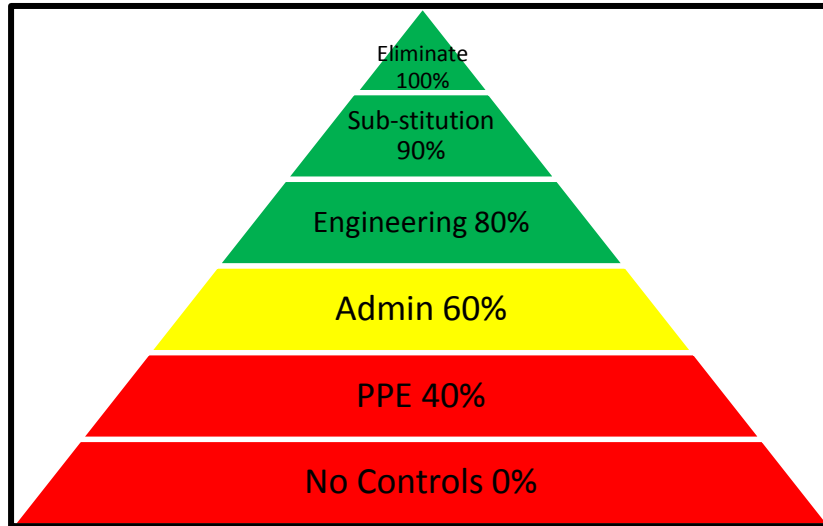


# RISK ASSESSMENT CONTROL SAMPLES FOR BASELINE R/A

EFFECTIVENESS OF CONTROLS:



CONTROLS (EXAMPLES ONLY)				
ENGINEERING		ADMINISTRATIVE		PPE
<ul style="list-style-type: none"> <li>Local exhaust ventilation</li> <li>General ventilation</li> <li>Silencer on machine</li> <li>Installed lighting</li> <li>Barricading</li> <li>Bunding</li> <li>Access control cages</li> <li>Automated lockout</li> <li>Filter bags</li> <li>Drip tray</li> <li>Machine fixed guard</li> <li>Earth leakage</li> <li>Automated braking system</li> <li>Wet scrubber</li> </ul>	<ul style="list-style-type: none"> <li>Sound proofing</li> <li>Closed water reticulation</li> <li>Drainage/water channels</li> <li>Automated access control</li> <li>Filtration system</li> <li>Speed limiter</li> <li>Reconditioning</li> <li>Product reuse in process</li> <li>Ligt curtain</li> <li>Methane/ energy capture</li> </ul>	<ul style="list-style-type: none"> <li>Inspections</li> <li>Culture survey</li> <li>Posters</li> <li>Demarcation</li> <li>Symbolic signage</li> <li>Colour coding</li> <li>Waste permits</li> <li>Monitoring programme</li> <li>Labelling</li> <li>Lock out</li> <li>Performance tests</li> <li>MSDS</li> <li>Vehicle licence</li> <li>Certificate of compliance</li> <li>Toolbox talks/awareness</li> </ul>	<ul style="list-style-type: none"> <li>Training</li> <li>Appointments</li> <li>Emergency plan</li> <li>Mock drill</li> <li>Internal or external audits</li> <li>Incident recall</li> <li>HSE committee meeting</li> <li>Supervision</li> <li>Medical surveillance</li> <li>Man-job specification</li> <li>Work instructions</li> <li>Planned job observation</li> <li>Waste management</li> <li>All documentation</li> </ul>	<ul style="list-style-type: none"> <li>Hard hat</li> <li>Goggles</li> <li>Safety harness</li> <li>Boots</li> <li>Face shield</li> <li>Gauntlets</li> <li>Boot flap</li> <li>Gloves</li> <li>Lead apron</li> <li>Ear protection</li> <li>Hazchem suit</li> </ul>



## BASELINE RISK ASSESSMENT: STANDARD RISK MATRIX WIKA RETAIL DEVELOPMENT (ERF 949) FOODZONE IVYPARK - POLOKWANE

Reference Number	WIKA 001
Implementation Date	24 OCT 2016
Rev / Amendment No	001
Rev / Amendment Date	15 JAN 2017

RISK & ASSURANCE STANDARD RISK MATRIX		HAZARD EFFECT / CONSEQUENCE				
Loss Type		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
Timeline	No impact on overall project timeline	No impact on overall project timeline	May result in overall project timeline overrun of less than 5%	May result in overall project timeline overrun of between 5% and less than 20%	May result in overall project timeline overrun of between 20% and less than 50%	May result in overall project timeline overrun of 50% or more
Budget	No impact on the budget of the project	No impact on the budget of the project	May result in overall project budget overrun of less than 5%	May result in overall project budget overrun of between 5% and less than 20%	May result in overall project budget overrun of between 20% and less than 50%	May result in overall project budget overrun of 50% or more
Investment Return – NPV loss	Less than R5m	Less than R5m	R5m to less than R50m	R50M to less than R500m	R500m to R5b	R5b or more
Quality	No impact on quality	No impact on quality	Minimal quality issues that can be addressed in a short timeframe with minimal interactions	Some quality issues that requires immediate management action	Significant quality issues that requires senior project management interaction	Significant quality issues that requires sponsorship intervention with significant resource and cost implications for rework
Safety / Health	First aid case / Exposure to minor health risk	First aid case / Exposure to minor health risk	Medical treatment case / Exposure to major health risk	Lost time injury / Reversible impact on health	Single fatality or loss of quality of life / Irreversible impact on health	Multiple fatalities / Impact on health ultimately fatal
Environment	Minimal environmental harm – L1 incident	Minimal environmental harm – L1 incident	Material environmental harm – L2 incident remediable short term	Serious environmental harm – L2 incident remediable within LOM	Major environmental harm – L2 incident remediable post LOM	Extreme environmental harm – L3 incident irreversible
Legal & Regulatory	No legal impact	No legal impact	Minor legal concerns with minor impact	Some legal concerns with manageable level of impact	Serious legal concerns and significant impact on operations	Legal non compliance with risk of shutdown of operations with significant cost impacts
Reputation / Social / Community	Slight impact - public awareness may exist but no public concern	Slight impact - public awareness may exist but no public concern	Limited impact - local public concern	Considerable impact - regional public concern	National impact - national public concern	International impact - international public attention
LIKELIHOOD		RISK RATING				
5 Almost Certain	The unwanted event has occurred frequently; has a 90% and higher probability of reoccurring	11 Medium	16 Significant	20 Significant	23 High	25 High
4 Likely	The unwanted event has a probability of between 60% and less than 90% of occurring	7 Medium	12 Medium	17 Significant	21 High	24 High
3 Possible	The unwanted event has a probability of between 30% and less than 60% of occurring	4 Low	8 Medium	13 Significant	18 Significant	22 High
2 Unlikely	The unwanted event has a probability of between 1% and less than 30% of occurring	2 Low	5 Low	9 Medium	14 Significant	19 Significant
1 Rare	The unwanted event has never occurred, has a probability of less than 1% of occurring	1 Low	3 Low	6 Medium	10 Medium	15 Significant

## SCOPE OF WORKS AT WIKA RETAIL DEVELOPMENT AND ASSOCIATED HAZARDS:

The construction work for the WIKA RETAIL DEVELOPMENT IVYPARK (NEW FOODZONE) will entitle the following activities.

