RISK EXECUTIVE SUMMARY (PROFILE)

Project / Site / Area: Construction of Dr. Mathole Motshekga Primary School (Tender No: RFP 066/2022 | EMIS No: 700341321)

Rev.	HIRA Ref No:	Tasks	Legal Compliance (Y / N)	Normal (N) Abnormal (A) Emergency (E)	Residual Risk Rating			
					Consequence	Likelyhood	Risk Rating	Severity
01	BRA01	Building Construction	Y	A	2	2	6	M
01	BRA01	Workplace Sanitation, Chemical	Y	N	2	2	5	L
		TOTALS			**2**	**2**	**6**	**M**

Role	Developed By:	Accepted By:	Implemented By:	Date Created:	22/05/2025
Name & Surname, Signatue:	Eric Nqampi: 			RevisNo:	01
				Review Date:	03/11/2026
Position:	Construction Health and Safety Agent (CHSA)	OHS Act 16(1) / 16(2) Appointee	Construction Manager	Responsible Person:	OHS Act 16(1) / 16(2) Appointee

RISK RATING MATRIX

CONSEQUENCE

IMPACT TYPE	Loss Type		Insignificant	Minor	Moderate	Major	Catastrophic
	Safety / Heatlh	S / H	First Aid Case / Exposure to minor health risk	Medical Treatment Case/Exposure to major health	Lost Time Injury/Reversible impact on health	Single Fatality or loss of quality life/Irreversible impact on health	Multiple Fatalities/Impact on health ultimately fatal
	Environmental	E	Possible risk to the environment	Fixable dmage to the ecosystem	Serious Environmental harm/Degradation of ecosystem	Major Environmental Harm/ Legal non-compliance	Extreme Environmental harm/ Ecological disaster
	Enterprise / Quality	Q	<R300 000	>R300 000 <R500 000	>R500 000 >R5 million	>R5 million <R20 million	>R20 million
	Impact on Reputation / Social Community	R / C	Slight impact - public awareness may exist but no public concern	Limited impact - local public concern	Considerable impact - regional public concern	National impact - national public concern	International impact - international public concern

LIKELYHOOD	RISK RATING MATRIX			1	2	3	4	5
	Certain	The unwanted event has occurred infrequently;occurs in order of less than once per year & is likely to re-occur within **6 months**	5	11 (M)	16 (H)	20 (H)	23 (EX)	25 (EX)
	Almost Certain	The unwanted event has happened in the business at some time; or could happen within **1 year**	4	7 (M)	12 (M)	17 (H)	21 (EX)	24 (EX)
	Likely/Possible	The unwanted event has happened in the business at some time; or could happen within **1 year**	3	4 (L)	8 (M)	13 (H)	18 (H)	22 (EX)
	Unlikely	The unwanted event has happened in the business at some time; or could happen within **2 years**	2	2 (L)	5 (L)	9 (M)	14 (H)	19 (H)
	Rarely	The unwanted event has never been known to occur in the business; or it is highly unlikely that it will occur within **5 years**	1	1 (L)	3 (L)	6 (M)	10 (M)	15 (H)

Risk Rating	Risk Level	Guidelines for Managing Risk
21 to 25	EXTREMELY HIGH	Eliminate, Avoid, Implement Specific Action Plans or Procedures to Manage & Monitor
13 to 20	HIGH	Proactively Manage
6 to 12	MEDIUM	Actively Manage
1 to 5	LOW	Monitor & Manage as appropriate

RISK MATRIX

DR MATHOLE MOTSHEKGA PRIMARY SCHOOL	Project / Site / Area:	Construction of New Primary School Facilities (Blocks A, B, C, D, EP, I, J, K, L,
BASELINE RISK ASSESSMENT	Division / Contractor:	Building Construction
WORKPLACE RISK ASSESSMENT & CONTROL	Scope of works:	Comprehensive Building Works

Activity (What activity is to be conducted)	Task steps (What are the steps required for the task)	Hazard	Hazard Clasification					Risk	RAW RISK RATING				Controls (What is put in place to prevent the unwanted event tfrom occuring)	RESIDUAL RISK				Comments
			Safety	Health	Environment	Quality	Ergonomic		Consequence	Likelyhood	Risk Rating	Significance		Consequence	Likelyhood	Risk Rating	Significance	
Site Establishment	Clear and grubb using shovels/TLB/Grader	Operated Construction Equipment, Vehicles, heavy lifting equipment etc. Overhead electrical or Telecommunication lines.	x	x	x		x	Lacerations and hand injuries from fence installation. Injuries and fatal incidents when colliding with construction plant.	4	3	18	H	•The principal contractor will be required to develop and submit prior to commencement of work a risk assessment, health and safety plan, the method statements and all relevant supporting documentation to ensure that all overall activities are properly planned. •When using lifting equipment and cranes to assist with site establishment, ensure that all relevant risk assessments and method statements are conducted & employees are briefed on the risks involved. •Use competent employees to fulfil functions during the activities. •Ensure that sites are suitably and sufficiently fence off and provided with controlled access points to prevent the entry of unauthorized persons. •Task specific training; Operators competent and medically fit; Inspection of work area; Registers and checklists conducted daily; Flagmen in position near edges of excavations, constant supervision; and wearing of overalls, reflectors and safety boots.	2	2	5	L	Good
	Working in excavation, excavation by hand. Establishing work area for Excavator / TLB and manual excavation	Collapsing of excavation / trench walls; Faulty equipment; and hitting underground services. Personal / Behaviour - Dangerous behaviour whilst operating equipment. Climatic / Natural Events - Operation within the rainy season. Non-compliance with safe work procedures, short-cuts,	x	x	x		x	Electrocution; Multiple injuries; Engulfment; and Damage to plant and equipment. LTI or fatality. Flooding of loading area, equipment, damage, production loss.	5	4	24	EX	•Constant supervision; Registers and checklists conducted daily; wearing of overalls, reflective vests and safety boots; and Task specific training. •Conduct disciplinary procedure, PTO's. •Conduct daily gegisters and checklists; wearing of overalls, reflective vests and safety boots; and Task specific training. •Evacuation procedure (emergency preparedness & response procedure/ plan), procedure for responding to heavy rainfall/ thunderstorms.	3	2	9	M	Satisfactory
Location, Exposing and Protection of Known and Unknown Existing Services	Location, exposing and protection of known and unknown existing services	Tele communication lines, underground Water and sewage. Overhead and underground power lines and any other Services. Possible damage to property.	x	x	x	x		Electrocution, injuries and Property Damages. Disruption of municipal services.	5	4	24	EX	•Prepare and communicate risk assessment, safe work procedures and or method statement •Locate and identify existing services using underground detectors where possible. •Expose and safe guard services. •Supervision and adequate pre-task training required. •Supervisors must use drawings to locate existing services. •All excavations open overnight / non-working days to be barricaded or fenced at least 1 meter in height. •Limit the length of open excavations by implementing methods statement that reduces the exposure to danger.	3	2	9	M	Satisfactory
s Chemical Agents	Preparing a HCA store	Exposure to various Hazardous Chemical Agents		x	x		x	Inhallation of HCA causing lung diseases, eye and hand injuries, and chronic illnesss. Environmental pollution.	5	4	24	EX	•Before any employee is allowed to use HCA, they must be provided with training, warned about possible hazards as per SDS. Correct and relevant PPE (overalls, safety boots, refletor and respirator) should be issued and wearied to mitigate any possible risk. • Preventative maintenance programme to be implemented for all mobile equipment and light vehicles to minimise emissions. •Pre – use inspections to be carried out by drivers / operators. Use of PPE instances where all has been implemented and there is still significant level of risk.	3	2	9	M	Satisfactory
	Mixing of cement for concrete (building)	Cement mix and concrete splashes into the eyes of the employees, leading to eye injuries.		x	x	x			4	5	23	EX	•Ensure employees are provided with overalls and respirators and goggles.	3	2	9	M	Satisfactory

