Project	Appointment of a Contractors for the Alterations, Demolitions, and the Fire Remedial Works at the Charlotte Maxeke Johannesburg Academic Hospital Buildings in Parktown, Gauteng.	**Evaluator Name**	
Compiled By	Client Team	**Signature**	
Date of Assessment	03 May 2024	**Responsible Manager Signature**	

ANNEXURE B

BASELINE RISK ASSESSMENT

DBSA DEVELOPMENT BANK OF SOUTHERN AFRICA *Building Africa's Prosperity*

S34-BRA-0001-00

PROBABILITY INDEX		SEVERITY INDEX INJURY/DISEASE (I)		SEVERITY INDEX PRODUCTION (P)		SEVERITY INDEX ENVIRONMENT (E)		SEVERITY INDEX COST (C)		FREQUENCY INDEX	
5	Almost certain to inevitable	5	Fatal	5	No production	5	Permanent effects	5	> R500 000	5	Hazard permanently present
4	Probable	4	Permanent to Slight Disability	4	Loss of 1 month or more production	4	Long term 2 years	4	R100 000 - R499 999	4	Hazard arises every week
3	Improbable	3	14 Days with complete recovery	3	Loss of 1 week of production	3	Med - 6 months to 1 year	3	R10 000 - R99 999	3	Hazard arises every month
2	Less than even chance	2	Medical attention 14 Days with complete recovery	2	Loss of 1 days's production	2	Short term - 1 day to 6 months	2	R1 000 - R9 999	2	Hazard arises every year
1	High improbable	1	First aid only	1	Loss of 1 man shift	1	Insignificant effect	1	R0 - R999	1	Hazard arises every 5 years

PROBABILITY VALUE X SEVERITY VALUE X FREQUENCY VALUE /125 = TOTAL SCORE (%)

Risk Value		
A	80 - 100%	Very High Risk
B	60 - 79 %	High Risk
C	40 - 59%	Medium Risk
D	20 - 39%	Lower Risk
E	0 - 19%	Low Risk

PPE Requirement & Safety Signs

A B C D E F G H I J K L M N O

Item	Task / General Activities	Hazard Identified	Risks i.r.t the hazard	Severity Index I	P	E	C	Tot	Assess. Count	5 Points Each	Formula = points *5*5	Probability Index	Frequency Index	Risk Score	Risk Value	PPE	Signs	Corrective Action	Responsible Person & Time Frame
1	Site establishment	**1.** Improper loading and off loading practices **2.** Traffic congestion **3.** Movement of vehicles and Plant **4.** Improper electric installation **5.** Use of damaged portable electrical tools and hand tools **6.** Dust **7.** Clearing of ground (levelling) **8.** Social / Community Disruption **9.** Contractors / Service Providers working on site without being approved by Client or client representative **10.** Truck Crane Operations	**1. Health & safety (I)**	4				4	1	5	125	5	5	100	80%	Mandatory or as per requirement	Site Specific Construction Sign at site entrance	**1.** Appointed spotter (flagperson) to be in position wearing reflective vest and whistle to assist Truck driver or Plant operator with movement on site. **2.** Clear all bystanders away from operations - Barricade area and post warning signage - Only Authorised workers/persons to enter construction area **3.** Appointed competent Banksman (Rigger) to oversee all lifting operations • Pre-lift checks to be done on lifting material, and recorded on a Checklist, any deviations must be recorded and reported to Construction manager. • Slings and chain blocks to be checked prior lifting operations and to have valid load test certificate. Lifting truck to also be in possession of a load test certificate and driver to be appointed in writing with valid competency. **3.** All electrical installations to be conducted by a competent appointed person and COC's to be obtained when necessary. **4.** Power tools to be inspected by a competent person, pre-check inspections to be conducted, power tools to be recorded on inspection register **5.** Social facilitators to ensure community are aware of Construction work before Site establishment. **6.** Only Competent appointed Contractors or Service Providers will be authorised to work on the site. **7.** Dust Control measures to be implemented continuously at the site laydown area, watering the areas and roads on site. **8.** All operators must be appointed to operate and inspect the specific plant he is competent in operating, Medical fitness and competencies for operators must be valid and available on site. **9.** Site Establishment Risk Assessment and Safe working Procedure / Method Statement to be communicated to all workers	PSP & Principal Contractor
			2. Cost (C)				4	4	1	5	125	5	5	100	80%				
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%				
			4. Environment (E)			2		2	1	5	125	5	5	50	40%				
			Total Average Risk Value												65%				

2	Manual Loading and Offloading - Manual Handling (Ergonomics)	**1.**Improper manual loading and off loading procedure **2.** Nip & Pinch Points **3.** Poor Communication **4.** Slipping & Tripping Hazards **5.** Employee handling materials / equipment that is to heavy to lift **6.** Materials / equipment or tools falling	**1. Health & safety (I)**	3			3	1	5	125	5	5	75	60%	Mandatory or as per requirement	Signage Posted at Designated Storage Areas	**1.** Manual handling / lifting Safe work Procedure and Risk Assessment to be communicated to all workers on site. (Keep proof of communication in safety file) **2.** Workers assisting each other to lift must communicate with each other to ensure safe lifting and lowering of items. **3.** Before offloading or handling any materials, equipment or tools, ensure walkways are clear and free from tripping hazards. **4.** Workers to assist each other if intended load to be lifted exceeds 25kg (per person). **5.** Workers / Supervisors to ensure materials, equipment and tools are secure when offloading. **6.** When manual lifting the correct procedure must be used, workers to lift loads using their legs and not their back.	PSP & Principal Contractor
			2. Cost (C)			3	3	1	5	125	5	5	75	60%				
			3. Productivity (P)		2		2	1	5	125	5	5	50	40%				
			4. Environment (E)			1	1	1	5	125	5	5	25	20%				
				Total Average Risk Value										**45%**				
3	Lifting Operations - (includes truck crane, mobile crane, Lifting Machinery as per DMR 18(11)	**1.** Incompetent Operator **2.** Unsafe Lifting Machine (Substandard) **3.** Man - Machine interface **4.** Defecting Lifting equipment(slings, chains, ropes etc) **5.** Incorrect lifting equipment used for specific operations **6.** Uneven surfaces **7.** Surrounding structures and other machinery or equipment **8.** Incompetent Rigger **9.** Inclement Weather (high winds, lightning) **10.** Poor ground conditions	**1. Health & safety (I)**	5			5	1	5	125	5	5	125	100%	Mandatory or as per requirement	Warning Signage to be Posted at Lifting area	**1.** Only appointed competent operator will be authorised to operate lifting machinery (Competency must be valid) **2.** Lifting Machine must be inspected before use, and finding to be recorded on checklist, any deviations must be recorded and reported to supervisor. **3.** Load test certificate and maintenance schedule (Service history) must be available and valid for the lifting machine to be used **4.** All lifting equipment must be inspected before use and findings to be recorded on a checklist, any deviations must be recorded and reported to supervisor. Load test for all lifting equipment must be valid and available on site. **5.** Appointed / competent rigger to indicate the correct lifting equipment to be used. Rigger to use a whistle as communication method when lifting is taking place to warn surrounding areas. **6.** Operator to inspect work area before work, to identify any unsafe ground conditions or uneven surfaces, Operator to ensure outrigger are used with base plates to level the lifting machine. **7.** Lifting operations will not be allowed in windy conditions or when raining. **8.** SWP & Risk assessment to be communicated to all involved with lifting operations **9.** Lifting area to be barricaded with solid barricading and warning signage to be posted. No other work operations will be allowed in close vicinity with the lifting operations **10.** Ensure 3 point contact when climbing on and off the lifting machine **11.** Lifting equipment to be clearly and conspicuously marked with the maximum mass load (MML) that it is designed to carry safely. When the MML varies with the conditions of use, the table of maximum loads should be used by the driver/operator; **12.** Lifting equipment be fitted with a brake or other applicable device capable of holding the MML. This brake or device must automatically prevent the downward movement of the load when the lifting power is interrupted;	PSP & Principal Contractor
			2. Cost (C)			4	4	1	5	125	5	5	100	80%				
			3. Productivity (P)		3		3	1	5	125	5	5	75	60%				
			4. Environment (E)			2	2	1	5	125	5	5	50	40%				
				Total Average Risk Value										**70%**				
4	Exposure of underground services	**1.** Underground water lines **2.** Underground Electrical cables **3.** Manual Excavations **4.** Machine Excavations	**1. Health & safety (I)**	5			5	1	5	125	5	5	125	100%	Mandatory or as per requirement	Warning Signage to be Posted at excavated	1. Scanning devices to be used prior any excavation issues in order to determine live services and avoid electrocution or damage to existing water lines. 2. Drawings can be used to identify any underground services (If drawings are available)	PSP & Principal Contractor
			2. Cost (C)			4	4	1	5	125	5	5	100	80%				
			3. Productivity (P)		3		3	1	5	125	5	5	75	60%				
			4. Environment (E)			2	2	1	5	125	5	5	50	40%				
				Total Average Risk Value										**70%**				