TASK/DESCRIPTION	MAIN HAZARDS IDENTIFIED	WHO AFFECTED
<ul style="list-style-type: none"> <li>• Alterations and renovations to existing buildings</li> <li>• Demolition work (portion of buildings)</li> <li>• Altering &amp; openings in existing walls</li> <li>• Dismantling &amp; storage of material &amp; disposal</li> <li>• Removal of demolished material</li> <li>• Breaking up of mass concrete/brick paved areas and brick work</li> <li>• Removal of all sanitary fittings</li> <li>• Preparatory work to existing surfaces</li> <li>• Work conducted inside existing buildings</li> <li>• Earth works / open face excavations/trenches/backfilling</li> <li>• Concrete works; formwork; reinforcing</li> <li>• Concrete in foundations – superstructure</li> <li>• Rough formwork</li> <li>• Steel reinforcement</li> <li>• Masonry work / water proofing of roof coverings</li> <li>• Carpentry and joining</li> <li>• Ceilings installation; partitioning / access flooring</li> <li>• Iron monger</li> <li>• Installation of bathroom fittings</li> <li>• Structural steelwork / metal work</li> <li>• General plastering work</li> <li>• Tiling work</li> <li>• Paint work on new work (external plastered walls)</li> <li>• External works – preparation of soil for paving</li> </ul>	<p>Mechanical / Mobile</p> <p>Uncontrolled operations</p> <p>Manual handling</p> <p>Mechanical</p> <p>Falling objects</p> <p>Falling hazards</p> <p>Falling working at heights</p>	<p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p> <p>All</p>
<p><b><u>NEW WORK (SECTION 3):</u></b></p> <ul style="list-style-type: none"> <li>• Removal of existing work</li> <li>• Building up openings</li> <li>• Re-fixing of existing palisade fencing</li> <li>• Earth works and filling (import material)</li> <li>• Soil poisoning (BASF Termidor 25EC) – <span style="background-color: yellow;">Submit MSDS</span></li> <li>• Concrete formwork &amp; reinforcement</li> </ul>	<p>Chemicals</p>	<p>All</p>

<ul style="list-style-type: none"> <li>• Formwork to soffits of solid slab, sides of bases</li> <li>• Reinforced concrete casts – strip footings &amp; bases</li> <li>• Masonry work – for new work</li> <li>• General brick work (one and two brick walls)</li> <li>• Building of superstructure</li> <li>• Installation of concrete lintels</li> <li>• Waterproofing (damp proofing of walls/floors/roofs)</li> <li>• Installation of roof coverings (galvanized steel)</li> <li>• Installation of roof insulation</li> <li>• Carpentry &amp; joining work (new work scope)</li> <li>• Installation ceilings; partitions &amp; access flooring</li> <li>• Installation of electrical light fittings</li> <li>• Installation of suspended ceilings</li> <li>• Ironmongery work</li> <li>• Fitting of bathroom fittings</li> <li>• Metal work – including door frame installations; gates and screens</li> <li>• External/internal plastering work (New work scope)</li> <li>• Tiling, including wall tiling/floor tiling</li> <li>• Plumbing and drainage work (New work scope)</li> <li>• Disinfection of water pipe work (require MSDS of disinfectant)</li> <li>• Soil drainage – Sewer + Pipe + drain fittings</li> <li>• Water supply</li> <li>• Installation of fire appliances “CHUBB”</li> </ul>	<p>Working at Heights</p> <p>Roof work</p> <p>Electrical hazards (LOTO)</p> <p>Manual handling</p>	<p>All</p> <p>All</p> <p>All</p> <p>All</p>
<p><b>EXTERNAL WORK (SECTION 4):</b></p> <ul style="list-style-type: none"> <li>• Boundary &amp; yard walls / palisade fencing</li> <li>• Aprons – compaction of surfaces</li> <li>• Construction of generator plinth</li> <li>• Signage</li> <li>• Installation of electrical fencing</li> <li>• Construction &amp; installation of steel canopies with roof coverings</li> <li>• Internal electrical installations</li> <li>• Site electrical reticulation</li> <li>• Electronic installations to existing buildings</li> </ul>	<p>Excavations</p> <p>Electrical</p>	<p>All</p> <p>All</p>

NO	HAZARD/ITEM	RISK ASSOCIATED WITH HAZARD	CONSEQUENCES	RR	HOW IS HAZARD TO BE DEALT WITH	BY WHOM	BY WHEN?
<b>1.</b>	<b>SITE ESTABLISHMENT</b>						
<b>1.1</b>	<ul style="list-style-type: none"> <li>- <b>INCOMPETENT PERSONS</b></li> <li>- <b>INCORRECT STACKING</b></li> <li>- <b>PROCEDURES</b></li> </ul> <p><b>DURING SITE ESTABLISHMENT</b></p>	<ul style="list-style-type: none"> <li>• Injuries during off loading</li> <li>• Cuts and burns</li> <li>• Rushed activities</li> <li>• Incorrect supervision</li> <li>• Trip and fall</li> <li>• Cuts</li> <li>• Collapsing of stacks</li> </ul>	<ul style="list-style-type: none"> <li>• Hand and back injuries</li> <li>• Dropping of equipment</li> <li>• Physical injuries</li> <li>• Lost Time injuries</li> <li>• Medical treatment cases</li> <li>• Potentially fatal accidents</li> <li>• Loss of limbs</li> </ul>	<b>6</b>	<ul style="list-style-type: none"> <li>• The contractor must declare all employees competent in writing</li> <li>• Contractor OHS file must be approved prior to site establishment begins</li> <li>• Site specific safe work procedures must be followed</li> <li>• Site –induction must be given to all employees to make them aware of the specific hazards</li> <li>• Employees must be issued with correct PPE before work begin</li> <li>• All workers on site must be declared medically fit by a medical practitioner</li> </ul>	<ul style="list-style-type: none"> <li>- Construction supervisor</li> <li>- Contractor Safety Officer</li> <li>- CHSA (Construction Health &amp; Safety Agent)</li> <li>- Construction Manager</li> <li>- Construction supervisor</li> </ul>	During site establishment
<b>1.2</b>	<p><b>OFFLOADING HEAVY EQUIPMENT AND CONTAINERS</b></p> <p><b>P/C SITE ESTABLISHMENT</b></p>	<ul style="list-style-type: none"> <li>• Defective mobile crane can cause accidents</li> <li>• Adverse weather conditions</li> <li>• Untrained personnel/ Operators</li> <li>• Unsafe hooking methods unstable load</li> </ul>	<ul style="list-style-type: none"> <li>• Serious injury and fatalities</li> <li>• Damage to property and equipment</li> <li>• Potential hand &amp; foot injuries</li> <li>• Standing time</li> </ul>	<b>19</b>	<ul style="list-style-type: none"> <li>• Material to be stacked on firm and level ground.</li> <li>• Stacking to be supervised by a competent supervisor.</li> <li>• Adequate storage area to be provided</li> <li>• All unstable stacks to be dismantle and stacked over</li> <li>• Load test certificate will be submitted to the client.</li> <li>• Rope certificates must be submitted to the client.</li> <li>• Safe load indicator must be in good working order.</li> <li>• Over wind device must be in place and in working order.</li> <li>• Daily checks as per checklist by operator.</li> <li>• Checklist signed by supervisor and filed by safety officer.</li> </ul>	<ul style="list-style-type: none"> <li>- Construction Supervisor</li> <li>- CHSO</li> <li>- Construction Manager</li> </ul>	During site establishment