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Hazardous	Painting	Use of broken and unsafe rollers and paintbrushes may lead to cuts, bruises, and other injuries The excessive inhalation of paint fumes, leading to respiratory complications.		x	x				4	3	18	H	•All hand tools e.g., rollers and paint brushes must be inspected for splinters and if they are broken, they must be disposed of. •Adequate PPE (overalls, gloves and respirators) must be provided to alleviate exposure to fumes and noxious gases. •Employees to adhere to all (SDS) Safety Data Sheet requirements. •HCA storage containers must be installed with ventilation system.	2	2	5	L	Good
		Incorrect disposal, and unsolicited spillage of paint.	x	x	x				3	4	17	H	•All cleaning of paint brushes to be conducted in controlled manner. •No paint spills to be disposed into drains/stormwater channels. •All waste must be safely disposed at a licenced landfill site. •Paint work to be conducted on an impermeable surface.	2	2	5	L	Good

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Electrical Works	Use of electrical equipment	Contact with live electrical wires/cables.	x			x		Electrocution, injuries and possible multiple fatalities	5	5	25	EX	•Develop detailed method statement and ensure that it is implemented. •Exclusion zones to be created with rigid barriers and warning signs when working in open and uncontrolled areas. •No machine to be operated in an area where any part of machine or equipment can make contact with electrical cables. •All persons to be provided with training in the hazards associated with live electrical cables. •Provide employees with relevant PPE. •Ensure built structures are earthed and all electrical installations are inspected and compliant.	3	2	9	M	Satisfactory
	Generating power in remote areas	Unsafe electrical equipment (including generators). Spillages causing soil contamination.	x	x		x	x	Electrocution, Enviornmental contamination	5	4	24	EX	•Electrical equipment to be inspected by an authorised operator or user on a daily basis prior to use. •Details of these inspections to be recorded in a register which will be kept on site at all times. •Generators to be placed on an impermeable surface or in a dip tray.	2	2	5	L	Good
	Tipping of material using tipper trucks	Contact with live overheard power lines	x	x	x			Electrocution, injuries and possible multiple fatalities	5	5	25	EX	•Truck operator's needs to be mindful of overheard electrical wires. Before any mobile equipment is mobilised to a work site, an assessment should be carried out in order to clearly identify any overheard power lines. •Flag-person / spotters to accompany construction plant when conducting dangerous activities.	3	2	9	M	Satisfactory
Excavations — Geotechnical Silty Sand & Strip Footings Risk Controls	Excavating for foundation and underground services	Collapsible, loose to medium-dense silty SAND upper horizon (as identified in Geotechnical Test Pit TP1); structural instability of trench sidewalls; differential settlement; sidewall sloughing; and collapse of unsupported strip footing excavations.	x		x	x		Excavation collapse causing injuries and possible fatalities.	5	4	24	EX	• Geotechnical Report Analysis: Treat all upper silty SAND horizons as highly collapsible and prone to sudden sloughing; batter sidewalls back to a safe angle of repose (maximum 1:2) or install certified continuous trench boxes/shoring prior to personnel entry. • Foundation Strip Footing Construction: Excavate down to the competent founding layer (approx. 1200mm depth); place 3 imported engineered G7 fill layers watered and consolidated to 93% Mod AASHTO density below the 600mm wide strip footing soffit to achieve the required 250kPa bearing capacity as per Structural Engineering specifications. • Inspection & Sign-off: Daily inspections of trench integrity by the appointed Excavation Supervisor, with mandatory re-inspections after any rainfall event, groundwater seepage, or heavy compaction plant vibration. • Edge Loading Control: Maintain spoil heaps, concrete mixers, and construction equipment at least 1.5m back from the edge of all excavations in silty sand zones.	3	2	9	M	Satisfactory
		Excavations conducted without supervision of competent person.	x	x	x	x		Injury to people and damage to property.	4	3	18	H	•All excavations are to be created in the presence of competent excavation supervisor and inspected thoroughly. •Registers of said inspections to be kept in OHS file.	2	2	5	L	Good
Excavations	Working inside excavations	Presence of overhanging rocks or poor soil condition.	x	x	x	x		Collapsing of walls and falling objects resulting in injury to people.	4	4	21	EX	•Excavations must be sloped to the maximum angle of repose. •Rocks and boulders shall be taken out, and loose material must be placed at least 1m from the edge of the excavations. •Regular inspections need to be conducted by competent excavation inspector / supervisor.	3	2	9	M	Satisfactory
		The unsafe use of material and equipment when conducting excavation work.	x	x	x	x		Injury to workers, medical treatment cases.	4	3	18	H	The placement of employees should be limited to the size and accessibility of the working area involved.	3	1	6	M	Satisfactory

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Excavations	Making excavations safe	Inadequate barricading of excavations, falling due to unauthorized access to excavations.	x	x	x	x		Injuries and medical treatment cases.	4	4	21	EX	•Highly visible barricade, hoarding and physical barriers need to be established around deep excavations to impede personnel from falling off the edges. Visible signage to be installed around these working zones for awareness. •Temporary water diversion Berm at an altitude/ level above the working zone, must be created around the open excavations to redirect excess water flowing towards open excavations. If heavy rains lead to the excavations being water-logged, water pumps should be provided to extract the excess water from the excavations.	2	2	5	L	Good
	Edge barricading / protection	No barricading installed on all open edges of buildings / excavations where the risk of falling exist. Edge protection not secured into position to serve the purpose. Edge protection means not inspected daily by competent person	x	x	x	x		Injuries, medical treatment cases and possible fatalities	5	4	24	EX	•PC must devise plans to ensure that edges are protected so as to safeguard the safety of employees. •Must be inspected daily by competent person.	3	2	9	M	Satisfactory
Ladders	To gain access to deep excavations	Falling from the ladder	x		x		x	Injuries and medical treatment cases.	4	3	18	H	•Must be inspected daily. •Principal contractor to appoint such qualified person and must ensure that no worker uses a ladder where scaffolding should be used for elevated works. •Provide personal protective equipment. •Ladders are to be inspected before commencement of work, ladders are to be securely fixed tied down below and protrude 1m above the surface level. •Workers to be trained for safe use of ladders.	2	2	5	L	Good
	Accessing trenches/Conduits	Collapse of trench, falling objects	x		x		x	Serious injuries or even a fatality.	5	3	22	EX	Support / Bench / batter the excavation to avoid caving – in of the material. Assess the properties on the material ideally Geotechnical reports. Materials must not be placed or stacked near the edge of the trench. All trenches to have safe barricade when left open for a period of time.	3	2	9	M	Satisfactory

