

Project		TENDER NO. RFP017/2023 TURNKEY CONTRACTOR FOR CONSTRUCTION OF 176 LOW COST HOUSING UNITS IN KWAZULU NATAL AND 07 LOW COST HOUSING UNITS IN EASTERN CAPE		Evaluator Name		Thulani Bukhosini		BASELINE RISK ASSESSMENT  5059-S010P-34-BRA-0001 Rev 00-Anexure B										
Compiled By		Client Team		Signature														
Date of Assessment		06 March 2023		Responsible Manager														
				Signature														
PROBABILITY INDEX	5	Almost certain to inevitable	SEVERITY INDEX INJURY/DISEASE (I)	5	Fatal	SEVERITY INDEX PRODUCTION (P)	5	No production	SEVERITY INDEX ENVIRONMENT (E)	5	Permanent effects	SEVERITY INDEX COST (C)	5	> R500 000	FREQUENCY INDEX	5	Hazard permanently present	PROBABILITY VALUE X SEVERITY VALUE X FREQUENCY VALUE /25 = TOTAL SCORE (%)
	4	Probable		4	Permanent to Slight Disability		4	Long term 2 years		4	R100 000 - R499 999		4	Hazard arises every week				
	3	Improbable		3	14 Days with complete recovery		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	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	
Risk Value																		
A		80 - 100%		Very High Risk		PPE Requirement & Safety Signs												
B		60 - 79 %		High Risk														
C		40 - 59 %		Medium Risk														
D		20 - 39 %		Lower Risk														
E		0 - 19 %		Low Risk														
Item	Task / General Activities		Hazard Identified	Risks I.r.t the hazard	Severity Index										PPE	Signs	Corrective Action	Responsible Person & Time Frame
					I	P	E	C	Tot	Assess. Count	\$ Points Each	Formula = points x S	Probability Index	Frequency Index				
1	Site establishment		1. Improper loading and unloading practices 2. Traffic congestion 3. Improper electric installation 4. Use of damaged portable electrical tools and hand tools	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	2 3 2 2	1 3 2 5	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	5 5 50 125	40% 60% 40% 100%	Mandatory or as per requirement		• Appointed spotter to be in position wearing day glow vest and blowing whistle. • Clear all bystanders away from operations • Banksman to oversee all lifting operations • Pre-lift checks to be done on lifting material. • Slings and chain blocks to be checked prior lifting operations and to have valid load certificate. Lifting truck to also be in possession of a load test certificate and driver to be appointed in writing. 2. All electrical installations to be conducted by a competent person and COC's to be obtained when necessary. 3. Power tools to be inspected by a competent person, pre-check inspections to be conducted, power tools to be recorded on inspection register	Principal Contractor		
Total Average Risk Value 60%																		
2	Exposure of services		1. Manual excavation 2. Digging using excavators	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	3 3 4 2	1 3 4 2	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	75 75 100 50	60% 60% 80% 40%	Mandatory or as per requirement		1. Scanning devices to be used prior any excavation issues in order to determine live services and avoid electrocution.	Principal Contractor		
Total Average Risk Value 60%																		
3	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. Unbaricaded excavations/trenches 6. Damage to existing services during excavations 7. Oil spillages causing ground contamination 8. Air pollution	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	5 5 4 3	1 1 4 3	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	125 100 100 60%	100% 100% 80% 60%	Mandatory or as per requirement		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/baricaded/lighted after dark in public areas and when there is no work conducted. All excavations are subject to daily inspections by a competent person. 6. Scanning devices to be used to identify underground services prior excavation works, in order to prevent cable damage and possible electrocution.	Principal Contractor		
Total Average Risk Value 85%																		
4	Vehicles not roadworthy		1. Construction vehicles unroadworthy 2. Employees transport facilities unroadworthy 3. Mobile plant used in the project unsafe	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	4 4 3 1	1 4 3 1	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	100 100 75 25	80% 80% 60% 20%	Mandatory or as per requirement		1. All construction vehicles have to comply with Construction regulations 2. Employees to be managed to and from work in a safe manner, never to be ferried at the back of bakkies and trucks. 3. Mobile plant operating on site to fully comply with CR 23.	Principal Contractor		