5	Mechanical and Hand Excavations/Backfilling	**1.** Unsuitable ground conditions for excavation work that may lead to excavation collapse **2.** Man machine interaction, **3.**Dust generation **4.** Noise generation (especially during rock breaking) **5.** Unbarricaded excavations/trenches **6.** Damage to existing services during excavations **7.** Oil spillages causing ground contamination **8.** Incompetent Operator **9.** Substandard Machinery used for excavation. **10.** Unsafe / self-made hand tools used **11.** Working in direct sun / Heat stress	**1. Health & safety (I)**	5				**5**	1	5	125	5	5	125	100%	Mandatory or as per requirement	Warning Signage to be Posted at excavated area Unauthorised entry Prohibited	**1.** Shore/brace excavations to prevent caving/falling in and provide access ladder. Soil dumped at least 1m away from edge of excavation and no material to be kept closer to the edge of excavation. **2.** Traffic control to be managed to prevent collision of mobile plant as well as collision with personnel. **3.** Dust suppression methods to be used when required and employees to be provided with dust masks when required. **4.** In residential areas noisy activities to be conducted at timings specified by laws. **5.** Excavations guarded/barricaded/lighted after dark in public areas and when there is no work conducted. All excavations are subject to daily inspections by a competent appointed person. Excavations must be kept open to the minimum, do not leave open for long periods. **6.** Scanning devices to be used to identify underground services prior excavation works, in order to prevent cable damage and possible electrocution. **7.** Spill kit to be used for any Chemical spillages on site. **8.** Only competent / Appointed operators authorised to operate machinery (must have valid Competency, medical and PDP) **9.** Machinery must be inspected before use, findings to be recorded on a checklist, any deviations must be recorded and reported to a supervisor. Service / maintence schedule / history must be available for the specific machinery. **10.** SWP & Risk Assessment to be communicated to all workers involved. **11.** All hand tools must be inspected and recorded on a checklist. NO SELF-MADE tools will be allowed. **12.** Workers working in direct sun / heat must take regular water breaks to ensure they stay hydrated **13.** Excavation work must be carried out under the supervision of a competent person who has been appointed in writing. **14.** Before excavation work begins the stability of the ground must be evaluated. **15.** Every excavation must be provided with means of access that must be within 6 metres of any employee within the excavation at any time. Should ladders be utilised for this purpose they should be duly secured **16.** Only workers declared medically fit are allowed to work inside an excavation, Proof of Medical must be valid and available on site.	PSP & Principal Contractor
			2. Cost (C)				4	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)		**3**			**3**	1	5	125	5	5	75	60%				
			4. Environment (E)			**3**		**3**	1	5	125	5	5	75	60%				
				Total Average Risk Value											**75%**				
6	Construction vehicles and mobile Plant operations	**1.** Construction vehicles not roadworthy **2.** Employees transport facilities not roadworthy **3.** Mobile plant used in the project unsafe or substandard **4.** Intoxicated operator **5.** Vehicles left unattended when not operated **6.** Speeding **7.** Overloading vehicles or Plant	**1. Health & safety (I)**	**4**				**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement	Speed Limit signage and Heavy Vehicle Movement Signage to be posted on site	**1.** All construction vehicles and mobile plant have to comply with Construction regulations and Driven Machinery Regulations. Other construction vehicles used must have a valid roadworthy certificate **2.** Employees to be transported to and from work in a safe manner, never to be carried at the back of bakkies and trucks. **3.** Mobile plant operating on site to fully comply with CR 23. Maintenance / Service history must be available on site and Used in accordance with their design and intention for which they were designed **4.** Random alcohol and drug tests to be introduced and maintained **5.** Ensure vehicles are isolated when not in operation, Construction vehicles and mobile plant left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights, reflectors or adequate barricades to prevent moving traffic from a sudden emergency, or to come into contact with the parked construction vehicles and mobile plant. In addition construction vehicles and mobile plant left unattended after hours must be parked with all buckets, booms etc. full lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely. **6.** Operators to drive according to the required speed limit on site and on public roads. **7.** All drivers must be appointed and must have a valid drivers license and PDP/Competency certificate **8.** Vehicles or plant not to exceed the prescribed weight limit of the plant or vehicle. **9.** Construction Vehicle to be Fitted with adequate signalling devices to make movement safe including reversing; Fitted with two head and two tail lights that is in good working condition whilst operating under poor visibility conditions. **10.** No loose tools, material etcetera is allowed in the driver and/or operators compartment/cabin nor in the compartment in which any other persons are transported. **11.** The construction site must be organised to facilitate the movement of construction vehicles and mobile plant in such a manner that pedestrians and other vehicles are not endangered. Traffic routes to be suitable, sufficient in number and adequately demarcated.	PSP & Principal Contractor
			2. Cost (C)				4	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)		**3**			**3**	1	5	125	5	5	75	60%				
			4. Environment (E)			**2**		**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value											**65%**				