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BASELINE RISK ASSESSMENT

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Concrete Works	Mixing of cemenet using manual labour and mechanical means	Noise, dust and slippery surfaces	x	x	x	x		Occupational disease, injuries and medical treatment case	4	4	21	EX	•The contractor to ensure that workers are informed about the risks associated with their activities. •Contractor to use appropriate PPE.	2	2	5	L	Good
	Compacting of floor using Pedestrian Roller or Compactor	High noise levels; Exposure to excessive equipment vibrations; Excessive dust; Faulty equipment; ad Running over equipment and tools	x	x		x		Occupational diseases and injuries; Damage to plant and equipment; and Noise induced hearing loss	4	3	18	H	Constant supervision; Task specific training; wearing of overalls, dust masks, ear plugs and safety boots; Constant rotation of employees using a Pedestrian Compactor; and Registers/checklists conducted daily	1	1	1	L	Good
	Concrete pouring using mechanical means	Falling objects Slippery surfaces Concrete coming to contact with skin. Splashes of concrete entering eye.	x	x	x	x		Eye injuries, absorbtion through skin, occupational disease	4	3	18	H	•Induct employees on safe work procedure •Provide correct PPE and ensure that they wear the PPE	1	2	2	L	Good
Temporary Works	Erecting working platforms	Poor manual handling	x		x	x		Sprains, strains, and fractures (ergonomic injuries)	4	5	23	EX	•Train employees on good lifting techniques. •Heavy loads to be lifted by a group rather than an individual. •Introduce the lifting machinery to avoid accidents to employees.	2	2	5	L	Good
	Erecting temporaty supporting structures	Temporary works not designed by competent Engineer; not being signed off by appointed temporary works designer; erected by incompetent erectors. PC not working according to temporary works design. Temporary works not designed, inspected, and approved by competent person as per CR12. Collapsing of substandard supported structure.	x		x	x		Serious injuries or even a fatality.	5	5	25	EX	•Must be designed, inspected, and approved by competent person. •Must be inspected daily. •Detailed drawings must be readily available for all temporary works.	3	2	9	M	Satisfactory

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Steel Reinforcement	Offloading steel from the truck	Falling load	x					Injuries, fatalities and property damage	4	4	21	EX	Pre-use inspections to be conducred, regular load tests, competence / DSTI / Whistle blow, banksman techiniques, right communcation between banksman and operator.	2	2	5	L	Good
		Swinging load	x					Injuries, fatalities and property damage	4	4	21	EX	Working area must be sufficiently baricaded to keep out unauthorised persosn, whistle blowing tobe observed, access limit signs, right communcation between banksman and operator.	3	2	9	M	Satisfactory
		Hit the walls, formwork or plant with the load	x				x	Injuries, fatalities and property damage	3	4	17	H	Guide rope to be used, operator must be competent, proper communication.	2	2	5	L	Good
		Fall from heights	x				x	Injuries, fatalities	4	3	18	H	Proper access to and from trucks to be maintained.	2	2	5	L	Good
		Poor visibility	x					Injuries, fatalities and property damage	2	3	8	M	DSTI and tool box talks to be communicated to employees, beacon lights must be on, and works to be supervised at all times.	1	3	4	L	Good
		Use of alcohol or drugs to avoid the fall asleep	x					Injuries, fatalities and property damage	3	3	13	H	Conduct Alcohol tests often but except during the declared transmittable diseases pandemic, conduct DSTIs and tool box talks relative to the use of alcohol at work.	1	2	2	L	Good
		Fatigue in the later hours	x			x		Injuries, fatalities and property damage	3	3	13	H	Conduct relevant DSTI and tool box talks, constant supervision required, regular breaks to be observed or rotating of employees and/or teams on the task at hand and with high risk tasks to prevent fatique and occupational diseases, fatigue management to be observed.	1	3	4	L	Good
		Employees strucked by the plant	x	x			x	Injuries, fatalities and property damage	3	5	20	H	Address all hazards during DSTI and tool box talks	2	2	5	L	Good
Steel Reinforcement	Stacking steel at designated areas	Falling stacks	x					Crush injuries and fatalities	3	5	20	H	Stacking and storing inspections, DSTIs conducted to identify hazards, constant supervision of works.	3	2	9	M	Satisfactory
		Sharp edges / rough edges	x					Deep laceration and minor cuts	3	5	20	H	Leave at leaset 1m walk way in between stacks and maintain good housekeeping.	1	3	4	L	Good
		Hit the wall, formwork or plant with the load	x			x	x	Injuries, fatalities and property damage	4	3	18	H	Guide rope to be used, stacking and storing person to be competent, and proper communication to be observed.	1	2	2	L	Good
		tripping on stacks	x					Falling bruises/ contusions	3	4	17	H	Leave at least 1m walkways in between stacks and stack neat and proper.	2	2	5	L	Good
		Poor visibility	x				x	Injuries, fatalities and property damage	2	3	8	M	DSTI and tool box talks to be communicate poor visibility control measures, beacon lights must be on, constant supervision.	1	3	4	L	Good
		Use of alcohol or drugs to avoid the fall asleep	x	x		x		Injuries, fatalities and property damage	3	3	13	H	Conduct Alcohol tests often but except during the declared transmittable diseases pandemic, conduct DSTIs and tool box talks relative to the use of alcohol at work.	1	2	2	L	Good

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Steel Reinforcement		Fatigue in the later hours	x	x		x	x	Injuries, fatalities and property damage	3	3	13	H	DSTI, tool box talks, constant supervision, regular breaks, fatigue management, rotate teams	1	3	4	L	Good
		Employees strucked by the plant	x					Injuries, fatalities and property damage	3	5	20	H	Flagmen/ladies to be deployed where needed, use of whistle to be observed, banksman techiniques to be used to communicate with operators, certificate of competence must be valid for all operators.	2	2	5	L	Good
	Moving steel from laydown area to fixing point	Heavy objects	x	x				Back injuries	3	4	17	H	Supervision of the works, lift with legs instead of your back, conduct DSTI to identify hazards.	3	1	6	M	Satisfactory
		Falling objects	x					Crush injuries and fatalities	3	5	20	H	Conduct per-use ifting equipment check list, discuss relevant tool box talks and DSTI, create a safe zone to keep out unauthorised persons.	3	2	9	M	Satisfactory
		Employees strucked by the steel/plant	x					Injuries, fatalities and property damage	3	5	20	H	Have flagladie/men in place, make use of a whistle with banksman techiniques, a valid certificate of competence is required.	2	2	5	L	Good
		Poor visibility	x				x	Injuries, fatalities and property damage	2	3	8	M	DSTI and tool box talks to be communicate poor visibility control measures, beacon lights must be on, constant supervision.	1	3	4	L	Good
		Fatigue in the later hours	x	x		x	x	Injuries, fatalities and property damage	3	3	13	H	DSTI, tool box talks, constant supervision, regular breaks, fatigue management, rotate teams.	1	3	4	L	Good
		Use of alcohol or drugs to avoid the fall asleep	x	x		x		Injuries, fatalities and property damage	3	3	13	H	Conduct Alcohol tests often but except during the declared transmittable diseases pandemic, conduct DSTIs and tool box talks relative to the use of alcohol at work.	1	2	2	L	Good

