

DUNEDIN INVESTMENTS CC-OIL DISTRIBUTION PROJECT Project Baseline Risk Assessment:

Item	Hazard	Risk	Who is at Risk	Risk Rating			Necessary Control Measures	Action By	Residual Risk Rating		
				S	L	Rating			S	L	Rating
Site Establishment											
1	Contaminated ground	Contact with hazardous chemicals / substances leading to illness & ill health	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	3	2	06	<ul style="list-style-type: none"> Carry out site survey in advance of occupation Notify MENNO'S TRADING CC of any hazardous contamination not previously advised. Neither MENNO'S TRADING CC or the Contractor shall take responsibility for contaminated land unless contractually agreed in advance Contractors to identify and remove hazardous chemicals / substances in line with HSE-CoP-004-Chemicals and Hazardous Material Where deemed necessary by MENNO'S TRADING CC contaminated ground shall be fenced off to prevent inadvertent contact by 3rd parties whilst removal is in progress Arrange occupational health screening for any workers accidentally coming into contact with contaminated ground where it is confirmed that the contamination is a significant health hazard 	PM	3	1	03
2	Contact with existing services / utilities during site grading and clearance	<ul style="list-style-type: none"> Electric shock / Electrical fire Gas leak / gas explosion Water leak / flooding Sewage leak Damage incident – financial penalty 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Acquire current utility drawings Carry out survey to confirm depth and line of existing utilities (utilise suitable survey equipment relevant to the scope and scale of the work. Survey equipment may include ground radar, cable avoidance tools and accessories). As necessary, dig trial pits to locate underground services Mark the line of underground services to ensure visibility to all persons working in the vicinity incorporating the requirements of HSE-CoP-013-01 Excavation Safety Where possible, underground electrical services shall be de-energised prior to excavations Where services are to be re-routed, no work shall commence until services are confirmed as de-energised / inert Permits shall be secured in advance from the relevant utility / local authority prior to excavation in the vicinity of existing underground services 	PM	5	1	05
4	Unauthorised entry to site	<ul style="list-style-type: none"> Injury to 3rd party 	<ul style="list-style-type: none"> General site workers (other contractors) General public 	4	3	12	<ul style="list-style-type: none"> Hoarding / fencing shall be erected once the Contractor has taken possession of the site Hoarding shall be at least 6' tall and shall be sufficient to prevent unauthorised access Site access points shall include a boom gate (or similar) and security station that is manned 24/7 for the duration of the project Security signage shall be erected Site set up shall be in accordance with the requirements set out in HSE-CoP-024-01 Site Access and General Security 	PM	4	1	04
5	Unsafe temporary structures	<ul style="list-style-type: none"> Fire Electrical shock / electrical fire Collapse of temporary structures Damage to materials and equipment – financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	3	12	<ul style="list-style-type: none"> Temporary buildings / structures (e.g. site offices, stores, workshops and fuel stores) shall be structurally sound and installed in line with MENNO'S TRADING CC requirements Electrical services to temporary buildings / structures shall be installed in line with the requirements of HSE-CoP-032 Live Electrical High Voltage 	PM	4	1	04