Total Average Risk Value 60%																		
5	Working next to the road		1. Working on the road without Traffic plan, Traffic controllers and road signs	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	2 3 2 1	1 3 2 1	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	50 75 50 25	40% 60% 40% 20%	Mandatory or as per requirement		1. Traffic plan must be submitted to RE for approval prior to commencement of work.	Principal Contractor		
Total Average Risk Value 40%																		
6	Limited recourses to conduct all task		1. Contractual non compliance 2. Schedule and cost over run on project	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	1 4 4 1	1 4 4 1	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	25 100 100 20%	20% 80% 80% 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	Principal Contractor		
Total Average Risk Value 50%																		
7	Scaffolding		Unsafe scaffolding, offloading of scaffold material, incompetent scaffold erectors,	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	3 4 3 1	1 4 3 1	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	75 100 75 25	60% 80% 60% 20%	Mandatory or as per requirement		1. Competent person's appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee's available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/ are used	Principal Contractor		
Total Average Risk Value 55%																		
8	Electrical Installation		1. Incompetent Electrical Contractor	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	2 2 2 3	1 2 2 3	1 1 1 1	5 5 5 5	125 125 125 125	5 5 5 5	50 50 50 75	40% 40% 40% 60%	Mandatory or as per requirement		1. Only competent contractor is allowed to do Electrical installation. 2. Principal contractor must appoint comitent person for electrical work	Principal Contractor		
Total Average Risk Value 45%																		

9	Water reticulation	1. Incompetent supervisor 2. Trench can collapse 3. Man machine interaction, 4. Water with pressure, 5. Damage to existing services during excavations.	<table><tr><td>1. Health &amp; safety (I)</td><td>4</td><td></td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>100</td><td>80%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>40%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>55%</td></tr></table>	1. Health & safety (I)	4			4	1	5	125	5	5	100	80%	2. Cost (C)			2		2	1	5	125	5	5	40%	3. Productivity (P)				3		3	1	5	125	5	75	60%	4. Environment (E)					2		2	1	5	125	5	50	40%	Total Average Risk Value											55%	Mandatory or as per requirement	1. Principal contractor must appoint competent supervisor for supervision of construction work. 2. Appointed Excavation supervisor must monitor the excavation and keep records of excavation register. 3. Employees must keep safe distance from moving machinery and wear appropriate PPE, Safety vest. 4. Supervisors must develop Safe work procedure for valve installation and maintenance. 5. Principal contractor must refer to construction drawing and wayleave prior to commencement of excavation.	Principal Contractor	
1. Health & safety (I)	4			4	1	5	125	5	5	100	80%																																																											
2. Cost (C)			2		2	1	5	125	5	5	40%																																																											
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4. Environment (E)					2		2	1	5	125	5	50	40%																																																									
Total Average Risk Value											55%																																																											
10	Storm water and Sewer Repairs	1. Incompetent supervisor 2. Trench can collapse 3. Man machine interaction, 4. Working in confined space 5. Damage to existing services during excavations 6.	<table><tr><td>1. Health &amp; safety (I)</td><td>5</td><td></td><td></td><td>5</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>125</td><td>100%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>5</td><td></td><td>5</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>125</td><td>100%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>5</td><td></td><td>5</td><td>1</td><td>5</td><td>125</td><td>5</td><td>125</td><td>100%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>1</td><td>1</td><td>1</td><td>5</td><td>125</td><td>5</td><td>25</td><td>20%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>80%</td></tr></table>	1. Health & safety (I)	5			5	1	5	125	5	5	125	100%	2. Cost (C)			5		5	1	5	125	5	5	125	100%	3. Productivity (P)				5		5	1	5	125	5	125	100%	4. Environment (E)					1	1	1	5	125	5	25	20%	Total Average Risk Value											80%	Mandatory or as per requirement	1. Principal contractor must appoint competent supervisor for supervision of construction work. 2. Appointed Excavation supervisor must monitor the excavation and keep records of excavation register. 3. Employees must keep safe distance from moving machinery and wear appropriate PPE, Safety vest. 4. Conduct gas test prior to entering confined space, Safe work procedure and rescue plan must be in place. 5. Principal contractor must refer to construction drawing and wayleave prior to commencement of excavation.	Principal Contractor	