RISK MATRIX

DBSA Building Africa's Prosperity		DR MATHOLE MOTSHEKGA PRIMARY SCHOOL												Project / Site / Area:				Construction of New Primary School Facilities (Blocks A, B, C, D, EP, I, J, K, L,				
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Steel Reinforcement	**Fixing steel using pliers and wires**	Wire whiplash, nip points	x					Eye injuries, body cuts	3	4	17	H	Wear a task specific PPE such as gloves that grip, goggles, overalls, reflector and safety boots.	2	3	8	M	Satisfactory				
		Fatigue in the later hours	x	x		x		Injuries, fatalities and property damage	3	3	13	H	Company fatique management policy to be communicated and complied with. Teams and individuals to rotate with high risk tasks to prevent fatique and occupational diseases.	1	3	4	L	Good				
		Poor visibility	x			x	x	Cuts, fracture, serious injury	2	3	8	M	DSTI and tool box talks to be communicate poor visibility control measures, beacon lights must be on, constant supervision.	1	3	4	L	Good				
	Working near unprotected edges or open holes	Falling from heights to lower level	x					Fracture, serious injuries, fatalities	3	4	17	H	Danger signs to be erected. Constant supervision and conduct DSTI to identify hazards and control measures.	2	2	5	L	Good				
		Fatigue in the later hours	x	x		x		Injuries, fatalities and property damage	3	3	13	H	Company fatique management policy to be communicated and complied with. Teams and individuals to rotate with high risk tasks to prevent fatique and occupational diseases.	1	3	4	L	Good				
		Poor visibility	x				x	Injuries, fatalities and property damage	2	3	8	M	DSTI and tool box talks to be communicate poor visibility control measures, beacon lights must be on, constant supervision.	1	3	4	L	Good				
	Access sloped slab	Slipping and falling down slopes	x					Sprains, fractures, bruises	3	4	17	H	DSTI to be conducted to identify present hazards and control measures. If slops exist on site, planks or such must be secured on walk way ground for employees to grip and not fall.	2	2	5	L	Good				
		Poor visibility	x			x	x	Injuries, fatalities and property damage	2	3	8	M	DSTI and tool box talks to be communicate poor visibility control measures, beacon lights must be on, constant supervision.	1	3	4	L	Good				
Brick Works	Moving bricks and blocks for employees	Poor terrain Incorrect type of trolley to lift bricks and blocks. Repetitive lifting of bricks and blocks. Increased load of new modular bricks and blocks.	x	x	x		x	Pinches, Hand injuries	3	4	17	H	•Train employees on good lifting techniques •Introduce the lifting machinery to avoid accidents to employees •Wearing of hand gloves to prevent injuries.	2	2	5	L	Good				
Portable Electrical Equipment	Drilling and grinding	Flying particles (sparks) that can cause asthma	x	x	x	x	x	Occupational disease, eye injuries and asthma, uncontrllable fire	4	4	21	EX	•Machine guard to be fitted and ensure that the machine is working properly. •Inspection and pre-checks to be conducted before using any driven machine. •Grinding area must be controlled by screens to prevent sparks from flying to other workers in the area and/or even fire. •Fire extinguishers to be placed everywhere there is a risk of fire.	1	2	2	L	Good				
Welding	Welding	Fumes and welding sparks	x	x	x		x	Occupational disease, eye injuries and asthma	4	5	23	EX	Provide personal PPE (welding helmet and denim overalls), ensure that the area is ventilated if the operation is taking place in-house. Fire extinguishers to be placed everywhere there is a risk of fire.	2	2	5	L	Good				

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			Safety	Health	Environment	Quality	Ergonomic		Consequence	Likelyhood	Risk Rating	Significance		Consequence	Likelyhood	Risk Rating	Significance	
Confined Spaces	Working in enclosed areas or confined space or deep excavations	Trench collapse. Lack of oxygen. Damage to property such as water and sewer lines.	x	x	x		x	Serious injuries or even a fatality.	5	4	24	EX	The construction plant and vehicles should not be allowed to drive too close to the edges of the trench. The construction plant must at least drive 2m away from the trench.	2	3	8	M	Satisfactory
Stacking & Storing	Stacking and storage	Material falls due to improper stacking, heavy concrete pipes rolling if stacked incorrectly.	x		x	x	x	Damage to property and injuries to persons on site	4	4	21	EX	Stacking should be supervised by competent person. Best stacking practices should be applied. Training for those responsible for discharging this duty should be provided. 1m spaces must be left in between stacks. Stacking must be done in tiers that are gradually decreasing going up where the base is securely on an even surface. Stop blocks must be placed on each side of the stacked pipes to prevent rolling.	2	2	5	L	Good
		Insecure stacked material. Stacking and storage of storm water pipes on site could prove problematic and if rolled down hills.	x		x	x	x	Severe damage, serious injuries, and possible fatalities.	5	4	24	EX	Adequate supervision will be needed. The Principal Contractor is advised to take the terrain factor into consideration when stacking and storage of heavy pipes is done. Stacking must be done in tiers that are gradually decreasing going up where the base is securely on an even surface.	3	2	9	M	Satisfactory

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Loading & offloading	Loading and offloading	Lack of man-power or lifting equipment	x		x		x	Back injuries, serious injuries, medical treatment case	4	4	21	EX	Train employees on safe lifting techniques, reduce the weight of items to be lifted and use the mechanical equipment to lift heavy items.	2	3	8	M	Satisfactory				
	Moving material by transport	Material not stacked/loaded and tied down properly onto the transporting vehicle.	x		x		x	Damage to property, machinery, and injuries to persons because of it falling off.	4	5	23	EX	•Material and equipment to be stacked and loaded properly onto transportation vehicles, tied down correctly to minimize movement, and falling off the edges. •No passengers are to be loaded in an unauthorized manner or position in the transportation vehicle. •All moving of material must be supervised by a competent person. •The use of a guide rope must be implemented at all times.	2	2	5	L	Good				
	Loading and offloading manually	Unsafe handling techniques used in the process of offloading heavy material and equipment	x			x	x	Back injuries, persons being hit by falling objects and overall damage to property and equipment.	4	4	21	EX	•Appropriate equipment and manual handling techniques must always be used to prevent unforeseen injuries. •Lift in pairs or in groups to eleviate the weight of the load. •Lift using legs and not your back.	2	3	8	M	Satisfactory				
	Positioning / loading / offloading of a container	Contacting live overhead electrical cables during the loading / offloading of an elevated container	x		x			Serious injuries and possible fatality.	5	5	25	EX	•Adequate preventative measures must be put in place to prevent/avoid contacting live electrical cables during the installation of elevated containers. •A holistic task-specific risk assessment must be conducted prior to the commencement of activities, covering all the necessary hazards attributed to the task, which must subsequently be communicated to all personnel involved. •Competent supervision must be implemented throughout the inception of activities. •The use of a guide rope must be implemented at all times.	3	2	9	M	Satisfactory				
Use of a Ready Mix Truck	Pouring blinding using ready mix truck	Ready mix truck too close to the edges of the excavation, risk of truck toppling into the excavation and compromising the strength of the excavation.	x	x	x	x		Trench collapse, sever property damage and serious injuries leading to medical treatement.	4	5	23	EX	Operators to be trained about the hazards associated with driving the truck too close from the edges of the excavation. Excavations to be barricaded and signage's to be erected. A safe zone must be preserved to prevent activities too close to the edges.	2	3	8	M	Satisfactory				
Use of a Mobile Crane	Use of Cranes to lift and off load heavy objects	Crane falling over or accidentally releasing the load	x		x			Serious injuries and catastrophic fatalities	5	5	25	EX	Operator and Risk Assessor to inspect the ground conditions. Crane to stand on the firm ground, safe work procedure to be communicated with crane operator. Strong winds to be observed with caution and the decision be taken on whether it is safe to use the crane or not. Safe Working Load to be displayed and planned around it. Use a guide rope to control loads.	3	1	6	M	Satisfactory				
Weather tions	Working on adverse weather conditions	Thunder and lightning	x	x	x	x		injuries and fatalities	5	3	22	EX	Employees should not be allowed to work on severe weather conditions, especially working with steel and corrugated iron. Work should be halted as soon as the weather becomes intense and the rain start falling.	3	1	6	M	Satisfactory				