6	Traffic	<ul style="list-style-type: none"> Road traffic accident – vehicle collision / personal injury / fatality Damage to materials and equipment – financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors General site workers (other contractors) General public Neighbours 	5	3	15	<ul style="list-style-type: none"> Traffic management shall be in line with the requirements of HSE-CoP-023-01 Road Traffic Management and HSE-CoP-019-01 Forklifts and Powered Industrial Trucks A site logistics plan shall be prepared. This shall detail the site boundary, pedestrian and vehicle access, site roads, parking, lay down areas and temporary structures Traffic management signage and lighting shall be installed as necessary Traffic management arrangements for labour drop off / collection shall be implemented. Labour shall not be put at risk from moving vehicles and machinery Traffic Marshalls or 'Flag' men shall control heavy traffic routes and crossing points. Flag men shall be suitably trained Barriers shall be installed to separate pedestrians from vehicle traffic. Pedestrian routes shall be clearly marked and illuminated where necessary. Signage should be in a language understood by the majority of the labour / bi-lingual where possible Vehicles utilised outside of the construction sites shall be registered according to the local traffic laws 	PM	5	2	10
7	Lack of welfare and medical facilities	<ul style="list-style-type: none"> Food / drinking water contamination Human waste contamination of temporary facilities and site Disease and ill health due to lack of washing facilities Escalation of minor injuries due to lack of treatment – infection risk Ill health due to lack of recognition of medical conditions Preventable fatalities due to lack of first aid skills and equipment 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Site welfare facilities shall be established in line with the requirements set out in MENNO'S TRADING CC CoP (OHS-CoP-042-1) and (OHS-CoP-037-1). Sufficient toilets, washing facilities, drying facilities and mess facilities shall be installed in line with manpower levels. As manpower levels change, welfare facilities shall be reviewed and altered accordingly. Mess and welfare facilities shall be installed in a safe area where there is no risk from moving vehicles or other site hazards Temporary chemical toilets may be utilised in the early stages of a project, however, these shall not be permitted in the long term. Full flushing WC's shall be installed Medical facilities shall be established in line with the requirements set out in MENNO'S TRADING CC CoP (OHS-CoP-042-1). Sufficient first aiders and / or a site nurse shall be appointed for the project Where local regulations require a different standard to that set out in the MENNO'S TRADING CC CoP (OHS-CoP-042-1) the higher standard shall be implemented 	PM	4	1	04
8	Lack of waste management / waste facilities	<ul style="list-style-type: none"> Increase in fire loading General housekeeping issues Blockage of access routes Infestation of vermin / insects 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	3	4	12	<ul style="list-style-type: none"> Waste management arrangements shall be in line with the requirements of HSE-CoP-011-01 Environmental Monitoring Waste collection points shall be installed and suitable and sufficient skips and bins provided. Waste collection points shall be clearly signed Housekeeping teams shall be established to ensure the waste material is managed effectively Waste materials shall be segregated between general waste, metals, wood and hazardous materials. More detailed segregation may be required where contractual or national requirements specify Waste shall not be buried or burned on site. A licensed waste management partner shall be engaged to dispose of waste materials in line with contractual requirements and / or national regulations 	PM	3	2	06
9	Infestation	<ul style="list-style-type: none"> Infestation – vermin Infestation – insects (mosquitoes / cockroaches / ants etc) Damage to installed materials 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	3	4	12	<ul style="list-style-type: none"> Temporary facilities shall be maintained in a clean and tidy manner Food preparation area shall be cleaned daily and waste securely stored in closed bins. Food waste shall be secured against wild animals Pest control measures shall be implemented for temporary facilities in locations susceptible to infestation by cockroaches etc Relevant permits or permissions shall be secured prior to use of poisons Waste water shall be removed / tanked and removed from site via tanker, or where permitted, in existing waste water utilities. Waste water shall not be allowed to pool and become stagnant as this may encourage the breeding of mosquitoes 	PM	3	2	06
10	Failure to consider weather / climate	<ul style="list-style-type: none"> Illness due to temperature extremes e.g. dehydration, heat stress Irrational and / or violent behavior 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Install and maintain heating / air conditioning / dehumidifying systems Implement control measures in line with the project heat stress management plan and 015 OHS-CoP-Heat and Cold Stress Prevention Work is to be stopped where extremes of weather endangers the workers Provision of winter jackets shall be in place during cold weather months Implement counter measures such as drinking programmes, use of electrolytes etc. Counter measures shall be medically proven and shall be appropriate to the location 	PM	4	2	08