<b>1.3</b>	<b>SITE SECURITY AND FENCING</b>	<ul style="list-style-type: none"> <li>• Theft of property</li> <li>• Fires</li> <li>• Unsafe conduct or access by visitors/or public</li> </ul>	<ul style="list-style-type: none"> <li>• Financial losses</li> <li>• Loss of equipment / documentation</li> <li>• Stolen goods/material</li> </ul>	<b>5</b>	<ul style="list-style-type: none"> <li>• Fence with lockable gates</li> <li>• 24 Hour Security deployed</li> <li>• Fire prevention</li> <li>• All required OHS signage</li> </ul>	- Construction Manager	
<b>1.4</b>	<b>HOUSEKEEPING:</b> - ABLUTION FACILITIES - CLEAN DRINKING WATER - SHELTERED EATING AREA - DESIGNATED PARKING AREAS - BUNT AREA FOR DIESEL - STORAGE / OFFICE FACILITIES - DESIGNATED STACKING AREAS	<ul style="list-style-type: none"> <li>• Poor health and diseases</li> <li>• Unsafe movement of people and equipment on site</li> <li>• Personal injuries</li> <li>• Trip &amp; fall incidents</li> <li>• No proper stacking &amp; storage – lead to trip &amp; fall</li> </ul>	<ul style="list-style-type: none"> <li>• Diseases</li> <li>• Serious injuries</li> <li>• Environmental impact</li> <li>• Personal injuries</li> <li>• Lost time injuries</li> <li>• Medical treatment cases</li> <li>• Uncontrolled traffic management could lead to accidents</li> </ul>	<b>3</b>	<ul style="list-style-type: none"> <li>• Use site establishment checklist to ensure compliance with all items</li> <li>• Designated stacking area to be identified</li> <li>• Laydown area</li> <li>• Parking area for vehicles</li> <li>• Correct signage</li> </ul>	- Construction Supervisor - Construction Manager - Housekeeping Supervisor - Stacking & Storage Supervisor	
<b>1.5</b>	<b>TEMPORARY ELECTRICAL SUPPLY</b>	<ul style="list-style-type: none"> <li>• Incorrect installation</li> <li>• Electrocutation</li> <li>• Damaged services</li> <li>• Unstable positioning Electrical box</li> </ul>	<ul style="list-style-type: none"> <li>• Medical treatment cases</li> <li>• Fatality due to electrocution</li> <li>• Lost time injuries</li> </ul>	<b>21</b>	<ul style="list-style-type: none"> <li>• Ensure all cables are marked properly and isolated</li> <li>• Electrician to provide C.O.C for temporary installation</li> <li>• Lock-out/Isolation</li> <li>• Qualified Electrician</li> </ul>	- Construction Supervisor - Contractor Safety Officer - Electrical Engineer	At all times
<b>2</b>	<b>THEFT/SECURITY</b>	<ul style="list-style-type: none"> <li>• Unauthorised removal of tools, equipment or substances</li> <li>• Theft of equipment &amp; material</li> </ul>	<ul style="list-style-type: none"> <li>• Financial losses to the company.</li> <li>• Tools, equipment or substances which may be used by inexperienced or incompetent persons could result in injury or ill health to such persons.</li> </ul>	<b>18</b>	<ul style="list-style-type: none"> <li>• All tools, equipment or substances will be stored in a safe and secure manner.</li> <li>• Security staff will conduct searches of premises and persons in a random basis.</li> <li>• Relevant records will be kept.</li> <li>• Access controls to premises will be maintained.</li> </ul>	- Construction Supervisor - CHSO - Security (24 Hr) to be arranged	At all times
<b>3</b>	<b>LABOUR CONTROL</b>	<ul style="list-style-type: none"> <li>• Sub-standard time keeping and attendance records</li> <li>• Poor record keeping</li> <li>• Disputes due to poor</li> </ul>	<ul style="list-style-type: none"> <li>• Persons remaining on site after the official end of shift time could be injured</li> <li>• Legal disputes and</li> </ul>	<b>20</b>	<ul style="list-style-type: none"> <li>• Attendance registers are kept at the main offices.</li> <li>• Records of overtime</li> <li>• Sign all company policies with labourers</li> </ul>	- CLO - Contractor	Before work commence

		labour practices	strikes <ul style="list-style-type: none"> <li>• Standing time due to strikes</li> <li>• Financial losses due to strike action</li> </ul>		<ul style="list-style-type: none"> <li>• Proper induction of workforce</li> <li>• Ensure labour contracts signed with all labourers</li> <li>• Signed copies of labour contracts are kept on file in the site office</li> </ul>		
<b>4</b>	<b>ENVIRONMENT:</b> - WATER POLLUTION - AIR POLLUTION	<ul style="list-style-type: none"> <li>• Hazardous substances from the construction process entering rivers, streams or dams</li> <li>• Waste substances from workshops, repair bays or salvage/scrap site</li> <li>• Dust from construction work</li> <li>• Gases and fumes released into the atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>• Contamination of rivers, streams or dams which could result in illness to persons who may consume the water</li> <li>• Contamination of ground water resulting in possible illness to persons</li> <li>• Contaminated water entering rivers or streams</li> <li>• Persons exposed to harmful dust which could result in respiratory illness</li> <li>• Persons exposed to gases and fumes</li> <li>• Damage to structures through corrosion</li> </ul>	<b>9</b>	<ul style="list-style-type: none"> <li>• Biological monitoring programmes</li> <li>• Regular environmental surveys are conducted</li> <li>• Fumes and gas emission controls at discharge points, i.e. filler system.</li> <li>• Regular environmental survey.</li> </ul>	<ul style="list-style-type: none"> <li>- Construction Supervisor</li> <li>- Construction Health &amp; Safety Officer</li> </ul>	Before works commences
<b>5</b>	<b>TEMPORARY STOCKPILING OF MATERIAL (WASTE MANAGEMENT)</b>	<ul style="list-style-type: none"> <li>• Stackers working area always to be kept clean and tidy. Floor area to be free from obstacles</li> <li>• Stacker to stay away from all moving parts of machinery</li> <li>• Un-barricaded area could lead to unauthorised access</li> </ul>	<ul style="list-style-type: none"> <li>• Injury to hand, feet, legs and arms</li> <li>• Lost time injuries</li> <li>• Medical treatment cases</li> <li>• Crushed fingers; Splinters in fingers or hands</li> <li>• Cut to fingers or hands, feet or legs injured</li> <li>• Injury to hands, arms, legs and feet</li> <li>• Injury to all parts of</li> </ul>	<b>8</b>	<ul style="list-style-type: none"> <li>• Stackers to be inducted into the use maintenance and reason for wearing PPE</li> <li>• The following PPE is to be used: <ul style="list-style-type: none"> <li>- Overalls</li> <li>- Safety boots</li> <li>- Gloves</li> <li>- Hard hat</li> <li>- Earplugs(if required)</li> </ul> </li> <li>• Units are to be stacked according to a set standard the stack is to be stable and secure before strapping operation may begin</li> </ul>	<ul style="list-style-type: none"> <li>- Construction Supervisor</li> <li>- Construction Health &amp; Safety Officer</li> <li>- Hand tools Inspector</li> <li>- Stacking and Storage Supervisor</li> </ul>	All the time