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Extreme W Condi	Working at extreme weather conditions	Thermal heat	x	x	x	x		Heat stroke, dehydration, and fatigue	4	3	18	H	Adequate water supply, ensure workers are medically fit for the type of activity that they may be exposed to. Exposure to excessive heat/hot weather conditions should be prohibited and regular breaks taken.	1	2	2	L	Good
Compacting	Compaction with mechanical equipment. Use of jack hammers	Vibration	x	x	x	x	x	Muscular skeleton injuries, low back disorde, occupational disease	5	4	24	EX	Regular intervals to be taken and rotation of employees to reduce exposure to danger.	3	2	9	M	Satisfactory
Mechanical / Machinery	Operating machinery	Noise will be generated by construction plant. Caught in between.	x		x		x	Noise induced hearing loss, hand injuries, serious injuries leading to fatality	5	4	24	EX	Principal Contractor to provide PPE (ear protection, gloves, goggles and overalls). Workers should be rotated to reduce exposure. Noise must be measured and if found to be more than 85 decibels, the contractor must provide means to mitigate the impact. Loose clothing and jewelery prohibited when working with machinery, especially ones with rotating machenisms.	3	2	9	M	Satisfactory

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Construction Traffic, Deliveries & Public Road Interface	Movement of construction plant will generate dust	Dust	x	x	x		x	Inhallation of dust leading to occupational injuries and diseases, asthma	4	4	21	EX	The Principal Contractor must ensure that the dust generation is suppressed by means of watering the area. Provide the PPE such as Dust mask to mitigate the impact. Medical surveillance must be conducted before the commencement of the project and after the project.	2	2	5	L	Good
	Movement of heavy tippers, concrete trucks, and plant accessing Falcon Street, Korhaan Crescent, and Duiker Street; offloading of building supplies.	Severe traffic congestion on surrounding residential roads; construction vehicles turning across active traffic lanes; supplier delivery queues blocking public roadways; restricted site access sightlines.	x		x	x		Collisions between construction vehicles and public motorists; traffic gridlocks during peak municipal traffic hours; property damage to perimeter municipal roads and kerbs.	5	5	25	EX	• Implement a formal Traffic Management Plan (TMP) strictly aligned with the Traffic Impact Study Report recommendations. • Schedule all heavy construction plant movements, bulk earthmoving tippers, ready-mix concrete pours, and wide-load deliveries strictly outside of morning and afternoon peak hours. • Station trained, certified flagmen equipped with high-visibility PPE, two-way radios, and Stop/Go boards at all site ingress and egress gates. • Erect South African Road Traffic Signs Manual (SARTSM) compliant advance warning road signs (W107/W108 construction vehicle turning, speed reduction to 30km/h) along Falcon Street, Korhaan Crescent, and Duiker Street. • Demarcate internal holding bays inside the site perimeter to prevent delivery trucks from staging or idling on municipal streets.	3	2	9	M	Satisfactory
Construction Plant	Operating construction plant	Mistakes in operation by employees and operators, Lack of competency leads to mistakes, use of equipment incorrectly	x		x		x	Traffic accidents, collisions with other vehicles and people leading to serious injuries and fatality	5	5	25	EX	•All employees on site to be properly inducted. •Competent supervision to be provided on site. •Employees must wear reflective clothing and always give construction plan a right of way.	3	2	9	M	Satisfactory
	Operating / movement of heavy machines.	Short cuts, incompetency, lack of observation	x		x		x	Collisions leading to serious injury and/or fatality.	5	4	24	EX	•Only competent and properly trained workers must be allowed to operate machines. •Workers need to be in possession of valid medical certificates of fitness and operator competency. •Daily pre-inspections to be conducted on all equipment and machinery, and all deviations recorder and reported accordingly. •Trained flag persons to be used when plants are in operation.	3	2	9	M	Satisfactory
Hygiene	Microbiological bacterium	Exposure to bacterium hazards associated with portable chemical toilets and ablution facilities.	x	x	x		x	Occupational disease	3	4	17	H	Units to be serviced regularly. Units to be inspected and cleaned daily. Water and soap to be provided to enable employee's tom to wash their hands, Hygiene practice.	2	2	5	L	Good
Pollution	Environmental contamination	Spillage of chemicals polluting the soil. Release of excessive smoke polluting the air. Hydrocarbon spillages on the ground.		x	x	x	x	Occupational disease, soil contamination	3	4	17	H	The principal contractor must put the drip trays under the vehicles whenever there is leak. All pollution incidents must be reported to relevant authorities.	2	2	5	L	Good

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Housekeeping	Walking	Slopping ground Falling / rolling objects injuring persons	x		x		x	Serious injuries and medical treatment case	4	4	21	EX	Maintain good housekeeping, remove trip hazards and keep site neat and tidy.	2	2	5	L	Good					
	Working by stripping, cutting, dismenttling, rearranging, etc.	Housekeeping not being maintained daily. Generated waste, scrap and debris not removed from site at reasonably appropriate intervals. Construction areas near build up areas not sufficiently hoarded.	x		x		x	Environmental contamination, injuries to workers.	4	3	18	H	•Housekeeping to be maintained daily. •Hoarding must be maintained daily and must be kept up to standard.	1	2	2	L	Good					
Overhead and Underground Power Cables	Excavating and operating Tippers and Excavator	Lack of spotters and flag-persons, lack of supervision	x		x		x	Electrocution which can cause injury to persons or even fatality.	5	4	24	EX	•Determine the location of underground services. •If underground power cables are located in the vicinity, exercise extreme cautions while excavating. •Communicate with relevant stakeholders such as Eskom, and the relevant Department from the Local Municipality.	3	2	9	M	Satisfactory					
Pedestrian, Learner & School Community Safety Management	Learner intake and dismissal pedestrian traffic; members of the public utilising perimeter sidewalks and designated crossings adjacent to active construction work.	Extremely high pedestrian volumes around the school; high concentration of primary school learners; multiple pedestrian crossing points surrounding the site; blind spots at construction entrances; vehicle-pedestrian conflict.	x	x		x		Run-over, impact, and fatal pedestrian strikes involving learners or members of the public; crowd crush incidents near active vehicle gates.	5	5	25	EX	• Erect a continuous, solid, anti-climb hoarding fence of at least 1.8m height along the entire boundary to achieve complete physical segregation between active construction areas and public/learner zones. • Deploy dedicated crossing guards/pointsmen at all pedestrian crossing locations around the school perimeter during morning peak arrival (06h30–08h00) and afternoon dismissal (13h00–14h30) hours. • Establish physical covered pedestrian walkways and continuous solid pedestrian barriers adjacent to vehicle gates to prevent learners from walking into vehicle swept paths. • Enforce a strict 15 km/h site precinct speed limit with zero tolerance; reverse operations prohibited unless directed by a designated banksman. • Maintain active liaison with the School Governing Body (SGB) and Community Liaison Officer (CLO) to provide school safety awareness assemblies on construction hazards.	3	2	9	M	Satisfactory					
Heights	Working at elevated positions	Falling objects. Employees not hooking safety harness to anchor points. Employees working at heights not having necessary competency to work at heights.	x	x	x			Serious injuries maybe leading to deaths	5	4	24	EX	•Employees working at heights must have certificates of competence. •Anchor points must be certified by a competent person before they can be used. •Fall arrest or restraints to be inspected by competent person before use. •Tools to be secured while working at heights to prevent falling from heights.	3	2	9	M	Satisfactory					