1. Health & safety (I)	5			5	1	5	125	5	5	125	100%																																																											
2. Cost (C)			5		5	1	5	125	5	5	125	100%																																																										
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4. Environment (E)					1	1	1	5	125	5	25	20%																																																										
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11	Use of portable electrical tools and hand tools	1. Unsafe, sub-standard and/or defective equipment used Untrained employees using portable electrical tools	<table><tr><td>1. Health &amp; safety (I)</td><td>3</td><td></td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>60%</td></tr></table>	1. Health & safety (I)	3			3	1	5	125	5	5	75	60%	2. Cost (C)			3		3	1	5	125	5	5	75	60%	3. Productivity (P)				3		3	1	5	125	5	75	60%	4. Environment (E)					3		3	1	5	125	5	75	60%	Total Average Risk Value											60%	Mandatory or as per requirement	1. All portable electrical equipment to be logged on a register and monthly inspections to be conducted. 2. Pre use checklists to be implemented, conducted and maintained 3. Employees to be trained on use of portable electrical tools	Principal Contractor
1. Health & safety (I)	3			3	1	5	125	5	5	75	60%																																																											
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12	Electrical work	1. Incompetent person doing electrical work. 3. Incompetent Contractor 2. Electrification and fire	<table><tr><td>1. Health &amp; safety (I)</td><td>3</td><td></td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>1</td><td>1</td><td>1</td><td>5</td><td>125</td><td>5</td><td>25</td><td>20%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>40%</td></tr></table>	1. Health & safety (I)	3			3	1	5	125	5	5	75	60%	2. Cost (C)			2		2	1	5	125	5	5	50	40%	3. Productivity (P)				2		2	1	5	125	5	50	40%	4. Environment (E)					1	1	1	5	125	5	25	20%	Total Average Risk Value											40%	Mandatory or as per requirement	1. Only competent person is allowed to do electrical work on site. 3. Only competent Contractor is allowed to do electrical work. 2. Legally appointed Fire fighter, fire extinguisher and first Aider must be in place for in case of emergency.	Principal Contractor	
1. Health & safety (I)	3			3	1	5	125	5	5	75	60%																																																											
2. Cost (C)			2		2	1	5	125	5	5	50	40%																																																										
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Total Average Risk Value											40%																																																											
13	Loading and Offloading	1. Improper loading and unloading 2. Incompetent operators deployed	<table><tr><td>1. Health &amp; safety (I)</td><td>3</td><td></td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>50%</td></tr></table>	1. Health & safety (I)	3			3	1	5	125	5	5	75	60%	2. Cost (C)			3		3	1	5	125	5	5	75	60%	3. Productivity (P)				2		2	1	5	125	5	50	40%	4. Environment (E)					2		2	1	5	125	5	50	40%	Total Average Risk Value											50%	Mandatory or as per requirement	1. Pre-use inspections to be conducted on truck mounted crane 2. Truck mounted crane operator to be licensed and appointed in writing 3. Truck mounted crane to be accommodated with a valid load test certificate, crane hook certificate 4. Full maintenance record of crane to be available 6. Ensure 3 point contact when climbing on and off the truck. 7. Ensure loads are stable when loading and offloading. 8. All material/equipment that is sling to be lifted must be checked before lifting takes place and locked down in register.	Principal Contractor
1. Health & safety (I)	3			3	1	5	125	5	5	75	60%																																																											
2. Cost (C)			3		3	1	5	125	5	5	75	60%																																																										