			body		<ul style="list-style-type: none"> <li>• Strapping is also to be done to pre-planned set standard</li> <li>• Be aware of forklift movement when it comes to collect the load</li> <li>• Stackers are to be trained how to stack properly and in a safe way</li> <li>• Stackers are to be trained how to strap properly</li> <li>• Forklift driver to alert stacker that is entering his working area</li> <li>• Stacker to be inducted at his work place. Re: housekeeping and safety</li> <li>• Stacker to be inducted to stay away from the composite plant and moving machinery</li> </ul>		
<b>6</b>	<b>FIRE</b>	<ul style="list-style-type: none"> <li>• Lightning</li> <li>• Burning of refuse on site</li> <li>• Unsafe electrical connections could lead to fire hazards</li> <li>• Uncontrolled Hot Works/ Sparks lead to ignition source</li> </ul>	<ul style="list-style-type: none"> <li>• Damage to property or equipment</li> <li>• Destruction of vegetation and possible damage to property or equipment</li> <li>• Injury to persons who enter the area</li> <li>• Environmental pollution</li> </ul>	<b>17</b>	<ul style="list-style-type: none"> <li>• Fire breaks around structures and buildings</li> <li>• Fill excavations with top soil when full</li> <li>• Maintain perimeter fence and fire breaks</li> <li>• Access gates to be locked</li> <li>• Removal of potential fire hazard sources</li> </ul>	<ul style="list-style-type: none"> <li>- Fire Control Officer</li> <li>- Construction Supervisor</li> <li>- CHSO</li> </ul>	At all times
<b>6.1</b>	<b>FIRES IN STORES</b>	<ul style="list-style-type: none"> <li>• Spontaneous combustion caused when chemicals such as HTH and oil products come into contact with each other</li> <li>• Accumulation of vapours/fumes in confined spaces</li> <li>• Accidental ignition during vehicle refuelling.</li> <li>• Ignition of flammable substances due to smoking or naked flames.</li> </ul>	<ul style="list-style-type: none"> <li>• Fires or explosions which could result in damage to property and injury to person</li> <li>• Lost time injuries</li> <li>• Potential for ignition due to naked flames or smoking</li> <li>• Fatalities</li> <li>• Medical treatment cases</li> <li>• Fire or explosion resulting in injury and</li> </ul>	<b>17</b>	<ul style="list-style-type: none"> <li>• Conform to the manufacturer's safe handling and storage instructions</li> <li>• MSDS for all combustible materials (chemicals)</li> <li>• Ensure storage area is well ventilated</li> <li>• Display relevant symbolic signs</li> <li>• Adequate fire extinguishers placed in strategic positions.</li> <li>• Warning signs informing persons of danger.</li> <li>• Stored in approval storage areas,</li> </ul>	<ul style="list-style-type: none"> <li>- Fire Control Officer</li> <li>- Construction Supervisor</li> <li>- Hazardous Chemical Supervisor</li> </ul>	At all times



		(i.e. grease/oil, paint, etc.) <ul style="list-style-type: none"> <li>Ignition of compressed gas</li> <li>Ignition of items such as timber, cotton waste, etc.</li> <li>Ignition due to faulty electrical cables/fittings</li> </ul>	<ul style="list-style-type: none"> <li>damage to property</li> <li>Injury to persons or damage to property or serious injury to personnel</li> <li>Damage to property</li> </ul>		<ul style="list-style-type: none"> <li>i.e. flammable stores</li> <li>Fire hydrants are required at strategic points</li> <li>Electrical cables and fitting must not be secured to timber roof beams/ structures i.e. use steel brackets</li> </ul>		
<b>7</b>	<b>CIVIL WORKS</b>						
<b>7.1</b>	<b>CLEAR &amp; GRUB SITE:</b>  - ESTABLISH TEMPORARY PARKING AREA	<ul style="list-style-type: none"> <li>Offloading machinery could lead to damage to property</li> <li>Falling machinery from lowbed</li> <li>Workers hit by machinery Man/Machine interface</li> </ul>	<ul style="list-style-type: none"> <li>Serious injuries</li> <li>Fatality</li> <li>Lost time injury</li> <li>Medical treatment cases</li> </ul>	<b>21</b>	<ul style="list-style-type: none"> <li>Qualified operators</li> <li>Offloading procedures</li> <li>Check operators medicals</li> <li>Pre-start checks</li> <li>Supervision</li> <li>Correct PPE for task</li> <li>Pre-start checks - machines</li> </ul>	<ul style="list-style-type: none"> <li>Qualified Plant Operator</li> <li>Heavy machinery Inspector</li> <li>Construction Supervisor</li> </ul>	At all times
<b>7.2</b>	<b>GRADING SITE: CUT TO FILL EARTH WORKS</b>  - USING MOTOR GRADER; TLB; EXCAVATOR; WATER TRUCK; ROLLER COMPACTOR; TIPPER TRUCKS	<ul style="list-style-type: none"> <li>Personnel being hit with machinery</li> <li>Breakdowns</li> <li>Oil spillage</li> <li>Poor workmanship</li> <li>Poor visibility due to dust</li> <li>Man/Machine interface</li> </ul>	<ul style="list-style-type: none"> <li>Fatalities</li> <li>Medical treatment cases</li> <li>Lost in production time</li> <li>Serious injuries</li> <li>Machine bread downs leading to standing time</li> </ul>	<b>22</b>	<ul style="list-style-type: none"> <li>Qualified operators</li> <li>All personnel to be inducted</li> <li>Proof of medicals</li> <li>Pre-start checks on machinery</li> <li>Identify lay-down area</li> <li>Correct PPE for task</li> <li>Direct supervision</li> </ul>	<ul style="list-style-type: none"> <li>Construction Supervisor</li> <li>Qualified Operators</li> <li>CHSO</li> </ul>	During plant operations
<b>7.3</b>	<b>INSTALLATION OF STORM WATER DRAINAGE</b>  - EXTERIOR FIRE LINES	<ul style="list-style-type: none"> <li>Trip &amp; fall into excavations</li> <li>Falling concrete pipes while offloading</li> <li>Man/Machine interface</li> <li>Poor quality workmanship</li> <li>Person buried in trench</li> </ul>	<ul style="list-style-type: none"> <li>Lost time injuries</li> <li>Workers struck by load while offloading pipes</li> <li>Medical treatment cases</li> <li>Serious injuries</li> <li>Standing time due to poor workmanship &amp; work to be repeated</li> </ul>	<b>19</b>	<ul style="list-style-type: none"> <li>Qualified operator</li> <li>Correct offloading of storm water pipes</li> <li>Direct Supervision</li> <li>Correct PPE for task</li> <li>Worker visibility</li> <li>Checks on medical truck maintained crane when offloading storm water pipes</li> </ul>	<ul style="list-style-type: none"> <li>Construction Supervisor</li> <li>Qualified Mobile Crane Operator</li> <li>CHSO</li> </ul>	During offloading of pipes procedures