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Work at h	Fall Protection	Employees not working according to approved fall protection plan. Employees not trained on fall protection plan. Lack of supervision to ensure that workers are implementing the approved fall protection plan.	x	x	x			Serious injuries maybe leading to deaths	5	4	24	EX	•Fall Protection plan to be communicated among all employees by means of induction training and toolbox talks. •Employees to have the necessary competency in order to qualify to work at heights. •Fall protection plan to be updated throughout the project lifespan. •Fall protection plan to address all site-specific conditions.	3	2	9	M	Satisfactory
Scaffolding	Working at elevated positions	Scaffolding not being erected according to SANS 10085 Standards, untrained scaffolding erectors. No scaffolding inspector, No sole boards installed, No sign, No design available for special scaffolding. No access ladder, Area below scaffolding not barricaded when scaffolds are being dismantled. Scaffolding erected on uneven ground level.	x	x	x	x	x	Serious injuries maybe leading to deaths	5	4	24	EX	•Must be designed and inspected by competent person. •Must be inspected daily by a competent person. •Must have detailed designs available upon request. •Must be erected by a trained employee. •Must be signed off as safe for use / unsafe for use.	3	2	9	M	Satisfactory
Roof Work	Roof structure installation	Falling from elevated position. Roof structure not secured properly and if sufficient temporary bracing is not in place, structure may fail. Tools falling from elevated working platform.	x	x	x		x	Serious injuries maybe leading to deaths	5	4	24	EX	•Employees must be trained on safe working procedures. •Work must be executed under supervision. •Work must be executed in line with task specific risk assessments to ensure safety of employees. •Employees must be medically fit to work at heights and must be trained at fall risk work. •Life line or similar means must be installed to prevent falls from heights.	3	2	9	M	Satisfactory

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Office Ergonomics	Operating a computer workstation, desktop or laptop; Working in awkward postures	Fixed or un-adjustable workstation and furniture setup; Contact Stress; Insufficient rest breaks; Static or sustained postures; Temperature (hot or cold); Substandard lighting; Poor layout/housekeeping; Body Mass Index (BMI), age, activity exposure history and sex of the employee can also have a negative and pose as a risk.	x	x	x	x	x	Leg, back, neck, upper limb, eye, and noise discomfort. Fatigue; Poor performance; Increased error or rejection rate; Absenteesm.	4	5	23	EX	•Desk height range: 72-74cm. Height adjustable desk should be implemented if viable. •Chair height range: 40-55cm, however this should be adjusted to your knee height. •Seat pan length range: 40-50cm, this should be adjustable to accommodate your leg length. •Seat pan width range: >45cm, ensure the chair is wide enough to accommodate you. •Monitor height to be positioned 15-20° below the horizontal eye-level. •Monitor distance to be greater than 60cm, about an arm's length away. •Back rest height: 50-68cm, should be adjustable to your needs. •Within 25cm from the edge of the desk. •Desk depth: >75cm, should be sufficient space for your work. •Armrest height range: 12-22cm	1	2	2	L	Good
Manual Handling & Lifting	Bending; Lifting heavy items; Reaching for items to be lifted or handled; Reachingn overhead	Inadequate work-rest cycles; Excessive work-pace and/or duration; Body Mass Index (BMI), age, activity exposure histor and sex of the employee can also have a negative and pose as a risk.	x	x	x	x	x	Inadequate work-rest cycles; Excessive work-pace and/or duration; Body Mass Index (BMI), age, activity exposure histor and sex of the employee can also have a negative and pose as a risk.	4	5	23	EX	**Human Component** •Employee age-related factors are not contributing to the risk of this task. •Employee exposure history poses a high risk to this task. Implement employee rotation and review work-rest ratios. •Employee BMI is not contributing to the risk of this task.	2	1	3	L	Good
	Compression; Contact Stress;	Divided attention task; Unfamiliar task; Poorly designed tools; Lack of PPE or poorly designed or maintained PPE; and Lack of task variability	x	x	x	x	x	Injury, Fatigue, Discomfort, Low back pains, Poor performance, Increased error or rejection rate, Absenteesm	4	4	21	EX	**Task Components** •Task time poses minimal risk. •Reach poses a high risk, reduce reach or re-design the task. The greater the reach the higher the compressional forces are in the back. Keep loads as close to the body as possible. •Vertical displacement poses minimal risk. •Horizontal displacement poses a high risk, implement a trolley or lifting device. Wherever possible reduce the need to carry loads. •Frequency poses minimal risk. •Working heart rate poses minimal risk. •Load poses a moderate risk, reduce the load wherever practicable. •Static holding poses minimal risk. •Twisting poses a moderate risk, design twisting out of the task. •Provide handles for the load. Appropriate handles help reduce the force required to hold and lift the load. If possible, provide mechanical aids. •There is no kneeling or crouching risk for this task. •Temperature poses a human safety risk and may reduce performance.	2	1	3	L	Good
elated Upper Limb der (Ergonomic)	Static or Sustained Postures; Repetitive motions	Lack of PPE or poorly designed or maintained PPE; Lack of task variability; Body Mass Index (BMI), age, activity exposure histor and sex of the employee can also have a negative and pose as a risk.	x	x	x	x	x	Injury, Fatigue, Discomfort, Low back pains, Poor performance, Increased error or rejection rate, Absenteesm	4	4	21	EX	**Human Component:** •Employee age-related factors pose a moderate risk to this task. •Employee exposure history poses a high risk to this task. Implement employee rotation and review work-rest ratios. •Employee BMI is not contributing to the risk of this task.	2	3	8	M	Satisfactory