Personal Protective Equipment

11	Lack of available personal safety equipment & PPE or Lack of personal safety equipment & PPE discipline (failure to use personal safety equipment & PPE)	<ul style="list-style-type: none"> High incidence of unsafe conditions e.g. unsafe working at height High incidence of personal head, eye, hand and foot injuries e.g. cuts / lacerations, abrasions, penetrating wounds, eye injuries, impact wounds etc Increased impact of longer term health hazards e.g. noise / dust 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	5	25	<ul style="list-style-type: none"> The requirement volume of personal safety equipment and personal protective equipment (PPE) shall be specified at the procurement stage. Sufficient spares shall be maintained in stores at all times Personal safety equipment and PPE shall be maintained and replaced if damaged or in line with manufacturers recommendation life cycle Personal safety equipment and PPE requirements for specified works shall be detailed in the project HSE plan, method statements and reinforced through tool box talks. Personal safety equipment and PPE discipline shall be paramount and disciplinary action taken against those failing to comply 	PM	5	2	10
12	Lack of training in the use of personal safety equipment & PPE	<ul style="list-style-type: none"> High incidence of unsafe conditions e.g. incorrect fitting and use of fall arrest equipment (harness / shock absorber / lanyard) High incidence of personal injury due to lack of awareness of when to use PPE Incorrect selection of PPE e.g. use of inadequate gloves, or incorrect eye protection leading to personal injury 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	5	25	<ul style="list-style-type: none"> Site labour shall be trained in the use of personal safety equipment and PPE through onsite training and tool box talks. Training shall include both the use and purpose of the protective equipment Labour shall be provided with personal safety equipment and PPE at no cost to themselves and shall be provided with replacement protective equipment on an old for new basis. Labour shall not be required to utilise old or damaged protective equipment in order to reduce costs Some PPE e.g. hard hats and high visibility vests are colour coded to allow easy identification of trades. Riggers / Signalers will wear an appropriately labelled hi-visibility red vest for example. 	PM	5	2	10
13	Poor quality / substandard personal safety equipment & PPE	<ul style="list-style-type: none"> Failure of PPE leading to personal injury or longer term health problems 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	5	25	<ul style="list-style-type: none"> The standard of personal safety equipment and personal protective equipment (PPE) shall be specified at the procurement stage. All personal safety equipment and PPE shall be manufactured to EN (European Norms) or equivalent standard e.g. ANSI (American National Standards). Protective equipment shall display an identifying symbol to confirm conformance. Personal safety equipment and PPE failing to meet these standards shall be removed from site. 	PM	5	2	10

Mobile Plant & Vehicles

14	Procurement of substandard mobile plant & vehicles	<ul style="list-style-type: none"> Personal injury or damage due to failure during operation e.g. during excavation operations Financial and production loss due to quarantine of plant / vehicle 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Request certificates of conformance and calibration at procurement stage Check all mobile plant and vehicles before allowing onto site Thoroughly check incoming items to confirm no counterfeit or reconditioned items have been sold as new Maintain mobile plant and vehicles with approved spare parts and fittings, not alternative non approved spare parts and fittings 	PM	5	1	05
15	Lack of equipment maintenance & certification	<ul style="list-style-type: none"> Personal injury or damage due to failure during operation e.g. during lifting operations Financial and production loss due to damage Financial and production loss due to quarantine of plant / vehicle 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> All mobile plant and vehicles shall be inspected prior to entry to site. Mobile plant and vehicles failing to meet the maintenance and certification requirements of 003 OHS-CoP-Maintenance of Equipment shall be rejected All mobile plant & vehicles shall be routinely maintained and serviced. Records shall be retained on site for review on request 	PM	5	1	05
16	Operation of equipment by incompetent persons	<ul style="list-style-type: none"> Personal injury or damage due to operator error Damage to equipment or structures due to operator error 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Only trained, experienced operators shall be permitted to use mobile plant and vehicles on site. Competence shall be in line with the requirements set out in the MENNO'S TRADING CC Project HSE plan. 	PM	5	1	05
17	Noise	<ul style="list-style-type: none"> Long term ill health – hearing loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	3	5	15	<ul style="list-style-type: none"> Noise assessments shall be carried for operators of mobile plant. Operators exposed to continuous noise in excess of 85dB shall be required to wear hearing protection of at least SNR (Sound noise reduction) +30. Where national regulations or client requirements exceed this requirement, the higher requirement shall be implemented 	PM	3	2	06