8	<b>EXCAVATION OF TRENCHES</b>	<ul style="list-style-type: none"> <li>• Excavate with excavator to the specific level</li> <li>• Trip &amp; fall</li> <li>• Falling soil</li> <li>• Machine struck worker</li> <li>• Excavations by hand leading to hand injuries</li> <li>• Incorrect manual handling</li> <li>• Man/Machine interface</li> </ul>	<ul style="list-style-type: none"> <li>• Accident due to defective machines</li> <li>• Damaging services</li> <li>• Over excavation</li> <li>• Dust</li> <li>• Lost time injuries</li> <li>• Over excavation causing:</li> <li>• Electrocutions when damaging electrical wires</li> <li>• Damage to services</li> <li>• Back injuries</li> <li>• Employees not visible to operate or moving machine</li> <li>• Fatalities</li> <li>• Serious injuries</li> <li>• Damages of injury of employee by machine</li> <li>• Materials can fall onto employees when working inside the excavator</li> <li>• In case of an emergency too many employees may be buried as a result of inadequate access.</li> <li>• Employees may also strain muscles to get into or out of excavation without safe and convenient access</li> <li>• Damage to the excavation. Injury to employees</li> <li>• Damage to plant and machinery</li> </ul>	13	<ul style="list-style-type: none"> <li>• Proper supervision- ensures proper communication when indicating and excavating</li> <li>• Well trained operators</li> <li>• Level on survey profiles clearly indicated</li> <li>• Dust mask provided</li> <li>• Correct PPE for task</li> <li>• Proper supervision- ensures proper communication when indicating and excavating</li> <li>• Well trained operators</li> <li>• Level on survey profiles clearly indicated</li> <li>• Operators must work under close supervision.</li> <li>• He must inspect the work area prior to commencing work</li> <li>• Supervisor must instruct operators when to commence work</li> <li>• Induct employees on safe working Procedures</li> <li>• Supervisor to inspect sides on a regular basis</li> <li>• Employees to be instructed not to place loose soil on edge of the excavation</li> <li>• Providing a ladder makes access into and out of the excavation area easy and safe</li> <li>• Excavated material to be placed away from side of excavation</li> <li>• All excavations deeper than 1.5m must have an access ladder available for employees to get into and out of the excavation safely</li> </ul>	<ul style="list-style-type: none"> <li>- Construction Supervisor</li> <li>- Construction Health &amp; Safety Officer</li> <li>- Excavation Supervisor</li> </ul>	Before works commences
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					<ul style="list-style-type: none"> <li>Sides of excavation to be shored (if necessary) and barricaded immediately</li> <li>Excavations must be backfilled as soon as possible after excavation</li> <li>Put adequate shoring and strong physical barricades in place immediately</li> <li>Keep area barricaded with a strong physical barricade and backfill as soon as possible</li> </ul>		
9	<b>LOCATING UNDER GROUND CABLES/SERVICES PRIOR TO EXCAVATION</b>	<ul style="list-style-type: none"> <li>Locate marks of existing services</li> <li>Damage to existing services</li> </ul>	<ul style="list-style-type: none"> <li>Improper or unidentified marks lead to over excavation and damage to underground cables and services</li> <li>No planks/marks available.</li> <li>Incorrect levels.</li> <li>Incompetent persons</li> </ul>	10	<ul style="list-style-type: none"> <li>Use visible marks- Marking over inspected to ensure correctness.</li> <li>Proper supervision</li> <li>Proper supervision.</li> <li>Well trained persons.</li> <li>Correct planning of work.</li> <li>Levels on survey profiles</li> <li>Confirm set levels on survey profiles</li> </ul>	Excavation supervisor	Before works commences
10	<b>CUTTING INTO EXISTING SEWER NETWORKS</b>	<ul style="list-style-type: none"> <li>Hand injuries</li> <li>Falling ground</li> <li>Man/Machine interface injuries</li> </ul>	<ul style="list-style-type: none"> <li>Improper marking or unidentified marks lead to over excavation and damage to underground cables and services</li> <li>No plan/marks available</li> <li>Incorrect levels</li> <li>Incompetent persons</li> <li>Injuries to workers</li> <li>Accident due to defective machines</li> <li>Damaging services</li> <li>Over excavation</li> <li>Dust</li> <li>Environmental –spillage of sewer</li> </ul>	10	<ul style="list-style-type: none"> <li>Use visible marks- marking over inspected to ensure correctness.</li> <li>Proper supervision</li> <li>Proper supervision</li> <li>Well trained supervisors</li> <li>Correct planning of the work</li> <li>Levels on survey profiles</li> <li>Proper supervision- ensures proper communication when indicating and excavating.</li> <li>Well trained operators</li> <li>Levels on survey profiles clearly indicated</li> <li>Dust masks provided</li> </ul>	<ul style="list-style-type: none"> <li>Construction Supervisor</li> <li>Construction Health &amp; Safety Officer</li> </ul>	Pre Task

## SECTION 2: DEMOLITION WORK @ ALTERATIONS:

1	<b>ALTERATIONS &amp; DEMOLITIONS TO EXISTING STRUCTURES</b>  - BREAKING UP EXISTING CONCRETE PAVED AREAS & BRICK WORK	<ul style="list-style-type: none"> <li>Injuries due to breaking down of existing structures</li> <li>Cuts &amp; bruises</li> <li>Collapsing of structures</li> <li>Trip &amp; fall</li> <li>Dust inhalation public &amp; tenants</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling injuries</li> <li>Lost Time Injuries</li> <li>1<sup>st</sup> Aid treatment cases</li> </ul>	18	<ul style="list-style-type: none"> <li>Implement proper Waste Management plan</li> <li>Dust control</li> <li>Barricade work area from public</li> <li>Correct PPE for task</li> <li>Training</li> <li>Signage to be displayed</li> </ul>	- Construction Supervisor	During alteration & demolishing work
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## SECTION 3: BUILDING WORK (NEW WORK):

1	<b>EXCAVATIONS FILLING TRENCHES FOUNDATIONS</b>  - COMPACTION - SOIL POISONING	<ul style="list-style-type: none"> <li>Hard rock material</li> <li>Risk of collapsing excavations</li> <li>Slip; trip &amp; fall hazards</li> <li>Seepage of subterranean water</li> <li>Workers inhaling dangerous fumes</li> <li>Skin contact with hazardous material</li> </ul>	<ul style="list-style-type: none"> <li>Blasting of hard rock material leading to injuries or damage to property</li> <li>Slip &amp; trip leading to serious injuries</li> <li>Lost time injuries</li> <li>Medical treatment cases</li> </ul>	18	<ul style="list-style-type: none"> <li>Inspections by Excavation Supervisor</li> <li>Correct PPE for task</li> <li>Properly trained Operators</li> <li>Full time Supervision</li> <li>Location of services</li> <li>Trained operators</li> <li>MSDS for chemical substances to be inducted with workers</li> <li>Use of correct application of methods during application of soil insecticides</li> </ul>	- Excavation Supervisor - Civil Engineer - Construction Supervisor - Construction Manager - Hazardous Chemical Supervisor	During Excavation Works
2	<b>REINFORCING CONCRETE:</b> - Formwork	<ul style="list-style-type: none"> <li>Falling material</li> <li>Concrete dust inhalation</li> <li>Skin irritation</li> <li>Unsecure retaining wall</li> <li>Sharp edges</li> </ul>	<ul style="list-style-type: none"> <li>Cuts; bruises; hand injuries due to steel work</li> <li>Medical treatment cases</li> <li>Serious injuries to back: Inadequate manual handling</li> <li>Lost time injuries</li> <li>1<sup>st</sup> aid cases</li> </ul>	13	<ul style="list-style-type: none"> <li>Qualified steel fixers</li> <li>Induct workers on MSDS for concrete dust</li> <li>Correct PPE for task</li> <li>Gloves for steel fixing</li> <li>Toolbox talks</li> <li>Direct supervision</li> <li>Correct tools for the task</li> </ul>	- Construction Supervisor - Hand Tools Inspector - Steel Fixer	Pre Task