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14	Use of chemicals	1. Improper storage of chemicals, transportation and handling	<table><tr><td>1. Health &amp; safety (I)</td><td>2</td><td></td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>45%</td></tr></table>	1. Health & safety (I)	2			2	1	5	125	5	5	50	40%	2. Cost (C)			2		2	1	5	125	5	5	50	40%	3. Productivity (P)				2		2	1	5	125	5	50	40%	4. Environment (E)					3		3	1	5	125	5	75	60%	Total Average Risk Value											45%	Mandatory or as per requirement	1. HCS to be properly stored in a cool locked store room 2. HCS to be safely transported to the work place and no HCS to be stored in a work place, only quantity used. 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.	Principal Contractor
1. Health & safety (I)	2			2	1	5	125	5	5	50	40%																																																											
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15	Laying storm water pipes	1. Incompetent person supervising excavation work 2. Trench can collapse 3. Storm water pipes can fall into employees 4. Insects and snakes	<table><tr><td>1. Health &amp; safety (I)</td><td>2</td><td></td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>1</td><td>1</td><td>1</td><td>5</td><td>125</td><td>5</td><td>25</td><td>20%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>35%</td></tr></table>	1. Health & safety (I)	2			2	1	5	125	5	5	50	40%	2. Cost (C)			2		2	1	5	125	5	5	50	40%	3. Productivity (P)				2		2	1	5	125	5	50	40%	4. Environment (E)					1	1	1	5	125	5	25	20%	Total Average Risk Value											35%	Mandatory or as per requirement	1. Excavation work must be supervised by legally appointed excavation supervisor. 2. Excavation supervisor must inspect excavation and keep records 3. Supervisor must develop safe method of laying storm water pipes. 4. Employees must report to supervisors if they see insects or animals. Competent personnel must be called to site so that they can handle the situation.	Principal Contractor	
1. Health & safety (I)	2			2	1	5	125	5	5	50	40%																																																											
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4. Environment (E)					1	1	1	5	125	5	25	20%																																																										
Total Average Risk Value											35%																																																											
16	Replacement of roof coverings	1. Overhead cables 2. Incompetent Supervisor 3. Poor planing of works	<table><tr><td>1. Health &amp; safety (I)</td><td>4</td><td></td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>100</td><td>80%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>4</td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>100</td><td>80%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>4</td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>100</td><td>80%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>4</td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>100</td><td>80%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>80%</td></tr></table>	1. Health & safety (I)	4			4	1	5	125	5	5	100	80%	2. Cost (C)			4		4	1	5	125	5	5	100	80%	3. Productivity (P)				4		4	1	5	125	5	100	80%	4. Environment (E)					4		4	1	5	125	5	100	80%	Total Average Risk Value											80%	Mandatory or as per requirement	1. Principal contractor must conduct Risk assessment and safe work procedure prior to commencement of work. 2. Principal Contractor must appoint competent Supervisor for construction work. 3. Competent supervisor must demarcate/barricade. 4. All employees working on site must be familiar with fall protection plan.	Principal Contractor
1. Health & safety (I)	4			4	1	5	125	5	5	100	80%																																																											
2. Cost (C)			4		4	1	5	125	5	5	100	80%																																																										
3. Productivity (P)				4		4	1	5	125	5	100	80%																																																										
4. Environment (E)					4		4	1	5	125	5	100	80%																																																									
Total Average Risk Value											80%																																																											
17	Working on Heights	1. Personal Injury 2. Fatality	<table><tr><td>1. Health &amp; safety (I)</td><td>5</td><td></td><td></td><td>5</td><td>4</td><td>20</td><td>500</td><td>5</td><td>5</td><td>125</td><td>25%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>5</td><td></td><td>5</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>125</td><td>100%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>4</td><td></td><td>4</td><td>1</td><td>5</td><td>125</td><td>5</td><td>100</td><td>80%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>61%</td></tr></table>	1. Health & safety (I)	5			5	4	20	500	5	5	125	25%	2. Cost (C)			5		5	1	5	125	5	5	125	100%	3. Productivity (P)				4		4	1	5	125	5	100	80%	4. Environment (E)					2		2	1	5	125	5	50	40%	Total Average Risk Value											61%	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 and Risk assessment is implemented, amended and maintained. 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.	Principal Contractor