7	Hot works (Grinding, Cutting, Welding, Drilling, Flame cutting, Soldering	**1.** Incompetent employees conducting hot works **2.** Improper storage of welding material **3.** Hot works conducted in view of employees **4.** Unsafe/ damaged equipment used **5.** Sparks **6.** Fire **7.** Hotwork near flammable materials **8.** Unsecured / unsafe storage of cylinders **9.** Substandard PPE used **10.** Overhead Hotwork operations **11.** Hot works in wet conditions **12.** Incorrect Discs used when cutting **13.** No Guards in Place when cutting / Grinding. **14.** Incorrect fittings used when connecting pipes to cylinders **15.** Gauges not working on cylinders **16.** No fire fighting equipment or fire fighter available **17.** Hot work area not barricaded	**1. Health & safety (I)**	**4**	**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement	Warning Signage to be posted at Designated Hotwork area	**1.** Only competent workers with the required skills and knowledge will be appointed to operate such machinery like grinders, welding machines, cutting torch etc. **2.** Gas cylinders when used to be safely stored and to be secured, when not in use, in a cool place, upright position and locked store room. **3.** All hot works to be conducted in an enclosed place away from public and employees conducting other activities. Welding screens to be placed at welding areas and solid barricading used to close off areas **4.** All equipment used for Hot works must be inspected before use, all findings to be recorded on a checklist and any deviation must be recorded and reported to a supervisor, all guards must be in place and correct blades/ discs or drill bits to be used. **5.** If conducting hot works near flammable materials or the bush, spark containment must be used, for example fire blankets, welding screens and wetting the areas with water. **6.** Fire extinguishers must be placed near areas where hot works are conducted, and a trained competent appointed fire fighter to be available onsite. **7.** SABS approved PPE to be issued and used on site. Task specific PPE is required for Hot work activities, for example welding helmet, face shield when cutting, safety glasses, dust masks, welding apron etc. **8.** No Overhead Hotworks will be allowed, if Hot work is required at height it should be done from a approved scaffold or MEWP. Then the area below should be barricaded to prevent workers from entering that area. **9.** Hot work will not be allowed in wet conditions, electrical cables must be made safe and free from water. **10.** All cylinders used onsite must be fitted with the correct fittings and clamps when connecting the hoses. All gauges must be in good working condition. **11.** All new vessels must be checked for leaks, leaking vessels should NOT be used. Equipment must be identified/numbered and entered into a register.	PSP & Principal Contractor
			2. Cost (C)	**4**	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)	**3**	**3**	1	5	125	5	5	75	60%				
			4. Environment (E)	**2**	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**65%**				
8	Limited recourses to conduct all task	**1.** Contractual non compliance **2.** Schedule and cost over run on project	**1. Health & safety (I)**	**1**	**1**	1	5	125	5	5	25	20%	Mandatory or as per requirement		**1.** Client to ensure that contractor is well aware of current scope definition as well as the requirements stipulated in the tender specifications. **2.** Contractor to ensure compliance on set specifications from client	PSP & Principal Contractor
			2. Cost (C)	**4**	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)	**4**	**4**	1	5	125	5	5	100	80%				
			4. Environment (E)	**1**	**1**	1	5	125	5	5	25	20%				
				Total Average Risk Value								**50%**				
9	Scaffolding	**1.** Unsafe scaffold materials used **2.** Offloading and Loading of scaffold material. **3.** Incompetent scaffold erectors **4.** Incompetent scaffold Inspector **5.** Substandard scaffold, not as per SANS 10085 **6.** Uneven surfaces / Unstable surfaces **7.** Inclement weather conditions **8.** Unsafe access **9.** Unsafe stacking and storage of scaffold materials **10.** Stacking and storage of materials on top of scaffold platform **11.** Overhead Powerlines **12.** Unsafe / damaged safety harnesses used	**1. Health & safety (I)**	**5**	**5**	1	5	125	5	5	125	100%	Mandatory or as per requirement	Scaffold must be tagged - Safe to use or unsafe to use. Scaffold inspection Signage to be posted on scaffold	**1.** No damaged or unsafe scaffold materials allowed to be used for erecting of scaffold. **2.** Workers to assist each other when lifting and handling of scaffold materials, gloves must be worn to prevent pinch point on hand and fingers. **3.** Only appointed / competent scaffold erector to erect and dismantle scaffold, Proof of competency must be valid and available on site. **4.** Only appointed / competent scaffold inspector to inspect and approve scaffold, Proof of competency must be valid and available on site. **5.** Scaffold must be erected by competent person as per SANS 10085 standard. Scaffold must then be inspected by a competent inspector and record all findings on a checklist, deviations must be recorded and reported to scaffold supervisor. **6.** Ground must be inspected stability before scaffold can be erected. If ground is stable scaffold can be erected, base jacks must be used to level the scaffold. **7.** All scaffold work must be stopped when its raining due to the slippery surface, scaffold work can only continue if scaffold is dry and scaffold supervisor / inspector has inspected scaffold and approved it. **8.** Stacking of materials on scaffold will only be allowed with the approval of the scaffold supervisor, after inspecting the height and weight of stacked materials. All materials must be removed daily on end of shift. **9.** All scaffold materials must be stacked neatly in a safe manner **10.** NO scaffold work will be allowed near overhead powerlines. **11.** SWP & Risk Assessment for scaffold work must be communicated to relevant and all involved with scaffold work. **12.** All safety harnesses must be inspected before use, all findings must be recorded on a checklist, any deviations must be recorded and reported to supervisor. COC for harness must be available in safety file. **13.** Workers must be trained on the usage of safety harnesses and working at height. (Proof of competency must be available) **14.** All workers working on scaffold must be medically fit (proof of valid medical must be available in the form of annexure 3. Medical must include fit for work at height.	PSP & Principal Contractor
			2. Cost (C)	**5**	**5**	1	5	125	5	5	125	100%				
			3. Productivity (P)	**3**	**3**	1	5	125	5	5	75	60%				
			4. Environment (E)	**2**	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**75%**				