3	<b>STRUCTURAL STEEL ERECTION:</b> - COLUMNS; BEAMS & JOINTS - CASTING OF CONCRETE COLUMNS - TOUCH UP PAINT ON STEEL	<ul style="list-style-type: none"> <li>Falling material causing serious injuries</li> <li>Trip &amp; fall</li> <li>Damage to property &amp; material</li> <li>“Sling” failure when lifting steel columns</li> <li>Falling shutters</li> <li>Fume inhalation from paint</li> </ul>	<ul style="list-style-type: none"> <li>Failing in lifting operations causing falling steel objects</li> <li>Medical treatment cases</li> <li>Lost time injuries</li> <li>Manual handling injuries</li> <li>Lung diseases</li> </ul>	21	<ul style="list-style-type: none"> <li>Competent steel erectors</li> <li>WAH Training</li> <li>Proof of medicals</li> <li>Direct supervision</li> <li>SWL for material hoist – lifting steel</li> <li>Pre-start checks</li> <li>Toolbox talks</li> <li>Correct PPE for task</li> <li>Use of fall arrest equipment when working at heights.</li> <li>Implement fall protection plan.</li> <li>Clear work area</li> <li>Check falling objects</li> <li>Barricade work area under suspended loads</li> <li>Direct supervision from rigger</li> <li>Use of guide ropes when lifting heavy steel beams.</li> <li>Check adverse weather conditions prior to task</li> <li>Issue PTW</li> <li>Emergency procedures</li> </ul>	<ul style="list-style-type: none"> <li>Construction Supervisor</li> <li>Hand Tools Inspector</li> <li>Steel Fixer</li> </ul>	Before task
4	<b>FORMWORK + SHUTTERING</b> - Install rebar - Casting of floor slabs	<ul style="list-style-type: none"> <li>Concrete coming in contact with the skin.</li> <li>Sharp edges could cut hands.</li> <li>Heavy rebar could have potential back injuries.</li> </ul>	<ul style="list-style-type: none"> <li>Concrete coming in contact with the skin.</li> <li>HCS poisoning</li> <li>Lost time injuries</li> <li>Medical injuries</li> </ul>	9	<ul style="list-style-type: none"> <li>Wear correct PPE.</li> <li>Correct PPE for task</li> <li>Gloves for steel fixing</li> <li>Toolbox talks</li> <li>Direct supervision</li> <li>Correct tools for the task</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Team members</li> <li>Safety Rep</li> </ul>	Before and During task
5	<b>ROOF WORK (WORKING AT HEIGHTS)</b> - Lifting steel trusses - Materials Hoist - Install trusses - Installing Sheeting - Waterproofing of roofs	<ul style="list-style-type: none"> <li>Inadequate preparedness for type of equipment could lead to serious injuries and fatality.</li> <li>Use of incorrect equipment could cause falls, falling objects</li> <li>Defective equipment</li> </ul>	<ul style="list-style-type: none"> <li>Fatality major disabling injuries</li> <li>Standing/Lost Time Injuries</li> <li>Failure to establish safe system for work could lead to fatalities &amp; serious disabling</li> </ul>	18	<ul style="list-style-type: none"> <li>SWL for steel beams to be inspected</li> <li>Inspect slings; chains; pulleys and hooks</li> <li>Inspect if overhead power lines</li> <li>Barricade working area</li> <li>Qualified operator</li> <li>No workers under suspended</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Team members</li> <li>Safety Rep</li> <li>Working at heights Supervisor</li> <li>Fall Protection Plan</li> </ul>	Before and During task

		<p>could lead to collapsing structures</p> <ul style="list-style-type: none"> <li>• Fragile surfaces</li> <li>• Overloading can lead to ropes; slings snapping and cause damage &amp; injury to personnel</li> </ul>	<p>injuries</p> <ul style="list-style-type: none"> <li>• 1st Aid Medical Treatment cases</li> </ul>		<p>load</p>	<p>Developer</p> <ul style="list-style-type: none"> <li>- Construction Supervisor</li> </ul>	
6	<p><b>SCAFFOLDING WORK</b></p> <ul style="list-style-type: none"> <li>- Install box gutters downpipes</li> <li>- Concrete roof</li> <li>- Waterproofing</li> </ul>	<ul style="list-style-type: none"> <li>• Working at heights risks</li> <li>• Potential fall incidents</li> <li>• Falling equipment</li> <li>• Erecting of scaffolds leading to potential fall injuries and potential fatalities</li> <li>• Scaffold collapse</li> <li>• Uneven surface</li> <li>• Insufficient / non-compliant scaffold</li> </ul>	<ul style="list-style-type: none"> <li>• Slip and fall while erecting scaffolding</li> <li>• Incompetent scaffolding Erector could cause the collapse of scaffolds while erecting the scaffolds.</li> <li>• Unsafe structures leading to falling from heights</li> <li>• Lost Time Injuries</li> <li>• Fatal injuries</li> <li>• Non adherence to FPP could lead to major and serious injuries</li> <li>• Tools or material dropped unto persons working below</li> </ul>	18	<ul style="list-style-type: none"> <li>• Operators are well trained and certified (Scaffold Erectors)</li> <li>• Using safety harnesses.</li> <li>• Work is adequately supervised (Scaffold Inspector)</li> <li>• Erectors are well trained and certified.</li> <li>• No erecting scaffolds in wet weather or on wet ground.</li> <li>• Compile Fall Protection Plan</li> <li>• FPP to be approved by client</li> <li>• Area is barricaded while dismantling or work above</li> <li>• Safety rails are present</li> <li>• Persons use life line (harnesses/fall rescue equipment)</li> <li>• Medicals for all people working at heights</li> <li>• Competent supervision of work.</li> <li>• Employees are well trained to implement FPP</li> <li>• Tools/material is kept in buckets.</li> <li>• Good communication practices are encouraged and enforced at all times.</li> <li>• Head protection is compulsory (Correct PPE)</li> <li>• Scaffolding checked daily to a checklist.</li> <li>• Scaffolds completely checked after heavy rains or strong winds</li> </ul>	<ul style="list-style-type: none"> <li>- Site Supervisor</li> <li>- Team members</li> <li>- Safety Rep</li> <li>- Scaffold erector</li> <li>- Scaffold inspector</li> <li>- Scaffold Supervisor</li> <li>- Fall Protection Plan Developer</li> </ul>	<p>Before and During task</p> <p>Working at Heights</p>