1. Health & safety (I)	5			5	4	20	500	5	5	125	25%																																																											
2. Cost (C)			5		5	1	5	125	5	5	125	100%																																																										
3. Productivity (P)				4		4	1	5	125	5	100	80%																																																										
4. Environment (E)					2		2	1	5	125	5	50	40%																																																									
Total Average Risk Value											61%																																																											
18	Vehicles not isolated when left unattended.	1. Exposed to pilferage 2. Unlicensed drivers operating machinery	<table><tr><td>1. Health &amp; safety (I)</td><td>3</td><td></td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>60%</td></tr></table>	1. Health & safety (I)	3			3	1	5	125	5	5	75	60%	2. Cost (C)			3		3	1	5	125	5	5	75	60%	3. Productivity (P)				3		3	1	5	125	5	75	60%	4. Environment (E)					3		3	1	5	125	5	75	60%	Total Average Risk Value											60%	Mandatory or as per requirement	1. Ensure vehicles are isolated when not in operation	Principal Contractor
1. Health & safety (I)	3			3	1	5	125	5	5	75	60%																																																											
2. Cost (C)			3		3	1	5	125	5	5	75	60%																																																										
3. Productivity (P)				3		3	1	5	125	5	75	60%																																																										
4. Environment (E)					3		3	1	5	125	5	75	60%																																																									
Total Average Risk Value											60%																																																											
19	Moving vehicles on public road during construction	1. Injury to people 2. Damage to equipment	<table><tr><td>1. Health &amp; safety (I)</td><td>3</td><td></td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>2. Cost (C)</td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>3. Productivity (P)</td><td></td><td></td><td></td><td>3</td><td></td><td>3</td><td>1</td><td>5</td><td>125</td><td>5</td><td>75</td><td>60%</td></tr><tr><td>4. Environment (E)</td><td></td><td></td><td></td><td></td><td>2</td><td></td><td>2</td><td>1</td><td>5</td><td>125</td><td>5</td><td>50</td><td>40%</td></tr><tr><td colspan="11">Total Average Risk Value</td><td>55%</td></tr></table>	1. Health & safety (I)	3			3	1	5	125	5	5	75	60%	2. Cost (C)			3		3	1	5	125	5	5	75	60%	3. Productivity (P)				3		3	1	5	125	5	75	60%	4. Environment (E)					2		2	1	5	125	5	50	40%	Total Average Risk Value											55%	Mandatory or as per requirement	1. Keep safe distance from moving machinery. 2. Wear reflective vests 3. Don't cross or leave work area without permission 4. Draft, implement and maintain a proper traffic management plan.	Principal Contractor
1. Health & safety (I)	3			3	1	5	125	5	5	75	60%																																																											
2. Cost (C)			3		3	1	5	125	5	5	75	60%																																																										
3. Productivity (P)				3		3	1	5	125	5	75	60%																																																										
4. Environment (E)					2		2	1	5	125	5	50	40%																																																									
Total Average Risk Value											55%																																																											

19	Pedestrian access to site	1. Unsafe pedestrian access (Walkway) 2. Personal injury	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>4</div> <div>4</div> <div>4</div> <div>1</div> </div> <div> <div>5</div> <div>125</div> <div>5</div> <div>5</div> </div> <div> <div>100</div> <div>80%</div> </div>	Mandatory or as per requirement	<div> <div>1. Safe demarcated walkway to be conducted.</div> <div>2. Walkway to be barricaded with snow netting.</div> <div>3. Pedestrian crossings to be conducted and utilized</div> </div>	Principal Contractor
20	Emergency Preparedness (Fire Fighting equipment insufficient)	1. Injury to people 2. Property and equipment damage	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>2</div> <div>2</div> <div>2</div> <div>2</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>5</div> </div> <div> <div>50</div> <div>40%</div> </div>	Mandatory or as per requirement	<div> <div>1. Fire fighting equipment must be in place accordance to survey conducted during site establishment.</div> <div>2. Identification and signage must be clear and visible.</div> <div>3. All relevant equipment to be inspected and on register.</div> </div>	Principal Contractor