No.	Activity	Hazards	Risk category													Control	Signage	Control measures	Responsible
10	Stacking and storage of material & Housekeeping	**1.** Unstable stacking of goods / materials / Unsafe Stacking Procedures **2.** Stacking & Storage area not identified and demarcated **3.** Pinch Points **4.** Environmental contamination from spillages **5.** Snakes **6.** No clear walkways at stacking and storage areas **7.** Unauthorised entry **8.** Poor waste removal **9.** Unstable Aggregate or Sand	**1. Health & safety (I)**	**3**				**3**	1	5	125	5	5	75	60%	Mandatory or as per requirement	Signage Posted at Designated Storage area - Unauthorised entry prohibited	**1.** Sufficient space of stacking of material to be provided, housekeeping to be maintained and cleaning of areas to be maintained. **2.** Stacking and storage areas to be barricaded to prevent unauthorised entry **3.** All contaminated ground must be removed and disposed at a registered waste facility. **4.** Workers to be aware of snakes, toolbox talks to be done for the awareness of snakes in surrounding area, If snakes are found on site, a snake handler must be contacted to remove snakes safely. **5.** All walkways at stacking and storage area must be kept clean and free from tripping hazards **6.** Waste must be removed on a regular basis to a registered waste facility, proof must be kept in the safety file on site. **7.** Housekeeping on site must be done on a daily basis, all rubble must be removed and placed at the designated waste area. **8.** Aggregate or soil should be stacked at a reasonable height and not close to any machinery or equipment. **9.** The principal contractor to ensure that: - A competent person is appointed in writing to supervise all stacking and storage on a construction site; - The height of any stack does not exceed 3 times the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector of the Department of Labour has been obtained to build the stacks higher with the aid of a machine. (The operator of the machine must be protected against items falling from overhead or off the stack and no items may overhang);	PSP & Principal Contractor
			2. Cost (C)				**3**	**3**	1	5	125	5	5	75	60%				
			3. Productivity (P)		**2**			**2**	1	5	125	5	5	50	40%				
			4. Environment (E)			**3**		**3**	1	5	125	5	5	75	60%				
				Total Average Risk Value											**55%**				
11	Offloading construction Materials	**1.** Tip truck reversing over personnel. **2.** Vehicle to vehicle collisions **3.** Man machine interaction, **4.** Exposure to dust **5.** Incompetent Operator **6.** Unauthorised to offload **7.** Incorrect plant used for offloading	**1. Health & safety (I)**	**4**				**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** Trucks to be equipped with reverse sirens. **2.** Draft, implement and maintain a proper traffic management plan. **3.** Exert dust suppression as far as reasonable. Ensure that the correct/adequate PPE is supplied and employees have received training on the use of them. **4.** Flag Person to be available to direct traffic onsite. **5.** Correct Plant to be used to offload different materials **6.** Plant operator to be appointed with valid competencies to be available on site **7.** Suppliers of materials must be authorised to offload materials, All workers, visitors or suppliers must be INDUCTED for the specific site. **8.** All offloading of construction materials or equipment must be Supervised and Authorised by Appointed Construction Manager.	PSP & Principal Contractor
			2. Cost (C)				**3**	**3**	1	5	125	5	5	75	60%				
			3. Productivity (P)		**3**			**3**	1	5	125	5	5	75	60%				
			4. Environment (E)			**2**		**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value											**60%**				
12	Working near overhead powerline	**1.** Sagging KV line **2.** Roof inclining near the KV LINE **3.** Scaffolding erected close to the KV Line **4.** Untrained employees working near the KV line **5.** Construction Vehicles or plant operations near overhead powerlines	**1. Health & safety (I)**	**5**				**5**	1	5	125	5	5	125	100%	Mandatory or as per requirement		**1.** Only approved authority employees to work near overhead power line. **2.** Allowed distance to work near overhead powerline to be determined by relevant authorities including Eskom thereafter employees to be made aware of the hazards and risks associated **3.** No scaffolding to be erected close to the overhead powerline **4.** No Construction vehicles to be operated within 10m of overhead powerlines, unless declared safe by Competent Authority **5.** Safe working Procedure and Risk Assessment must be communicated to those employees exposed to working near overhead powerlines **6.** Trained and Competent Spotters / Flagperson must be present at ALL times when plant is operational near overhead powerlines.	PSP & Principal Contractor
			2. Cost (C)				**5**	**5**	1	5	125	5	5	125	100%				
			3. Productivity (P)		**4**			**4**	1	5	125	5	5	100	80%				
			4. Environment (E)			**2**		**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value											**80%**				

13	Use of portable electrical tools and hand tools (Including use of Portable lights)	**1.** Unsafe, sub-standard and/or defective equipment used **2.** Untrained employees using portable electrical tools	**1. Health & safety (I)**	4		**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** Portable electrical tools and equipment includes every unit that takes electrical power from a 15 ampere plug point and is moved around for use in the workplace i.e. drills, saws, grindstones, portable lights, etcetera. In addition electrical appliances such as fridges, hotplates, heaters, etcetera must be inspected regularly but at least on a weekly basis and maintained to the same standards as portable electrical tools and appliances. **2.** The use, inspection and maintenance of portable electrical tools and equipment must be governed by the following: - Regular inspections by a competent person appointed in writing; - Inspection results must be recorded in a register; - Only competent authorised persons are allowed to use portable electrical tools and equipment; and - The correct protective equipment is worn/used whilst operating portable electrical tools and equipment. **3.** These equipment - - Must be maintained in good condition at all times to prevent an electrical shock to the user; - The main source should incorporate an earth leakage protection device or receive power through a double wound transformer or be double insulated and clearly marked as such; and - All equipment must be fitted with a switch to allow for safe and easy starting and stopping. **4.** The following requirements to be applied with when portable lights are utilised (such as for illumination at stop-go points at night): - Must be fitted with a robust non-hygroscopic non-conducting handle; - Metal parts which may become live must be protected against contact; - The lamp must be protected by a strong guard; - The cable lead-in must withstand rough handling; - A register be kept for each piece of equipment with findings of regular inspections undertaken to evaluate the condition of these lights; - Inspections must be undertaken that concentrate on at least the plug, cord, switch, guard and any obvious faults; and - When used in wet/damp/metal container conditions, it must be protected. **5.** Risk Assessment and Safe working Procedure for the operation of task specific Portable electrical tools must be communicated to those operating and exposed to hazards when using portable electrical tools	PSP & Principal Contractor
			2. Cost (C)			3	**3**	1	5	125	5	5	75	60%			
			3. Productivity (P)		3		**3**	1	5	125	5	5	75	60%			
			4. Environment (E)			2	**2**	1	5	125	5	5	50	40%			
				Total Average Risk Value										**60%**			
14	Illumination during night works	**1.** Personal injury due to poor illumination at night **2.** Damage to equipment **3.** Unauthorised Work at Night	**1. Health & safety (I)**	3		**3**	1	5	125	5	5	75	60%	Mandatory or as per requirement		**1.** Proper illumination to be available during night works **2.** If any Work requires to be conducted at night sufficient lighting should be supplied. **3.** All activities to be conducted at night must be approved by Construction Manager with guidance from competent Safety Professional	PSP & Principal Contractor
			2. Cost (C)			2	**2**	1	5	125	5	5	50	40%			
			3. Productivity (P)		2		**2**	1	5	125	5	5	50	40%			
			4. Environment (E)			1	**1**	1	5	125	5	5	25	20%			
				Total Average Risk Value										**40%**			
15	Use and Storage of flammables	**1.** Unsafe use and/or storage of flammables could result in fires or explosions **2.** Unsafe stacking and Storage of flammable could result in spillages	**1. Health & safety (I)**	3		**3**	1	5	125	5	5	75	60%	Mandatory or as per requirement	Flammable material storage area must have warning signs' (No Smoking, Flammable materials)	**1.** The principal contractor to ensure that: - No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapours being present unless adequate precautions is taken - Flammables stored on a construction site are stored in a well-ventilated, reasonably fire-resistant container, cage or room that is kept locked with consistent access control measures in place and sufficient fire fighting equipment installed and fire prevention methods practiced for example proper housekeeping; - Containers (including empty containers) to be kept closed to prevent fumes/vapours from escaping and accumulating in low lying areas - Welding and other flammable gases to be stored segregated as to the type of gas and empty and full cylinders **2.** All flammable materials / containers must be clearly marked/labelled	PSP & Principal Contractor
			2. Cost (C)			3	**3**	1	5	125	5	5	75	60%			
			3. Productivity (P)		2		**2**	1	5	125	5	5	50	40%			
			4. Environment (E)			3	**3**	1	5	125	5	5	75	60%			
				Total Average Risk Value										**55%**			