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Work-Re Disord	Vibrations	Complex task; Excessive work-pace and/or duration	x	x	x	x	x	Injury, Fatigue, Discomfort, Low back pains, Poor performance, Increased error or rejection rate, Absenteesm	4	4	21	EX	**Task Components:** •Task time poses minimal risk. •Load poses a moderate risk, reduce the load wherever possible. •Repetition poses minimal risk. •Forceful movement poses minimal risk. •Reach poses minimal risk. •Static posture poses minimal risk.	2	2	5	L	Good
Push / Pull Ergonomics	Forceful Exertions	Excessive work-pace and/or duration; Body Mass Index (BMI), age, activity exposure histor and sex of the employee can also have a negative and pose as a risk.	x	x	x	x	x	Injury, Fatigue, Discomfort, Low back pains, Poor performance, Increased error or rejection rate, Absenteesm	3	4	17	H	**Human Component:** •Employee age-related factors are not contributing to the risk of this task. •Employee exposure history poses a minimal risk to this task. •Employee BMI is not contributing to the risk of this task.	1	2	2	L	Good
	Push/Pulling heavy loads	Lack of PPE or poorly designed or maintained PPE; Lack of task variability;	x	x	x	x	x	Injury, Fatigue, Discomfort, Low back pains, Poor performance, Increased error or rejection rate, Absenteesm	3	5	20	H	**Task Components:** •Task time poses a moderate risk, implement employee rotation schedules. •One can reduce sustained forces, from mechanisation to more suitable carts. Engineering controls and employee education are required. •Frequency per shift is high, consider mechanizing the task. Engineering controls and employee education are recommended. •Distance the load is moved poses a high risk. Consider mechanizing the trolley. Engineering controls is required. •The working surface is appropriate for trolley pushing and pulling. •Handle height poses a moderate risk, implement vertical handles if possible. •Working heart rate poses minimal risk. •Load poses a high risk, reduce load or mechanize the trolley. Engineering controls is required. •Aisle width poses minimal risk. •No twisting risk. •Temperature poses a human safety risk and may reduce performance.	2	2	5	L	Good
Attenuation Pond & Civil Earth Retention Works	Deep bulk excavation (3,088 m³), dewatering, assembly and installation of stone-filled galvanised gabion boxes (274 m³), Reno mattresses (28 m³), geotextile underlay, and concrete trapezoidal spillways.	Excavation side-wall collapse; heavy water accumulation and subterranean seepage; sharp wire lacerations during lacing; manual handling of heavy broken stone; displacement of geotextile blankets.	x	x	x	x	x	Engulfment and crushing by collapsing embankment; drowning/flooding; severe puncture wounds and lacerations; musculoskeletal back strains; silting of surrounding natural stormwater courses.	5	4	24	EX	• Appoint a competent Excavation and Temporary Works Supervisor to oversee all dam cuts and battering. • Maintain side slopes at a safe angle of repose (maximum 1:2 in dry ground); install benching and rigid edge barricading with warning signs at 1.5m perimeter. • Deploy continuous mechanical dewatering pumps with discharge hoses routed to silt traps; keep open water pumping logs daily. • Enforce heavy-duty leather riggers' gloves, safety glasses, and steel-toe boots during wire basket lacing and stone packing. • Utilize mechanical plant (TLB/excavator buckets) for bulk stone staging close to boxes to prevent manual over-exertion and repetitive strain. • Anchor geotextile filter fabric immediately with ballast stones to prevent wind lift.	3	2	9	M	Satisfactory
Relocation and Re-erection of Decanting Modular Structures	Dismantling existing modular structures, mobile crane rigging/slinging, wide-load road transport within a 70km radius, site offloading, positioning on new concrete bases, and structural re-anchoring.	Overhead crane rigging failure; swinging suspended modules; wide-load transit road accidents; structural module collapse during jacking/dismantling; pinch points and working at heights during roof reconnects.	x	x	x	x	x	Crush fatalities from dropped loads; road traffic collisions and third-party property damage; structural collapse during unbolting; falls from elevated module roofs.	5	4	24	EX	• Conduct pre-dismantling structural integrity check by a competent person before unfastening anchors. • Develop a specialized lifting plan; appoint a qualified rigger and certified mobile crane operator with valid load test certificates and lifting tackle registers. • Demarcate 100% exclusion zones with rigid barriers and flagmen during hoisting operations. • Obtain statutory abnormal/wide-load transport permits; provide pilot escort vehicles and secure tie-downs during transit over public roads within the 70km corridor. • Enforce full-body safety harnesses attached to verified anchor lines for all roof-level disconnecting and reconnection tasks.	3	2	9	M	Satisfactory

RISK MATRIX

DR MATHOLE MOTSHEKGA PRIMARY SCHOOL		Project / Site / Area:	Construction of New Primary School Facilities (Blocks A, B, C, D, EP, I, J, K, L,
BASELINE RISK ASSESSMENT		Division / Contractor:	Building Construction
WORKPLACE RISK ASSESSMENT & CONTROL		Scope of works:	Comprehensive Building Works

Activity (What activity is to be conducted)	Task steps (What are the steps required for the task)	Hazard	Hazard Clasification					Risk	RAW RISK RATING				Controls (What is put in place to prevent the unwanted event tfrom occuring)	RESIDUAL RISK				Comments
			Safety	Health	Environment	Quality	Ergonomic		Consequence	Likelyhood	Risk Rating	Significance		Consequence	Likelyhood	Risk Rating	Significance	
Erection of 200kL Elevated Steel Water Tank and Support Tower	Excavation and casting of reinforced concrete base plinths, hoisting steel tower columns and bracing, lifting steel tank panels at heights, bolt tensioning, chemical anchoring, and pipe reticulation tie-ins.	Heavy structural steel lifts at heights; crane tipping; falling steel sections; working at heights exceeding 10m; dropped tools/bolts; working in enclosed tank space during internal sealing.	x	x	x	x	x	Fatalities from falls from height; structural collapse of tower during assembly; fatal strike by dropped objects; asphyxiation/fume toxicity during internal tank joint sealing.	5	5	25	EX	• Implement a specialized Fall Protection and Rescue Plan for elevated tower assembly (CR 10). • Enforce double-lanyard full-body safety harnesses with 100% tie-off to engineered lifelines and certified mobile elevating work platforms (MEWPs) / scaffolding. • Verify crane outrigger pads on compacted engineered ground; perform daily crane and tackle inspections before lifting steel sections. • Establish a barricaded dropped-object exclusion zone beneath the tower; fit all tools with safety lanyards. Issue a Confined Space Entry Permit with forced mechanical ventilation, gas monitoring, and standby safety sentry during internal tank sealing.	3	2	9	M	Satisfactory
Structural Steel Truss Assembly, Timber Rafter Erection & Roof Sheeting	Erection of welded double-pitched structural steel roof trusses (7.77t), 175mm lipped purlins (4.59t), prefabricated timber trusses across all blocks, Sisalation membrane, and 0.8mm Chromadek Klip-Tite roof sheeting	Unstable trusses during temporary propping; high winds; falls from open roof rafters and eaves; sharp edges of Chromadek sheeting; hot work and sparks during steel cleat welding/cutting.	x	x	x	x	x	Multiple fatalities due to roof truss collapse; falls from height; severe lacerations from metal sheeting edges; fire ignition from welding/cutting sparks.	4	5	23	EX	• Temporary bracing, props, and runners to remain locked in position strictly as per Structural Engineer / Truss Fabricator design until permanent bracing is fully secured. • Install safety crawl boards, static lifelines, edge protection handrails, and safety catch nets beneath open roof trusses. • Stop all roofing activities immediately when wind speed exceeds 35 km/h or during rain/lightning conditions. • Issue cut-resistant Level 5 gloves, safety glasses, and wrist guards for sheet metal handlers. • Issue Hot Work Permits with designated fire watches and fully charged fire extinguishers at all welding points.	3	2	9	M	Satisfactory
Deep Trenching, Pipe Laying & Manhole Construction	Excavating deep trenches (1.0m to 3.0m deep) for 525mm/300mm concrete stormwater pipes, 160mm Class 34 sewer lines, HDPe water mains, precast manholes, brick catchpits, and concrete encasement.	Trench collapse; striking buried municipal or electrical services; heavy concrete pipe handling; toxic sewer gases during tie-in to existing municipal infrastructure.	x	x	x	x	x	Suffocation/crush death from cave-ins; electrocution; strike injuries from swinging pipe sections; toxic gas inhalation / explosive methane ignition.	5	4	24	EX	• Shore, step back, or batter all trenches exceeding 1.5m depth; maintain spoil heaps and heavy plant at least 1.0m away from the trench crest. • Scan for underground utilities using cable locators and cross-reference municipal as-builts prior to mechanical trenching. • Use certified pipe-lifting clamps and slings with guide ropes for lowering concrete pipes and manhole rings into trenches. • Provide safe access ladders spaced every 6m along trenches. • Test atmosphere and vent existing sewer mains before tie-ins; notify Johannesburg Water 14 days prior to municipal connection.	3	2	9	M	Satisfactory
LPG Gas Systems, Bulk Electrical Upgrades & Standby Generator Commissioning	LPG gas pipe installation to science laboratories and domestic kitchens, bulk electrical cable laying, 1200kVA generator placement and synchronization, and DB terminations.	LPG gas leakage, fire, or explosion; electrical flashover / electrocution from high-voltage interface; diesel fuel spills during generator filling; acoustic noise.	x	x	x	x	x	Catastrophic fire and explosion; fatal electrical shock; environmental diesel soil pollution; hearing damage.	5	4	24	EX	• Ensure all LPG installations and pressure testing are carried out exclusively by a certified SAQCC Gas registered installer, issuing a Certificate of Conformity (CoC). • Enforce strict Lockout-Tagout (LOTO) protocols and earth feeder cables before working on incoming power supplies. • Install generator inside a bunded, impermeable concrete plinth with drip trays to catch 110% of fuel capacity. • Keep dedicated foam/dry chemical powder fire extinguishers mounted at the LPG cylinder bank and generator room. • Issue hearing protection (earmuffs/plugs rated >25dB SNR) in generator testing zones.	3	2	9	M	Satisfactory

