uauthorized entry
17.	Transporting workers from site camp to workplace and vice versa	• Workers transported in the same vicinity with tools, generators, materials etc. • Transporting workers on un-roadworthy vehicle • Overloading workers may capsize construction vehicle	High	• It is unlawful to transport workers in the same vicinity with tools, materials & other equipment. • No un-roadworthy vehicle will be allowed on site • No overloading of workers allowed on site
18.	Inclement Weather conditions	• Injuries • Fatalities • Heat Stroke • Lightning Strikes	Medium	• No work permitted in bad weather • Severe Heat experience more water must be supplied as well as shade and resting periods
19.	Working on an elevated position	• Fall from an elevated position while fasten the road sign • Incompetent fall protection planner • Working without fall arrest, hardhat and harnesses	Medium	• Risk assessment must be done to identify hazards & potential risk; it must also be communicated to the workers & signed off. • Necessary PPE is required prior to start working in an elevated position. • Fall protection planner must be appointed in terms of CR10 and be able to communicate with all workers on site.
20.	Manual handling	• Bleeding of hands due to cuts from sharp edges from the signs. • Inadequate lifting of signs can result into back injuries • No corresponding PPE	Medium	• Workers must be provided with necessary PPE & PPC prior to start working. • Physical demonstration should be given to all workers
21.	Training	• Language barrier-workers trained in uncomfortable language. • Incompetency trainer • Inadequate training	Medium	• The trainer must determine the language acceptable to workers. • The trainer must be competent to deal with training
22.	Stacking and storage of material	• Workers can trip and fall due to bad stacking. • Bad stacking may lead to compromise housekeeping.	Medium	• Correct stacking and storage are required to maintain housekeeping and avoid necessary accident. • All SWP to be signed off by employees

23.	Working under extreme temperatures	• Workers becomes unconscious because of working under extreme temperatures	Medium	• Workers must not be allowed to work under extreme temperature as that affect their health • Rest periods must be increased, and water intake must be increased
24.	Portable electrical tools to be used on site	• Noise induced hearing loss • Break-down of tools due to improper service • Injury to self-due to incompetent • Injury to others due to parts not being properly fastened.	Medium	• Correct use of and wearing of PPE • Earmuffs • Ear plugs • Noise clippers • Constant supervision
25.	Hazardous chemical agents	• Poor/Inadequate ventilation may lead to difficult breathing. • Working without or inadequate respirators/dust masks may lead to health risks like dermatitis, bronchospasm etc. • Working without the instruction & recommendations from manufactures specifications-DSD	Medium	SDS must be available for each, and every chemical used on site. Necessary PPE must be provided to workers to eliminate and mitigate unnecessary health risks.
26.	Housekeeping	• Poor housekeeping can cause slips, trips and falls which can lead to disablement e.g. twist an ankle.	Medium	• Ensure all PPE is worn. • Effective communication • Maintain housekeeping at all times. & stacking of signs properly to avoid unnecessary trip & fall
27.	Pouring of cement	• Back injuries	Medium	• All PPE to be worn dust mask safety shoes, gloves and safety glasses. • SWP must be available to avoid back injuries etc.
28.	Compacting the holes by means of a stamper	• Injuries to hands due to broken stumper • Injuries to feet • Sign fall as a result of poor stamping	Medium	• Stamper must be checked before being used. • Workers must wear corresponding PPE to avoid unnecessary accident.
29.	Housekeeping	• Illegal dumping of waste may affect nearby communities' health. • Site pollution can be created by leaving empty bags of cement, old signs, poles etc unattended. • Old signs and poles can fall into the road and cause accident.	Medium	• Illegal dumping is a serious offence, and it may lead to serious fine. • As part of environmental management plan, workers are encouraged to keep their site clean after use.

30.	Sewer tie-ins, chambers and confined spaces	• Sewage exposure • Unsafe atmosphere • Engulfment • Collapse and failed rescue	High	• Avoid entry where possible • Do not treat chamber entry as routine plumbing work • Require a separate competent confined-space assessment and entry authorisation, isolation, atmospheric testing, ventilation, attendant, communications and a workable trained rescue arrangement • Provide hygiene and exposure controls for sewage work
31.	Temporary works – Form work & support work	• Temporary works	Medium	• Trained personnel to be used • Correct PPE with harnesses to be issued • Supervised form work and support structures
32.	Painting	• Inhalation of paint fumes, vapour, mist etc • Skin contact with hazardous chemicals	Medium	• Use of respirators • Use of gloves • Training
33.	Bricklaying	• Caustic contamination with mortar • Contact with sharp bladed tools	Medium	• Use only trained personnel • Safe means of access to be provided • Safe/Suitable working platform required when working at heights • PPE for mortar to include gloves where practicable and goggles/ masks where there is a risk of contamination
34.	Cutting off Disc	• Noise • Cuts from machine • Fire (particularly at refuelling) • Flying debris • Blade shattering • Contamination by fume created or exhaust fume	Medium	• Use competent personnel. • Hot works control- fire extinguisher, fire watchman. (Permit may be required) • PPE to include gloves, eye protection, hearing protection • Solid working position. • Clear working area • Correct grade of blade must be used. • Good ventilation to be provided (forced if necessary). • Changing of wheels to be by competent persons only • Cut off discs must not be used for grinding (grinding disc thicker) • Bystanders to wear hearing protection, as applicable
35.	Confined Spaces	• Suffocating • Fumes	High	• Ensure that confined space is sufficiently ventilated • Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality • Test oxygen levels in confined space to ensure that is safe for entry • Ensure that emergency Procedures in place
36.	Demolition	• Falling materials • Premature collapse of structure	High	• Ensure there is a current method statement in place • Ensure all emergency Procedures are in place and all details are displayed • Design temporary propping where needed • Ensure that structural demolition has been approved by the Designer and site management • Personnel must be competent • Ensure at all times there is a safe means of access and egress