16	Hazardous Chemical Substances	**1.**Improper storage of chemicals, transportation and handling **2.** Unsafe use and/or storage of flammables could result in fires **3.** Spilled chemical substances may also impact negatively on the health of employees and negative implications for the environment including legal and claim exposures. **4.** Health hazards when ingesting, inhaling or skin contact with HCS	**1. Health & safety (I)**	**3**	**3**	1	5	125	5	5	75	60%	Mandatory or as per requirement	Hazardous Chemical Substance storage area must have warning signs (No Smoking, Hazardous or Flammable materials)	**1.** The principal contractor to ensure that: - Employees receive the necessary information and training to be able to use, handle and store hazardous chemical substances safely - The risk assessments required in terms of Construction Regulation 9 include employee exposure to hazardous chemical substances and that the necessary measures be taken to protect persons from being detrimentally affected by hazardous chemical substances present or used in the workplace, This Risk Assessment must be communicated to all employees exposed to HCS. - Suppliers provide the necessary information in the form of material safety data sheets regarding hazardous chemical substances required to ensure the safe use, handling and storage of these substances, This MSDS must be available on site and communicated to employees exposed to the HCS. - An up-to-date list is kept on site of hazardous chemical substances stored and used together with the material safety data sheet of the said hazardous chemical substances - Hazardous chemical substances containers be clearly marked as to the contents and main hazardous category e.g. "Flammable" or "Corrosive" - No person eats or drinks in a hazardous chemical substances workplace; - Hazardous chemical substances waste is disposed of safely in terms of hazardous waste disposal requirements at a registered facility. **2.** HCS to be properly stored in a cool locked store room or storage area **3.** Employees handling hazardous chemical substance to be trained. Possible preventive measures to be put in place in order to prevent harm to employees. PPE to be used when necessary.	PSP & Principal Contractor
			2. Cost (C)	**3**	**3**	1	5	125	5	5	75	60%				
			3. Productivity (P)	**2**	**2**	1	5	125	5	5	50	40%				
			4. Environment (E)	**3**	**3**	1	5	125	5	5	75	60%				
				Total Average Risk Value								**55%**				
17	Lack of communication between various parties involved.	**1.** Instructions not adequately followed through **2.** Information not transmitted as supposed to **3.** Schedule slippage due to rework	**1. Health & safety (I)**	**2**	**2**	1	5	125	5	5	50	40%	Mandatory or as per requirement		**1.**Implement and ensure a proper communication system between various parties involved. **2.** Site meetings to be conducted on set intervals including integration between various parties	PSP & Principal Contractor
			2. Cost (C)	**2**	**2**	1	5	125	5	5	50	40%				
			3. Productivity (P)	**2**	**2**	1	5	125	5	5	50	40%				
			4. Environment (E)	**1**	**1**	1	5	125	5	5	25	20%				
				Total Average Risk Value								**35%**				
18	Temporary structure (Temporary works)	**1.** Inadequate designs **2.** Incompetent formwork erectors and inspectors **3.** Temporary structure collapse due to poor design **4.** Unsafe access to elevated areas **5.** Poor stacking and storage of Form work materials **6.** Manual handling **7.** Pinch points **8.** Work at Fall Positions	**1. Health & safety (I)**	**4**	**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement	Areas where temporary structures are erected or demolished must be barricaded with warning signage posted	**1.** A contractor to appoint a temporary works designer in writing, to design, inspect and approve the erected temporary works. **2.** Temporary works to be carried out under the supervision of a competent person appointed in writing. **3.** To be erected by competent persons. **4.** Temporary structure to be inspected by a competent person immediately, before, during and after the placement of concrete. After inclement weather or any other imposed load and at least on a daily basis until the temporary works has been removed and results recorded in a register. **5.** All temporary works to be carried out as per Construction regulations 12. **6.** Temporary work structures to be so designed, erected, supported, braced and maintained that they will be able to support any vertical or lateral loads that may be applied. **7.** No load to be imposed onto a structure that the structure is not designed to carry. **8.** Temporary work to be erected in accordance with the structural design drawings for such temporary work and if there is any uncertainty, the designer must be consulted before proceeding with the erection/use of the temporary work. **9.** The foundation or base upon which the temporary work is erected to be able to bear the weight and keep the structure stable. **10.** Employees erecting temporary work to be trained in the safe work procedures for the erection, moving and dismantling of the temporary work. **11.** Safe access and emergency escape to be provided for employees. **12.** Only employees trained to work at height with a valid medical fitness to work allowed to erect temporary works	PSP & Principal Contractor
			2. Cost (C)	**4**	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)	**3**	**3**	1	5	125	5	5	75	60%				
			4. Environment (E)	**3**	**3**	1	5	125	5	5	75	60%				
				Total Average Risk Value								**70%**				

19	Working on Heights (Work in fall risk positions)	**1.** Inadequate fall protection **2.** Employees not medically fit to work at height **3.** Workers not trained to work at height **4**. Falling objects **5.** Workers falling **6.** Inadequate / unsafe or damaged fall prevention equipment used **7.** Inclement Weather	**1. Health & safety (I)**	**5**				**5**	1	5	125	5	5	125	100%	Mandatory or as per requirement		**1.** Designate a competent person to be responsible for the preparation of a fall protection plan. **2.** Ensure that the Fall protection plan is implemented, amended and maintained. - FPP must be developed by a competent / appointed person, proof of competency must be available on site. **3.** Take steps to ensure continued adherence to the fall protection plan. **4.** The fall protection plan must include but not limited: A Risk assessment of all work carried out from a fall risk position, procedures and methods used to address all the risks identified. **5.** Appointed 16 (2) to ensure that employees comply with Construction regulations 10 Fall protection. **6.** As far as is practicable, any person working in a fall risk position will work from a stable platform, ladder or other device that is at least as safe as if he or she is working at ground level and whilst working in this position be wearing suitable fall arrest equipment to prevent the person falling from the platform, ladder or other device utilised. This fall arrest equipment will be, as far as is possible, secured to a point away from the edge over which the person might fall and the lanyard must be of such a length and strength that the person will not be able to move over the edge. Alternatively any platform, slab, deck or surface forming an edge over which a person may fall may be fitted with suitable guard rails at two different heights as prescribed in SANS 10085 code of practice for the design, erection, use and inspection of access scaffolding. **7.** Employees working at height must be provided with a full body harness that will be worn and attached above the wearer's head at all times and the lanyard must be fitted with a shock absorbing device or the person must be attached to a fall arrest system that is approved by the Client. **8.** If no edge protection is not practicable or employee does not have a secured / approved anchor point for a lifeline a suitable catch net, which is able to sustain the weight of at least the average person working in a fall risk position, will be erected **9.** Employees working in a fall risk position will be trained to do this safely and without risk to their or other person's health and safety. Proof of competency must be available in safety file **10.** Where work on roofs is carried out, the risk assessment must take into account the possibility of persons falling through fragile material and openings in the roof. **11.** physical and psychological fitness of employees working fall risk positions (Medical fitness to work at height) must be valid and available on site. **12.** FPP, Risk Assessment and Safe working Procedures must be communicated to all workers working in a fall risk position.	PSP & Principal Contractor
			2. Cost (C)				**5**	**5**	1	5	125	5	5	125	100%				
			3. Productivity (P)		**3**			**3**	1	5	125	5	5	75	60%				
			4. Environment (E)			**2**		**2**	1	5	125	5	5	50	40%				
			Total Average Risk Value												**75%**				
20	Exposure to poisonous / Venomous or other dangerous animals, reptiles or insects	**1.** Venomous snakes, insects / spiders in bushes, stacking areas and other confined spaces **2.** Poisonous insects **3.** Insects, reptiles and other animal bites, stings that causes allergic reactions	**1. Health & safety (I)**	**4**				**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** The principal contractor to ensure that the following are duly adhered to: - the emergency procedure to be expanded to provide for the effective treatment of employees or other persons visiting exposed to bites or stings from poisonous animals and insects, i.e. the contact details of the nearest medical unit that could treat employees exposed to bites or stings be obtained and arrangements be made with this service provider on the procedures to be followed to ensure swift response when required; - confirmation to be obtained or made available from the nearest medical unit that they have anti venom reserved to treat employees or other persons visiting that may be exposed to snake bites or scorpion stings; - competent / appointed first aiders to be available to facilitate the treatment of employees or other persons visiting exposed to stings or bites; - the potential exposure posed by poisonous or venomous animals or insects and awareness thereof to be discussed with all employees as part of the toolbox talks and general awareness training and other persons visiting as part of the pre-site visit induction process **2.** If Snakes are located on site contact nears snake handler to assist with removal of the snake. Do not attempt to remove snake if not trained. **3**. Emergency contacts to be freely available on site and in safety file.	PSP & Principal Contractor
			2. Cost (C)				**4**	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)		**2**			**2**	1	5	125	5	5	50	40%				
			4. Environment (E)			**2**		**2**	1	5	125	5	5	50	40%				
			Total Average Risk Value												**60%**				