Lifting Operations

18	Procurement of substandard lifting equipment & lifting accessories	<ul style="list-style-type: none"> Personal injury or damage due to failure during operation e.g. during lifting operations Financial and production loss due to damage Financial and production loss due to quarantine of plant / vehicle 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Request certificates of conformance and calibration at procurement stage Check all mobile cranes before allowing onto site, check all tower crane sections and fittings before erection Thoroughly check incoming items to confirm not counterfeit or reconditioned items have been sold as new Maintain lifting equipment with approved spare parts and fittings, not alternative non approved spare parts and fittings Maintain accessories and remove from service if damaged. Do not utilise non approved parts / items to attempt temporary repairs 	PM	5	1	05
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19	Lack of equipment maintenance & certification	<ul style="list-style-type: none"> Personal Injury Financial and production loss due to damage or quarantine of plant / vehicle 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Lifting equipment and accessories shall be fit for purpose, certified and tested in line with the requirements set out in 020 OHS-CoP-Safe Crane Operations 	PM	5	1	05
20	Operation of equipment by incompetent persons	<ul style="list-style-type: none"> Personal injury or damage due to operator error Damage to equipment or structures due to operator error 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> A competent lifting supervisor shall be appointed to manage all lifting operations All operators and personnel involved in lifting activities are to be adequately trained to carry out their roles safely 	PM	5	1	05
21	Lack of lifting coordination	<ul style="list-style-type: none"> Collision Personal injury or damage due collapse / dropped load Financial and production loss due 	<ul style="list-style-type: none"> General site workers General site staff 	5	4	20	<ul style="list-style-type: none"> A lifting plan, complete with a schedule of common lifts shall be prepared, at an early stage A detail survey for crane positioning and overlapping arcs shall be carried out by the competent lifting supervisor Communication between riggers / signallers and crane operators shall be maintained at all time. Where possible two way radio shall be used. Where local restrictions prevent the use of two way radio, alternative arrangements shall be devised and implemented 	PM	5	1	05
22	Complex Lifts / Special lifts (Tandem Lifts / Lifts over 10 tonnes)	<ul style="list-style-type: none"> Inadequate precautions / working method leading to collapse of lifting equipment / failure of lifting gear Failed lift due to lack of experienced riggers / signallers leading to personal injury or damage – financial and production loss Failed lift due to failure of lifting gear / accessories 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Complex or special lifts may include major items of plant such as chillers, air handling units, generators, turbines, pumps, prefabricated concrete or steel structures, prefabricated risers or pods and cladding etc A specific method statement may be generated for complex or special lifts where deemed necessary by the competent lifting supervisor Highly experienced crane operators, riggers and signallers are to be appointed for complex or special lifts Specific method statements shall be mandatory for tandem lifts. Tandem lifts shall not be permitted unless a client approved specialist contractor is engaged Lifting equipment and accessories shall be fit for purpose in line with the requirements set out in 020 OHS-CoP-Safe Crane Operations 	PM	5	1	05
23	Improper set up / stabilisation	<ul style="list-style-type: none"> Risk of personal injury or damage due to tipping over 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Mobile cranes shall be positioned as required on level stable ground with outriggers fully extended. Outrigger mats to be used and an exclusion zone set up around the mobile crane 	PM	5	1	05
24	Non-working / non maintained alarms and warning devices	<ul style="list-style-type: none"> Risk of tipping over leading to personal injury or damage Risk of dropped load leading to personal injury or damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Alarms and warning devices on all cranes shall be maintained in working order. Cranes with damaged or non-operational alarms / warning devices shall be removed from service Operators shall not disable alarms or purposely bypass safe working load limits for any reason and shall cease operations immediately should operating tolerances be exceeded 	PM	5	1	05
25	Use of unsafe slinging / rigging techniques	<ul style="list-style-type: none"> Failed lift due to lack of experienced riggers / signallers leading to personal injury or damage – financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Only competent riggers / slingers shall be permitted to work on site. Evidence of valid training shall be submitted prior to appointment 	PM	5	1	05
26	Use of non-certified or damaged lifting accessories	<ul style="list-style-type: none"> Dropped load due to failure of lifting equipment components or failure of lifting gear / accessories leading to personal injury or damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Lifting equipment and accessories shall be fit for purpose in line with the requirements set out in 020 OHS-CoP-Safe Crane Operations 	PM	5	1	05
Excavations											
27	Procurement of substandard excavation equipment	<ul style="list-style-type: none"> Excavation / Trench / fatality / equipment damage Flooding potentially leading to personal injury / fatality / equipment damage Personal injury / damage due to falling objects leading to financial loss Work cessation leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Request certificates of conformance and calibration at procurement stage check all excavation equipment before allowing onto site Thoroughly check incoming items to confirm not counterfeit or reconditioned items have been sold as new Maintain excavation equipment / plant with approved spare parts and fittings not alternative non approved spare parts and fittings 	PM	4	1	04