				• All personnel must wear suitable and sufficient Personal Protective Equipment, including head, eye, and skin protection
37.	Electrical Commissioning	• Electric shock	High	• Personnel to comply with permits to work issued by Client • Personal protective equipment to be worn by employees to prevent electric shock • First aid treatment to be readily available • Only competent and trained persons may decommission or commission electrical equipment
38.	Erection of Equipment such as breakers, Isolators, CT's, and VT's	• Equipment may topple and fall and cause damage to equipment and injury to staff or staff may fall from heights • Tools may fall from a height and cause injury to staff working on ground level	Low	• Staff on ground level to move off when equipment is bolted to position • Work to be supervised by the Construction Supervisor • All bolts to be torqued to manufacture's Specifications • FAS shall be used by all staff who are erecting the equipment and working on top of support structure •
39.	Fire	• Injuries to workers, pedestrians • damage to property through fire	Medium	• No littering on site which could become fire hazard, maintain site in clean condition. • No fires to be lit on site. Have a working fire extinguisher at hand at all times. • No smoking or naked flame near flammable agents or in unauthorised areas • Ensure proper storage/use of Petrol/diesel/flammable agents – post warning notices
40.	Hazardous Agents	• Injuries to workers through use of hazardous agents, e.g. injuries to eyes, skin, etc.	Medium	• Use agents in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) • Know what First Aid measures are • Have welfare facilities available for washing of hands, etc.
41.	Hot Works	Burns to eyes or other parts of the body Fire	Medium	• Personal Protective Equipment to include eye, skin, and hearing protection • Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required. • The area must be wet down before hot work commence • Fire Extinguisher must be at hand • Remove hazardous and highly flammable materials
42.	Lifting Operations	Falling material Crushing by materials Hand injuries to the slinger Toppling crane	Medium	• Check test certificate • Check examination certificate • Check inspection has been carried out • Check certificates for lifting equipment (chains, slings, shackles, etc.) • Ensure lifting gear is rated to carry load (SWL) • Ensure materials being lifted are properly packaged and slung. • Be aware that there should be a minimum clearance of 600mm between any slewing

				parts of a crane and any fixed installation to prevent being trapped.
43.	Material Hoist	Mechanical failure Overloading Hoist gateway being lifted, left open at landings	Medium	• Safe working limits to be indicated on hoist • Hoist operator to be trained and competent • Regular maintenance and inspections by competent person • Records of maintenance and inspections to be kept • Hoist gate should be fitted with mechanical and electrical interlock devices
44.	Protection of Members of the public	Injury to member of public and road users from site works	Medium	• Barriers and signage to be in place • Workers must warn away any members of public from the works • Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public • Traffic turning into site – traffic management and signage as required. • Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible • Refer to plant Risk Assessment for details on plant safety precautions • NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PUBLIC MUST BE AGREED.
45.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	Medium	• Wear respiratory and hearing protection. • Working hours and noise limits must be limited as far as possible. • Keep CSSD air intakes clear of the work zone. • Wetting and/or damping down to be used to minimise dust where possible. • Engineering Method's must be used to reduce noise to the minimum to compensate for neighbouring public and business activities.
46.	Plastering	Falling materials Fall from height Contact with materials	Medium	• Ensure standard safety Procedures are followed • Ensure there is a safe working area • Ensure safe access and egress • Ensure competent personnel are used
47.	Plumbing	Falling material Falling from height Fire Burns Exposure to lead fumes	Medium	• Ensure standard safety Procedures are followed at all times • Only used trained and competent personnel • Ensure there is a safe working area at all times • Ensure materials are stored neatly • Ensure there is safe access and egress at all times

				• Ensure all personnel wear suitable and sufficient personal protective equipment • Consider a hot works permit system prior to commencing any hot works • Make sure emergency Procedures are in place and ensure all personnel are aware of where to go in case of a fire
48.	Scaffold Erection/ Dismantling	Personnel falling from a height Items of scaffold falling onto personnel Scaffold collapsing onto those below	Medium	• Ensure scaffold is designed to take the imposed loads • Scaffolding is constructed properly and set on steel base plates • Scaffold is not overloaded • Scaffolders are fully trained • Scaffold is anchored properly
49.	Steel Erection	Falling from heights Falling components Contact injuries from falling equipment	High	• Adhere to all general precautions for working at heights • Barrier off/ exclude area below work • All lifting equipment to be inspected and records kept • All personnel to be trained and competent, and to wear clipped on safety harnesses when working on heights • Ensure that lifting equipment (slings, chains, shackles) are tested and test certificates kept on site • Only competent persons allowed to work with lifting equipment
50.	Working at Height	Falling Serious Injury Fatal Injury	High	• All access equipment is properly constructed (inspections record must be maintained) • Only trained personnel construct, dismantle or control the access equipment • All access equipment must have full toe boards and guardrails - comply with SANS 10085 on erection, use and dismantling of scaffolding • No access equipment may be loaded above the level of the guardrail • No access equipment to be loaded above its safe working load • Where work involves leaning out on an open leading edge, then all personnel are to be fitted with full body harness. The harness must be connected at all times • All fall arrest equipment to be correctly maintained • Ensure if ladders are being used for access, they are either footed or tied. Also, the ladder must be set at the correct level of 1 in 4 or approximately 75°
51.	Working with Effluent	Contact with effluent causing sickness or disease	High	• ensure good hygiene facilities • personnel to be competent in work activity • personnel to wear appropriate personal protective equipment such as goggles, overall, gloves and goggles