21	Working in Inclement Weather	**1.** Exposed to thunder storms / lightning **2.** Strong winds **3.** Rain **4.** Sand / dust storms **5.** Extreme hot conditions	**1. Health & safety (I)**	4			**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** The principal contractor to implement an early warning system to identify inclement weather and to prevent such weather from posing negative implications on the safety of employees and other persons visiting **2.** The early warning system to, as a minimum. provide for the following: **- Construction work done during electrical storms** a) The principal contractor to ensure that all employees are removed from heights and all employees are as safe as possible, in inclement weather conditions. b) No work to be allowed on the construction site during electric storms where employees cannot be protected from it. Protection involves: - eating area fitted with a lightning mast - workshops - inside buildings c) No work to be allowed in electrical storms on top of open structural steel, even when earthed. d) No work to be allowed on height where the lightning is within a 10 kilometre radius. e) After inclement weather on-site risk assessments to be reviewed to include wet conditions. **- Crane operations during inclement weather** a) Crane operations to stop during lightning within a 10 kilometre radius and wind above 28 km/h, crane driver will not be allowed to leave the crane with the booms extended. b) Lifting operation to stop during rain, rigging and hand lifts. c) Booms on all cranes to be retracted. d) All rigging operations to stop and employees will be removed from site. **- Construction work done during rain** a) During rainy conditions all work on steel structures to stop. b) No electrical tools to be used during rainy weather in open areas. c) If necessary work only to be done in water proof areas where there is a zero risk for electrocution. **- Scaffolding activities during inclement weather conditions** a) During inclement weather only limited scaffolding actions to be permitted i.e. erecting and dismantling activities. b) When absolutely necessary to allow scaffolding activities to continue during abnormal equipment and process conditions so not to impair personnel safety or pose an environmental risk. In such cases, scaffolding activities may continue with the provision that the relevant team ensures that a comprehensive risk assessment is done, whilst considering both work and weather conditions. c) All scaffold users to: - Ensure that scaffolding is inspected immediately after inclement weather conditions. - Ensure that the risks associated with working at heights during inclement weather are identified and reasonably mitigated. - Be cautious of slip/trip hazards when performing activities during inclement weather.	PSP & Principal Contractor
			2. Cost (C)			4	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)		3		**3**	1	5	125	5	5	75	60%				
			4. Environment (E)			2	**2**	1	5	125	5	5	50	40%				
							Total Average Risk Value							**65%**				

22	Working in Confined spaces	**1.** Poor ventilation **2.** Gasses present **3.** Poor visibility **4.** Employees unfit to work in confined spaces	**1. Health & safety (I)**	**4**			**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement	Confined Spaces must be barricaded with warning signage posted (Entry Prohibited or No Unauthorised entry)	**1.** Principal Contractor to ensure confined space works comply to the following **- Ventilation** a) The confined space to be opened and allowed to ventilate for at least 15 minutes before entering the manhole. All open manholes to be barricaded and manned at all times. A gas monitor to be lowered to the bottom of the confined space with a rope to test the presence of any toxic/flammable gas. If any gas is detected, the space to be force ventilated by means of a blower for at least 15 minutes where after the air should be tested again. Under no circumstances may any space be entered while there is a toxic/flammable gas present. After the undertaking of the necessary work, the person in charge of the activities to confirm that all the employees are accounted for. **- Entering a confined space** a) When entering a confined space, the person entering the space to wear a safety harness and fully operational gas detector. A lifeline should be attached to the safety harness and a person on the surface should be in continuous contact with the person in the confined space. At least one person on the surface to be trained in basic first-aid (level 1) with proof of such training as well as a fully equipped first aid box available on site. b) No person shall remain within a confined space for a period of more than one hour at a time. A minimum of 5 minute rest periods on the surface to be taken after this period before re-entering. c) Should the alarm sound on the gas monitor, all employees to exit the confined space and the immediate area should also be evacuated immediately. The area to be properly ventilated and re-tested before re-entering the confined space. Professional support should be called for if necessary. d) Employees to be provided with flameproof lighting when entering a confined space with the possibility of flammable gases. No naked lights, smoking or unprotected electrical apparatus which may cause sparks, shall be permitted in any confined space or in its vicinity. **- Training** a) All employees that have to enter a confined space to be formally trained and confirmed competent before being required to enter such areas (new employees to complete this training and be declared competent before allowed to work in a confined space). b) Refresher courses to be attended by employees at least once every 2 years or immediately if new methodologies or equipment are adopted or acquired. c) Continuous onsite training (Safety moments / toolbox talks) and support by supervisory staff to be undertaken and enforced where required d) Competent person to conduct continues gas monitoring of confined spaces **2.** Task Specific Risk Assessment / Safe working Procedure and Method Statement for Work activities in Confined space to be communicated to relevant employees.(Proof of communication to be available in safety file)	PSP & Principal Contractor
			2. Cost (C)			**4**	**4**	1	5	125	5	5	100	80%			
			3. Productivity (P)		**2**		**2**	1	5	125	5	5	50	40%			
			4. Environment (E)			**2**	**2**	1	5	125	5	5	50	40%			
			Total Average Risk Value											**60%**			
23	Public health & safety and Pedestrians access to site	**1.** Unsafe pedestrian access **2.** Injuries to by standing public or pedestrians **3.** Public personal belongings or property damages	**1. Health & safety (I)**	**4**			**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** The principal contractor will be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes among others: - Non- employees entering the site for whatever reason; - The surrounding community; - Public bystanders **2.** Appropriate signage must be posted to this effect and all employees on site must be instructed to ensure that non-employees are protected at all times. **3.** All non-employees entering the site must receive site applicable induction into the hazards and risks and the control measures for these. **4.** Safe demarcated walkway to be erected / conducted or displayed for visitors **5.** Pedestrian crossings to be conducted and utilized **6.** No Construction work near public vehicles. **7.** Construction area must be barricaded (No Danger tape) or fenced to prevent Public from entering work area.	PSP & Principal Contractor
			2. Cost (C)			**4**	**4**	1	5	125	5	5	100	80%			
			3. Productivity (P)		**2**		**2**	1	5	125	5	5	50	40%			
			4. Environment (E)			**1**	**1**	1	5	125	5	5	25	20%			
			Total Average Risk Value											**55%**			