					<ul style="list-style-type: none"> <li>Working on scaffold in bad weather is not allowed</li> </ul>		
<b>7</b>	<b>EXTERNAL WALLING</b> - Brick walls construction - Plastering + painting of offices - Masonry work - Hollow walls - Face bricks	<ul style="list-style-type: none"> <li>Potential trip &amp; fall incidents</li> <li>Brick falling into due to poor stacking</li> <li>Bruises to legs &amp; feet</li> <li>Poor stacking could lead to work to be re-done</li> <li>Insufficient PPE</li> <li>Paint particles in eyes.</li> <li>Skin irritation from paint.</li> <li>Paint spillage on property</li> <li>Falling from heights</li> </ul>	<ul style="list-style-type: none"> <li>Loss of production due to incident investigation</li> <li>Lost time injury</li> <li>Medical treatment cases</li> <li>Back / body injuries</li> <li>LTI</li> <li>Medical treatment</li> <li>Environmental damage from spillage.</li> <li>Project time and budget overrun.</li> </ul>	<b>14</b>	<ul style="list-style-type: none"> <li>Correct tools for job</li> <li>Stack bricks not higher than 2 pallets high</li> <li>Correct PPE for handling bricks – sharp edges</li> <li>Toolbox Talk</li> <li>SWP</li> <li>Qualified brick layers</li> <li>Correct handling of bricks/ concrete cement into foundation</li> <li>Emergency escape drill (workers in trench)</li> <li>All workers must wear PPE such as gloves, goggles, dust masks / respirator.</li> <li>Ensure to place a plastic cover on ground to prevent spillage. Proper supervision from supervisor.</li> <li>MSDS' must be available at all times.</li> <li>Toolbox talks.</li> <li>Ensure workers are medically fit and trained to work at heights</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Team members</li> <li>Safety Rep</li> </ul>	Before and During task
<b>8</b>	<b>INSTALLATION OF WINDOWS / DOORS CARPENTRY &amp; JOINING</b>	<ul style="list-style-type: none"> <li>Use of hand tools that is damaged</li> <li>Unskilled worker could damage glass.</li> </ul>	<ul style="list-style-type: none"> <li>Hand cuts could lead to first aid cases.</li> <li>Cost budget overrun</li> <li>Lost time injuries</li> </ul>	<b>9</b>	<ul style="list-style-type: none"> <li>Ensure tools and equipment is inspected before use.</li> <li>Correct PPE to be issued and used.</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Team members</li> <li>Safety Rep</li> </ul>	Before and During task
<b>9</b>	<b>INTERNAL WORK</b> - Installation of doors - Installation of skirting	<ul style="list-style-type: none"> <li>Use of hand tools that is damaged.</li> <li>Manual handling injuries</li> </ul>	<ul style="list-style-type: none"> <li>Hand injuries that could lead to 1<sup>st</sup> Aid cases.</li> <li>Incorrect manual handling leading to injuries</li> </ul>	<b>5</b>	<ul style="list-style-type: none"> <li>Use of correct PPE issued.</li> <li>Correct manual handling methods</li> <li>Supervision</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Team members</li> <li>Safety Rep</li> </ul>	Before and During task

10	<b>FLOOR FINISHES</b> - Installation of porcelain tiles - Skirting - Plastering walls + paint	<ul style="list-style-type: none"> <li>• Sharp edges of tiles could cut hands</li> <li>• Insufficient PPE</li> <li>• Paint particles in eyes.</li> <li>• Skin irritation from paint.</li> <li>• Paint spillage on property</li> <li>• Falling from heights</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of production due to incident investigation</li> <li>• Lost time injury</li> <li>• Medical treatment cases</li> <li>• Back / body injuries</li> <li>• LTI</li> <li>• Medical treatment</li> <li>• Environmental damage from spillage.</li> <li>• Project time and budget overrun.</li> </ul>	9	<ul style="list-style-type: none"> <li>• Correct tools for job</li> <li>• Stack bricks not higher than 2 pallets high</li> <li>• Correct PPE for handling bricks – sharp edges</li> <li>• Toolbox Talk</li> <li>• SWP</li> <li>• Qualified brick layers</li> <li>• Correct handling of bricks/ concrete cement into foundation</li> <li>• Emergency escape drill (workers in trench)</li> <li>• All workers must wear PPE such as gloves, goggles, dust masks / respirator.</li> <li>• Ensure to place a plastic cover on ground to prevent spillage. Proper supervision from supervisor.</li> <li>• MSDS' must be available at all times.</li> <li>• Toolbox talks.</li> <li>• Ensure workers are medically fit and trained to work at heights</li> </ul>	<ul style="list-style-type: none"> <li>- Fall Protection Plan Developer</li> <li>- Supervisor</li> <li>- Construction Manager</li> </ul>	Before and During task
11	<b>CEILINGS</b> - Install suspended ceilings	<ul style="list-style-type: none"> <li>• Cutting of steel brandering – Hand injuries</li> <li>• Electrocutation from power drill</li> <li>• Falling from ladder</li> <li>• Damage to equipment / property.</li> <li>• Cutting of plasterboard using hack saw – Hand injuries</li> </ul>	<ul style="list-style-type: none"> <li>• LTI</li> <li>• 1st Aid Cases / Medical treatment</li> <li>• Serious injuries from falling</li> <li>• Back injuries from falling</li> <li>• Possibility of budget overrun on project</li> <li>• May result in project time overrun</li> </ul>	13	<ul style="list-style-type: none"> <li>• Ensure all workers are medically fit to work at height.</li> <li>• Ensure all workers received working at heights training</li> <li>• Toolbox talk on ladder safety</li> <li>• Ensure measurements are correct</li> <li>• Ensure tools and equipment is inspected prior to use.</li> <li>• All required PPE must be worn.</li> </ul>	<ul style="list-style-type: none"> <li>- Site Supervisor</li> <li>- Safety Rep</li> <li>- Team</li> <li>- Working at Heights Supervisor</li> <li>- Ladder Inspector</li> </ul>	Before and During task



12	<b>ELECTRICAL INSTALLATIONS</b> - External main power supply - Power supply to offices: Lights + Plugs	<ul style="list-style-type: none"> <li>Falling from ladder, back injuries</li> <li>Hand injuries</li> <li>Dust particles falling from roof,</li> <li>Eye damage.</li> <li>Damage to cable if not done properly.</li> <li>Electrocution</li> <li>Falling of lights, damage to property / assets</li> <li>Fire from incompetent electrician when misconnecting cables etc.</li> </ul>	<ul style="list-style-type: none"> <li>LTI</li> <li>1st Aid Cases / Medical treatment</li> <li>Serious injuries from falling</li> <li>Back injuries from falling</li> <li>Possibility of budget overrun on project</li> <li>May result in project time overrun</li> </ul>	17	<ul style="list-style-type: none"> <li>Ensure power is off and isolated.</li> <li>All workers must wear PPE to prevent injuries</li> <li>Trained and qualified electrician to complete task</li> <li>Proper supervision from Supervisor</li> <li>Toolbox Talks to be conducted on electrical tasks.</li> <li>Always have a Fire Extinguisher at job task</li> <li>All tools and equipment must be inspected.</li> <li>Fire extinguishers must be available and serviced</li> <li>Proper supervision must be applied from Supervisor</li> <li>Correct tools and equipment must be used.</li> <li>All workers must wear correct and sufficient PPE as required.</li> <li>Toolbox Talk on Power tools</li> <li>Ensure Electricity is isolated and locked out / switched off.</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Safety Rep</li> <li>Team</li> <li>Competent Electrician</li> <li>Electrical Engineer</li> </ul>	Before and During task
13	<b>MECHANICAL INSTALLATIONS</b> - Aircon Installation	<ul style="list-style-type: none"> <li>Damage to cable if not done properly.</li> <li>Electrocution</li> <li>Falling of aircon, damage to property / assets</li> <li>Fire from incompetent electrician when misconnecting cables etc.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>LTI from falling</li> <li>1st Aid case injury</li> <li>Medical treatment</li> </ul>	13	<ul style="list-style-type: none"> <li>All tools and equipment must be inspected.</li> <li>Fire extinguishers must be available and serviced</li> <li>Proper supervision must be applied from Supervisor</li> <li>Correct tools and equipment must be used.</li> <li>All workers must wear correct and sufficient PPE as required.</li> <li>Toolbox Talk on Power tools</li> <li>Ensure Electricity is isolated and locked out / switched off.</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Safety Rep</li> <li>Team</li> <li>Competent Electrician</li> </ul>	Before and During task