28	Lack of equipment maintenance & certification	<ul style="list-style-type: none"> Excavation / Trench / fatality / equipment damage Flooding potentially leading to personal injury / fatality / equipment damage Work cessation leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Excavation and tunneling equipment and accessories (Excavators, Front & Skid Steer Loaders, Wagons, Mobile Cranes, Tunnel Boring Machines, Directional Drills, Impact Moles, Hydraulic Shoring Systems, Pumps etc shall be fit for purpose, certified and tested in line with the requirements set out in 024 OHS-CoP-Forklifts and Powered Industrial Trucks, 020 OHS-CoP-Safe Crane Operations and 017 OHS-CoP-Excavation Safety 	PM	4	1	04
29	Operation of equipment by incompetent persons	<ul style="list-style-type: none"> Excavation / Trench / fatality / equipment damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> A competent excavation supervisor shall be appointed to manage all excavation operations All excavation equipment operators are to be fully trained and competent in order to carry out their roles safely 	PM	5	1	05
30	Voids	<ul style="list-style-type: none"> Excavation / Trench / fatality / equipment damage Flooding potentially leading to personal injury / fatality / equipment damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> A 'Geotechnical' survey shall be carried out prior to commencement of works. Voids shall be identified and filled backfill and compacted or pumped with concrete. Alternatively, tunnels shall be re-routed 	PM	5	1	05
31	Contact with existing services	<ul style="list-style-type: none"> Fire / explosion leading to major injuries, fatality and / or property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	5	4	20	<ul style="list-style-type: none"> Acquire current utility drawings Carry out survey to confirm depth and line of existing utilities (utilise suitable survey equipment relevant to the scope and scale of the work. Survey equipment may include ground radar, cable avoidance tools and accessories). As necessary, dig trial pits to locate underground services Mark the line of underground services to ensure visibility to all persons Prepare method statement for excavation of underground services incorporating the requirements of 017 OHS-CoP-Excavation Safety Where possible, underground electrical services shall be de-energised prior to excavations. Where services are to be re-routed, no work shall commence until services are confirmed as de-energised / inert Permits shall be secured in advance from the relevant utility / local authority prior to excavation in the vicinity of existing underground services 	PM	5	1	05
32	Collapse (Trench / Deep Excavation)	<ul style="list-style-type: none"> Personal injury / fatality and / or equipment damage Work cessation leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Excavations shall be designed by a competent engineer. The competent excavation / engineer shall prepare a method statement for excavation of underground services incorporating the requirements of 017 OHS-CoP-Excavation Safety Excavation design shall include the method of shoring / supporting the excavation Temporary makeshift shoring shall not be permitted, equipment used to shore excavations shall be fit for purpose and designed for the purpose employed 	PM	5	1	05
33	Lack of excavation inspection	<ul style="list-style-type: none"> Excavation / Trench / support failure potentially leading to personal injury / fatality / equipment damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Excavations shall be inspected on a regular basis immediately before every shift and before the commencement of any work after rain has fallen by a competent person. Deep or complex excavations shall be inspected daily and shoring alterations made to account for changing conditions 	PM	5	1	05
34	Excavation in the vicinity of or underneath existing structures	<ul style="list-style-type: none"> Collapse of existing structure Personal injury / fatality / equipment damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> No excavation work or tunneling shall be carried out in the immediate vicinity of or underneath existing structure until the impact of the work on the existing structure is determined by a competent engineer Underpinning requirements shall be determined by a competent structural engineer Where possible, the structure shall be evacuated for the duration of the works as an additional safety measure Excavation work under live tunnels (sewers etc) shall also be held until the impact of the work is determined by a competent engineer 	PM	5	1	05