24	Steel work (Steel fixing / steel reinforcing)	**1.** Manual handling and lifting of rebar at ground level and to elevated level. **2.** Transportation of rebar on trailers **3.** Sharp & pointed objects **4.** Cutting of Rebar - causing sparks and fire **5.** Use of unsafe or damaged pliers	**1. Health & safety (I)**	3				3	1	5	125	5	5	75	60%	Mandatory or as per requirement		**1.** Employees to be provided with proper walkways during steel erection and never to walk on erected rebar **2.** Workers to be supplied with the required PPE for Steel fixing and cutting of steel rebar. **3.** Truck drivers to ensure loads are sufficiently secured before transporting materials to site **4.** Workers to ensure to use correct lifting procedure when lifting steel rebar. SWP for manual handling / ergonomics to be communicated to workers. **5.** Cutting of Steel rebar to be conducted in a designated safe hot work area. **6.** All tools and equipment to be used must be inspected and registered on a checklist, deviations must be recorded and reported to appointed supervisor.	PSP & Principal Contractor						
			2. Cost (C)				2	2	1	5	125	5	5	50	40%										
			3. Productivity (P)		2			2	1	5	125	5	5	50	40%										
			4. Environment (E)			2		2	1	5	125	5	5	50	40%										
				Total Average Risk Value											**45%**										
25	Emergency Preparedness (Fire Prevention, First aid)	**1.** Inadequate emergency Planning could result in the inability to effectively respond to emergencies **2.** Inadequate first-aid arrangements could impact negatively of the ability to respond to first-aid injuries or to stabilise injured employees or other persons that may require advanced health care. **3.** Inadequate fire prevention and protection measures may impact negatively on the ability to fight fires	**1. Health & safety (I)**	4				4	1	5	125	5	5	100	80%	Mandatory or as per requirement	Signage required for Location of First Aid Kit, First Aider on site, Location of Fire Fighting Equipment	**Emergency Preparedness** **1.** The principal contractor to appoint a competent person to act as emergency controller and/or coordinator. **2.** The principal contractor to conduct an emergency identification exercise and establish what emergencies (such as health, safety, environmental, third party or community related actions etcetera) could possibly develop. Contractor must then develop detailed contingency plans and emergency procedures, taking into account any emergency plan that the project/site may have in place. **3.** The principal contractor and the other contractors must hold regular practice drills of contingency plans and emergency procedures to test them and familiarise employees with them. Emergency evacuation points must be available and signage displayed **First - Aid** **1.** The principal contractor to provide first-aid equipment and have qualified first-aider(s) on site as required by General Safety Regulation 3 of the OHSACT. **2.** The contingency plan of the principal contractor to include arrangements for the speedily and timeously transportation of injured and/or ill person(s) to a medical facility or getting emergency medical support to person(s) who may require it. **3.** The principal contractor to have firm arrangements with his contractors in place regarding the responsibility of these contractor's first-aid arrangements as well as treatment of injured and/or ill employees. **Fire Prevention and Protection** The principal contractor to ensure that a) Sufficient and suitable storage of flammables is provided; b) employees are trained in the use of the fire fighting equipment and know how to attempt to extinguish a fire; (these employees must be appointed and proof of competency to be available on site. c) A sufficient number of employees are appointed and trained to act as an emergency team to deal with fires and other emergencies; d) Employees are informed regarding emergency evacuation procedures and escape routes this must be included in the induction of all workers and visitors. e) Emergency escape routes are kept clear at all times and clearly marked; f) Roll call is held after evacuation to account for all employees and to ensure that no-one including visitors and disabled persons have been left behind; g) A clearly audible siren or alarm is fitted and regularly tested. if this is not practicable to the site , other method of warning employees must be used, for example whistles.	PSP & Principal Contractor						
			2. Cost (C)				3	3	1	5	125	5	5	75	60%										
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%										
			4. Environment (E)			2		2	1	5	125	5	5	50	40%										
				Total Average Risk Value											**60%**										
26	Site security and public protection	**1.** Public gaining access to the construction site. **2.** Theft **3.** Vandalism	**1. Health & safety (I)**	3				3	1	5	125	5	5	75	60%	Mandatory or as per requirement	Construction Signage to be available at Site entrance / gate.	**1.** Principal contractor to ensure the project is secure at all times. Access control to be maintained and no unauthorised entry to be permitted to the project. **2.** When there are no activities on site and no personnel conducting works. The Project has to be left in a safe manner that the public can't gain access and that all hazards are attended to prior vacating the site. **3.** Security should be available due to valuable materials and equipment that might be stored on site.	PSP & Principal Contractor						
			2. Cost (C)				3	3	1	5	125	5	5	75	60%										
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%										
			4. Environment (E)			2		2	1	5	125	5	5	50	40%										
				Total Average Risk Value											**55%**										