14	<b>PLUMBING WORKS</b> - All plumbing fittings, taps, basins	<ul style="list-style-type: none"> <li>Poor housekeeping</li> <li>Falling of objects</li> <li>Hand injuries</li> <li>Back injuries</li> <li>Strains</li> <li>Damage to property / equipment</li> </ul>	<ul style="list-style-type: none"> <li>LTI</li> <li>Medical Cases / 1st Aid Cases.</li> <li>May result in overall project overrun</li> <li>Trip slip and falls.</li> </ul>	9	<ul style="list-style-type: none"> <li>Ensure measurements are correct</li> <li>Supervisor to supervise</li> <li>Proof of all workers medically fit.</li> <li>Ensure all workers are trained on the specific task to prevent damage.</li> <li>Toolbox talks to be held on job specific task.</li> </ul>	<ul style="list-style-type: none"> <li>Site Supervisor</li> <li>Safety Rep</li> <li>Team</li> <li>Competent Plumber</li> </ul>	Before and During task
15	<b>FIRE PROTECTION</b> - Install Sprinklers - Fire Extinguishers	<ul style="list-style-type: none"> <li>Inadequate and wrongly placed fire equipment can cause delay in dealing with fire should it occur.</li> <li>Poor housekeeping</li> <li>Falling of objects</li> <li>Hand injuries</li> <li>Back injuries</li> <li>Strains</li> <li>Non availability of fire equipments</li> <li>Untrained personnel using wrong type of equipment to extinguish the fire delays in searching for fire extinguisher.</li> <li>Fire alarm not functional or inaudible</li> <li>Access blocked and people trapped inside, fire fighting team not able to obtain access.</li> <li>Shortage or non-operation of fire fighting equipment.</li> <li>Overcrowding at exit point during fire.</li> </ul>	<ul style="list-style-type: none"> <li>LTI</li> <li>Medical Cases / 1st Aid Cases.</li> <li>May result in overall project overrun</li> <li>Trip slip and falls.</li> <li>Serious injuries or possible fatalities when fire gets out of control.</li> <li>Damage to property</li> <li>Medical treatment</li> <li>Bruises, cuts, broken limb.</li> <li>1st aid case treatment</li> <li>Loss of life</li> </ul>	13	<ul style="list-style-type: none"> <li>Adequate fire equipment to be provided and placed at suitable location</li> <li>Monthly checklist of all fire equipments.</li> <li>Provide training and have fire drills periodically.</li> <li>Store material in demarcated areas.</li> <li>Cigarettes to be extinguished properly and thrown into rubbish bins.</li> <li>Ashtrays and waste bins to be emptied daily.</li> <li>Fire escape routes and assembly points to be determined and clearly marked.</li> <li>All workers must use appropriate PPE,.</li> <li>Close supervision</li> <li>Discuss risk assessment with workers.</li> <li>Induction training.</li> <li>Toolbox talks training.</li> </ul>	<ul style="list-style-type: none"> <li>Construction Supervisor</li> <li>Foreman</li> <li>Fire fighting Team</li> <li>First Aider</li> <li>Fire prevention supervisor</li> </ul>	Before and During task

16	<b>EXTERNAL WORKS</b> - Retaining walls - Boundary walls - Aprons - Generator plinth - Electrical fencing	<ul style="list-style-type: none"> <li>• Potential trip &amp; fall incidents</li> <li>• Paving Brick falling onto due to poor stacking</li> <li>• Bruises to legs &amp; feet</li> <li>• Poor stacking could lead to work to be re-done</li> <li>• Insufficient PPE</li> <li>• Paint particles in eyes.</li> <li>• Skin irritation from paint.</li> <li>• Paint spillage on property</li> <li>• Falling from heights</li> <li>• Back injuries due to heavy gate. Back injuries due to kerbing lifted incorrect method.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of production due to incident investigation</li> <li>• Lost time injury</li> <li>• Medical treatment cases</li> <li>• Back / body injuries</li> <li>• LTI</li> <li>• Medical treatment</li> <li>• Environmental damage from spillage.</li> <li>• Project time and budget overrun.</li> </ul>	14	<ul style="list-style-type: none"> <li>• All tools and equipment must be inspected.</li> <li>• Fire extinguishers must be available and serviced</li> <li>• Proper supervision must be applied from Supervisor</li> <li>• Correct tools and equipment must be used.</li> <li>• All workers must wear correct and sufficient PPE as required.</li> <li>• Toolbox Talk on Power tools</li> <li>• Ensure Electricity is isolated and locked out / switched off.</li> </ul>	<ul style="list-style-type: none"> <li>- Site Supervisor</li> <li>- Safety Rep</li> <li>- Team</li> </ul>	Before and During task
17	<b>INSTALLATION OF AIRCON UNITS</b>	<ul style="list-style-type: none"> <li>• Falling objects</li> <li>• Falling from ladder</li> <li>• Unstable surface</li> <li>• Poor supervision</li> <li>• Incorrect manual handling</li> <li>• Falling from heights</li> </ul>	<ul style="list-style-type: none"> <li>• Lost time injuries</li> <li>• Medical treatment cases</li> <li>• Loss of production time</li> </ul>	17	<ul style="list-style-type: none"> <li>• Correct manual handling procedures</li> <li>• Correct PPE for task</li> <li>• Qualified Electrician for Aircon installations</li> <li>• Toolbox Talk</li> <li>• Induct workers on R/A</li> <li>• Correct tools for job</li> </ul>	<ul style="list-style-type: none"> <li>- Electrical Supervisor</li> <li>- Construction Supervisor</li> <li>- Hand Tools Inspector</li> </ul>	During installation of Aircon units
18	<b>RETAINING STRUCTURES</b>	<ul style="list-style-type: none"> <li>• Falling objects</li> <li>• Unstable surfaces</li> <li>• Unplanned activities</li> <li>• Incorrect work procedure</li> <li>• Collapsing structures</li> </ul>	<ul style="list-style-type: none"> <li>• Lost time injuries</li> <li>• Medical treatment cases</li> <li>• Collapsing structures leading to standing time</li> </ul>	18	<ul style="list-style-type: none"> <li>• Proper instruction</li> <li>• Engineer design</li> <li>• Proper supervision</li> <li>• Correct tools for the task</li> <li>• Correct PPE</li> <li>• All workers to be inducted on PPE</li> </ul>	<ul style="list-style-type: none"> <li>- Construction Supervisor</li> <li>- Construction Manager</li> </ul>	At all times