21	Site security and public protection	1. Public gaining access to the construction site.	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>4</div> <div>4</div> <div>4</div> <div>2</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>5</div> </div> <div> <div>100</div> <div>80%</div> </div>	Mandatory or as per requirement	<div> <div>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.</div> <div>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 cant gain access and that all hazards are attended to prior vacating the site.</div> </div>	Principal Contractor
22	Abution facilities	1. 1. Use of untidy facilities putting employees at risk of contracting various infections and sicknesses	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>2</div> <div>1</div> <div>1</div> <div>2</div> </div> <div> <div>125</div> <div>4</div> <div>125</div> <div>4</div> </div> <div> <div>32%</div> <div>10%</div> <div>10%</div> <div>19%</div> </div>	Mandatory or as per requirement	<div> <div>1. Adequate, clean and ablation facilities to be provided by employer.</div> </div>	Principal Contractor
23	Safe guarding / Dealing with existing Structures	1. Damage to existing services and structures.	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>5</div> <div>5</div> <div>5</div> <div>5</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>3</div> </div> <div> <div>75</div> <div>60%</div> </div>	Mandatory or as per requirement	<div> <div>1. Ensure identification off all existing services and structures before commencing with site establishment.</div> </div>	Principal Contractor
24	Emergency Preparedness (Fire Fighting equipment insufficient)	1. Injury to people 2. Property and equipment damage	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>2</div> <div>2</div> <div>2</div> <div>2</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>5</div> </div> <div> <div>50</div> <div>40%</div> </div>	Mandatory or as per requirement	<div> <div>1. Fire fighting equipment must be in place accordance to survey conducted during site establishment.</div> <div>2. Identification and signage must be clear and visible.</div> <div>3. All relevant equipment to be inspected and on register.</div> </div>	Principal Contractor
25	Demolish and Reconstruct existing building block(s)	1. Falling objects. 2. Use of construction equipment 3. Use of eletrical powered tools	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>3</div> <div>3</div> <div>3</div> <div>3</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>5</div> </div> <div> <div>75</div> <div>60%</div> </div>	Mandatory or as per requirement	<div> <div>1. Appoint demolishing supervisor.</div> <div>2. Safety officer and supervisor must preapre details methos stament and risk assesment ad communicate to employees. 3. Demacate and barricade around construction area. Issue PPE to all employees and place madatary signs.</div> </div>	Principal Contractor
26	Concrete Mixing and Pouring (Manually and Mixer)	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	<div> <div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div> </div> <div> <div>3</div> <div>3</div> <div>2</div> <div>2</div> </div> <div> <div>1</div> <div>5</div> <div>125</div> <div>5</div> </div> <div> <div>75</div> <div>60%</div> </div>	Mandatory or as per requirement	<div> <div>1. concrete mixers to be regularly serviced in order to prevent breakdown leading to oil spillages. Spot checks to be done prior each shift.</div> <div>2. All hand tools to be inspected by a competent person.</div> <div>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.</div> <div>4. Concrete washout area to be created where concrete run off will be discharged.</div> <div>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.</div> <div>6. Operators to be well trained and no unauthorized employees must operate the mixer.</div> <div>7. Dust mask must be provided to employees handling cement as a last resource when dust cannot be controlled.</div> <div>8. Concrete mixer must keep a distance from excavations, when pouring into excavation flagman have to be more vigilant and a regular toolbox talks must be held.</div> <div>9. Task specify risk assessment for all activities must be developed and communicated.</div> </div>	Principal Contractor