27	Ablution facilities	**1.** Inadequate provision of welfare facilities may have negative implications on the health of employees and other persons as well as the environment	**1. Health & safety (I)**	2	**2**	1	5	125	5	5	50	40%	Mandatory or as per requirement	Signage required for Men / Ladies bathroom / Changeroom and designated sheltered eating area	**Toilets** a) Principal Contractor to provide toilets for each sex as required in terms of the National Building Regulations and Construction Regulation 30. b) Chemical toilets are allowed only if they are cleaned on a regular basis by registered contracted company. Toilets have to be provided at a ratio of at least 1 toilet per 30 employees **Eating facility / area** Principal Contractor to provide some form of eating facility sheltered from the sun, wind and rain must be provided. **Living accommodation** Where the site is in a remote location and transport to home is not readily available, reasonable and suitable living accommodation must be provided after obtaining of the necessary permission from authorities and adhering to requirements such as Bylaws of the local municipality	PSP & Principal Contractor
			2. Cost (C)	2	**2**	1	5	125	5	5	50	40%				
			3. Productivity (P)	1	**1**	1	5	125	5	5	25	20%				
			4. Environment (E)	2	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**35%**				
28	Safe guarding / Dealing with existing Structures	**1.** Damage to existing services and structures.	**1. Health & safety (I)**	3	**3**	1	5	125	5	5	75	60%	Mandatory or as per requirement		**1.** Ensure identification off all existing services and structures before commencing with site establishment.	PSP & Principal Contractor
			2. Cost (C)	3	**3**	1	5	125	5	5	75	60%				
			3. Productivity (P)	2	**2**	1	5	125	5	5	50	40%				
			4. Environment (E)	2	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**50%**				
29	Installation of fence	**1.**Transportation and handling of fence. (Poor Ergonomics) - Offloading of fence poles and heavy wire rolls **2.** Use of ladders **3.** Use of scaffolding **4.** Contact with underground services/ electricity **5.** Fencing collapses on employees or surrounding property **6.** Mixing and pouring of concrete **7.** Use of unsafe / damaged tools.	**1. Health & safety (I)**	4	**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** Rolls of fence to be transported mechanically. **2.** Proper PPE and suitable hand gloves to be provided to employees involved. **3.** Ladders to be inspected by a competent person appointed in writing and to be well positioned and secure when in use. No wooden ladders to be used. **4.** Tools to be inspected daily before work start Faulty tools to be repaired or removed from site immediately **5.** Drawings / plans or Underground scans must be available for areas to be excavated to identify any underground services like electrical cables, water or sewer lines. **6.** All fence poles to be inserted into the ground as per drawing requirements and to be secured with Concrete.	PSP & Principal Contractor
			2. Cost (C)	4	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)	3	**3**	1	5	125	5	5	75	60%				
			4. Environment (E)	2	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**65%**				
30	Concrete Works Concrete Mixing and Pouring (Manually and Mixer) and use of Concrete Pump	**1.** Concrete spillages **2.** Use of hand tools **3.** Oil spillages **4.** Dust generation **5.** incompetent operators **6.** Miscommunication between operator and flagman **7.** Mixer operating near excavation **8.** Incompetent Concrete Pump Operator **9.** Unsafe operation or control of Concrete Pump - Hoses / pipes moving around uncontrolled **10.** Inhaling of Cement dust and skin contact with wet cement(cement Burns)	**1. Health & safety (I)**	4	**4**	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** Concrete mixers to be regularly serviced in order to prevent breakdown leading to oil spillages. Spot checks to be done prior each shift. **2.** All hand tools to be inspected by a competent person. **3.** When concrete is being poured, concrete spillages to be prevented and plastic sheet to be placed on the ground when spillages cannot be prevented. **4.** Concrete washout area to be created where concrete run off will be discharged. **5.** A flagman must be well trained in order for him to be able to provide proper signals thus preventing employees being hit by a mixer. **6.** Operators to be well trained and no unauthorized employees must operate the mixer. - Only Competent / Appointed operator to operate concrete Pump, Ready-mix Truck. Competency must be valid and available **7.** Dust mask must be provided to employees handling cement as a last resource when dust cannot be controlled. If exposed to cement dust for long periods a breathing apparatus must be used. Workers exposed to Dry Cement or Wet Cement must be supplied with the minimum required PPE(Overalls, Gumboots, Safety Boots, PVC Gloves, Safety Glasses, Earplugs, if exposed to wet cement rain coats can be used. **8.** Concrete ready-mix truck, Concrete Pump Truck and Concrete Mixers must keep a safe distance from excavation edges, when pouring into excavation flagman have to be more vigilant and a regular toolbox talks must be held. **9.** Task specify risk assessment and safe working procedures for all activities must be developed and communicated. **10.** Housekeeping must be done after each pour, concrete waste should be disposed at designated waste areas, Concrete Mixers, Ready-mix truck and Concrete Pump trucks to be cleaned after each use. **11.** All plant or equipment used for concrete works must be inspected before use and findings recorded on a checklist, deviations must be reported to Construction manager / Supervisor	PSP & Principal Contractor
			2. Cost (C)	4	**4**	1	5	125	5	5	100	80%				
			3. Productivity (P)	3	**3**	1	5	125	5	5	75	60%				
			4. Environment (E)	2	**2**	1	5	125	5	5	50	40%				
				Total Average Risk Value								**65%**				

31	Temporary electrical equipment/ installations	**1.** Illegal connections Unsafe electrical installations could result in employees and other persons being electrocuted with subsequent injuries or even fatalities as well as asset damage due to fire **2.** Sub standard equipment **3.** Poor cable management **4.** Incompetent Installer **5.** Unauthorised Access to DB's	**1. Health & safety (I)**	4				4	1	5	125	5	5	100	80%	Mandatory or as per requirement	DB's Must be numbered. Warning signage posted at DB / No Unauthorised entry	**1.** Any electrical work undertaken as part of the project, including the installation of temporary electricity for construction use shall be in accordance with Construction Regulation 24 and the Electrical Installation Regulations **2.** The principal contractor to ensure that: - Existing services are to be located and clearly marked before construction commences and during the progress thereof; - Electrical installations and -machinery are sufficiently robust to withstand normal working conditions on site; - Temporary electrical installations must be inspected at least once per week by a competent person and a record of the inspections kept on the occupational health and safety file; **3.** Electrician with a Wireman's Licence must install, commission and inspect all electrical installations. Employee to be authorised, competent and appointed. COC must be available for electrical connections done. **4.** All DB's to be locked. Key register to be established and proof of key use to be evident. **5.** Lock out procedure to be communicated to all employees exposed. **6.** Task Specific Risk assessments to be communicated.	PSP & Principal Contractor
			2. Cost (C)			3		3	1	5	125	5	5	75	60%				
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%				
			4. Environment (E)			2		2	1	5	125	5	5	50	40%				
															60%				
											Total Average Risk Value								
32	Construction Trades Painting Tiling Paving Brickwork Plastering Ceiling / roof works	**1.** Exposed to Work at height (From Ladders, Scaffold and MEWP) **2.** Use, control and storage of HCS (Paint, Thinner, Silicon, Tile adhesive, Cement, Bonding agents) **3.** Use/operating of Small plant / equipment (Compactor, Brick cutter, Concrete Mixer, Tile cutter, Grinders, Skill Saw / jigsaw) **4.** Dust **5.** Vibrations **6.** Noise **7.** Use of unsafe hand tools and portable electrical tools **8.** Tools, equipment or materials falling from heights	**1. Health & safety (I)**	4				4	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1 .** All tools, machinery or equipment used in the different trades must be safe to use and be inspected on a daily or weekly basis, all findings must be recorded on a checklist and reported to Construction Manager / Supervisor. **2.** Workers operating Small plant or Machinery must be appointed and must have the required skills and knowledge on operating certain plant or machinery. These operators must be medically fit. **3**. Workers exposed to work at height , must have a valid medical fitness and work at height training. **4.** Scaffold, Ladders and MEWP must be inspected before use. Scaffold erector, Scaffold Inspector, Ladder Inspector and MEWP operator must be appointed with valid competencies **5.** Workers must be supplied with the CORRECT minimum required PPE for each specific task. **6.** Workers exposed to long periods of vibrations and Noise must take regular breaks or workers to be changed regularly. **7.** All trades specific Risk Assessments and Safe working procedures must be communicated to the relevant exposed workers. Proof of communication must be kept. **8.** Supervisor / Construction Manager to ensure NO overhead activities from different trades or simultaneous operations from different contractor overhead.	PSP & Principal Contractor
			2. Cost (C)				4	4	1	5	125	5	5	100	80%				
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%				
			4. Environment (E)			2		2	1	5	125	5	5	50	40%				
															65%				
											Total Average Risk Value								
33	Asbestos handling and removal	**1.** Inhalation of Asbestos fibres. **2.** Improper Asbestos removal **3.** Incompetent person conducting removal	**1. Health & safety (I)**	4				4	1	5	125	5	5	100	80%	Mandatory or as per requirement		**1.** Risk Assessment and Method statement for Handling of Asbestos to be communicated to the relevant exposed employees. **2.** Only registered Contractor (AAIA certified) will be allowed to removed and dispose Asbestos at a registered (designated) facility - Proof of disposal must be kept on record **3.** If Asbestos is noticed on site Department of Labour must be informed. **4.** Only workers with the required task, specific PPE will be allowed to handle and remove Asbestos **5.** Other simultaneously operations in the direct vicinity of Asbestos must be halted / stopped until asbestos type has been classified and removal according to requirement.	Principal Contractor & Registered Competent Asbestos removal contractor
			2. Cost (C)					5	1	5	125	5	5	125	100%				
			3. Productivity (P)		3			3	1	5	125	5	5	75	60%				
			4. Environment (E)			2		2	1	5	125	5	5	50	40%				
															70%				
											Total Average Risk Value								