RISK MATRIX

DBSA Development Bank of Southern Africa — Building Africa's Prosperity		DR MATHOLE MOTSHEKGA PRIMARY SCHOOL													Project / Site / Area:				Construction of New Primary School Facilities (Blocks A, B, C, D, EP, I, J, K, L,			
		BASELINE RISK ASSESSMENT													Division / Contractor:				Building Construction			
		WORKPLACE RISK ASSESSMENT & CONTROL													Scope of works:				Comprehensive Building Works			
Activity (What activity is to be conducted)	**Task steps** (What are the steps required for the task)	**Hazard**	**Hazard Clasification**					**Risk**	**RAW RISK RATING**				**Controls** (What is put in place to prevent the unwanted event tfrom occuring)				**RESIDUAL RISK**				**Comments**	
			Safety	Health	Environment	Quality	Ergonomic		Consequence	Likelyhood	Risk Rating	Significance					Consequence	Likelyhood	Risk Rating	Significance		
Perimeter ClearVu Fencing, Shark-Tooth Spikes & Anti-Burrow Extensions	Excavating post holes, casting concrete post bases, hoisting pressed mesh panels, bolting vandal-resistant clamping plates, fixing shark-tooth spike rails, and bituminous coating to anti-burrow mesh.	Lacerations and puncture wounds from sharp shark-tooth spikes; heavy fence panel manual handling; pinch points; bitumen fumes/skin irritation.	x	x	x	x	x	Severe cuts, artery lacerations, and tetanus from anti-climb spikes; back and shoulder musculoskeletal injury; dermatitis from bitumen coatings.	4	4	21	EX	• Mandate cut-resistant Level 5 gloves and protective arm gauntlets when handling and bolting shark-tooth spike rails. • Use minimum two-person team lifts or mobile crane aids when positioning 2.4m heavy mesh panels. • Apply bitumen emulsion with long-handled rollers while wearing nitrile gloves and respirators in well-ventilated outdoor conditions. • Barricade fence line along public interface to prevent unauthorized community access during open-hole periods.					2	2	5	L	Good	

RISK MATRIX

DR MATHOLE MOTSHEKGA PRIMARY SCHOOL	Project / Site / Area:	Construction of Dr. Mathole Motshekga Primary School
BASELINE RISK ASSESSMENT	Division / Contractor:	Buiding Construction
WORKPLACE RISK ASSESSMENT & CONTROL	Scope of works:	Workplace Hygiene & Communicable Disease Management

Activity (What activity is to be conducted)	Task steps (What are the steps required for the task)	Hazard	Hazard Clasification					Risk	RAW RISK RATING				Controls (What is put in place to prevent the unwanted event tfrom occuring)	RESIDUAL RISK				Comments
			Safety	Health	Environment	Quality	Ergonomic		Consequence	Likelyhood	Risk Rating	Significance		Consequence	Likelyhood	Risk Rating	Significance	
Workplace Sanitation, Chemical Ablutions & Occupational Health	Provision, servicing, and use of temporary site ablutions, eating areas, and potable drinking water facilities across the 24-month construction phase.	Unhygienic sanitation facilities; accumulation of waste; contaminated drinking water; biological pathogens (e.g. gastroenteritis, hepatitis); stagnant water breeding mosquitoes/vectors.		x	x	x		Outbreak of waterborne or communicable illnesses; worker downtime; biological contamination of site soils and stormwater drains.	4	3	18	H	• Provide clean, serviced chemical toilets at a ratio of 1 toilet per 15 workers, separated by gender, serviced at least twice weekly by a licensed waste contractor. • Install hand-washing basins equipped with clean running water, bactericidal liquid soap, and paper towels at all ablution clusters and dining facilities. • Provide tested, certified potable drinking water from designated dispensing containers; prohibit communal drinking cups. • Ensure daily cleaning and disinfection of dining areas, change rooms, and site offices. • Implement a medical surveillance program (pre-employment, annual, and exit medical fitness assessments) conducted by an Occupational Health Practitioner in terms of Construction Regulation 7(8).	2	2	5	L	Good

DBSA DEVELOPMENT BANK OF SOUTHERN AFRICA Building Africa's Prosperity	**DR MATHOLE MOTSHEKGA PRIMARY SCHOOL**	
	BASELINE RISK ASSESSMENT	Rev No: 01 Next Review Date: 03/11/2027

Site/Area: Construction of Dr. Mathole Motshekga Primary School

Risk Assessment Team: Name	**Designation**	**Signature**		Date:
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Construction Manager Name & Signature:		**Signature:**	**Date:**
Foreman / Supervisor Name & Signature:		**Signature:**	**Date:**
(Please initial every page of the risk assessment)			