35	Contact with toxic fumes / gases	<ul style="list-style-type: none"> Loss of consciousness Fatality Fire / explosion 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> The air quality in deep excavations shall be periodically tested with a multi gas monitor. Acceptable entry conditions are: <ul style="list-style-type: none"> Oxygen (O₂) – greater than 19.5% and less than 23.5% Lower Flammable Limit LFL – less than 10% Carbon Monoxide (CO) – less than 35ppm Hydrogen Sulphide (H₂S) – less than 10ppm Generators shall not be placed adjacent to deep excavations as exhaust fumes are likely to settle in the excavation 	PM	5	1	05
36	Water Hazards – Flooding	<ul style="list-style-type: none"> Flooding leading to work cessation and in turn leading to financial and production loss Personal Injury / drowning fatality 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	4	3	12	<ul style="list-style-type: none"> Dewatering equipment shall be prepared in advance of excavation work where the water table depth will lead to continual water ingress Dewatering equipment shall be maintained in working order and continually checked by a competent person Dewatering output shall be routed to storm water drainage / surface water drainage where possible and not released on open ground. Where options are limited excess water shall be tanked or pumped to temporary retention ponds 	PM	4	1	04
Fall Protection & Prevention											
37	Unprotected leading edges	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff 	5	4	20	<ul style="list-style-type: none"> Identify leading edges Install signage and illumination / lighting where necessary to highlight and warn of hazard Install edge protection (ideally guardrails at 1m with mid-rail and toe-boards). Install catch nets to protect parallel works or pedestrian routes Install crash decks over entrances / access routes where the risk of falling objects is significant Fall protection / prevention shall be in line with the requirements of 016 OHS-CoP-Working at Height and Fall Prevention Safety 	PM	5	1	05
38	Unprotected opening / holes / shafts	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Cover open holes / shafts with heavy duty steel plate or install guardrail and toe-boards around holes / slab openings Demarcation to be in place to separate workers from the falling hazard 	PM	5	1	05
39	Use of substandard access equipment and work platforms	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Scrap materials shall not be used to construct temporary guardrails and or platforms Guardrails shall be fit for purpose, sturdy enough to resist the impact of a falling / tripping man, and shall include a hand rail and mid rail. Toe boards shall be included where there is a risk of falling objects. Handrails shall be at least 1m high Work platforms shall be bespoke platforms or constructed of rated scaffold boards. Work platforms shall include handrails, mid rails and toe-boards. Where guardrails cannot be installed due to space restrictions, fall arrest / restrain systems shall be utilised (harness / lifeline etc) 	PM	5	1	05
40	Falls from mobile elevating work platforms	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Only trained, competent persons shall be permitted to operate a mobile elevating work platform (MEWP). This shall include all other telescopic / hydraulic man lifting devices Elevating platforms shall be maintained in accordance with the requirements set out in 021 OHS-CoP-Mobile Elevated Work Platforms Operators shall check all equipment prior to use Operators shall wear restraint lanyards in line with the requirements set out in 016 OHS-CoP-Working at Height and Fall Prevention Safety 	PM	5	1	05
41	Falls from ladders whilst accessing tops of rail stacks	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Ladders shall be acceptable at all times when used as access within a scaffold system where they are clamped / tied on and checked on a weekly basis as part of the scaffold inspection Ladders / step ladders shall only be acceptable for short duration work or inspections when used as a work platform. Short duration work shall be no longer than 30 minutes Ladders / step ladders shall be manufactured to EN or equivalent standards. Fabrication of ladders on site is not acceptable and they shall be removed. Where required an additional worker must foot and steady the ladder Wooden or steel hops ups of 3 steps are acceptable as work platforms but must be of sturdy construction and stable. Hop ups need not meet EN or equivalent standards. Hop ups may only be used where the clients agent has no objection 	PM	4	1	04

42	Lack of, or use of, substandard fall arrest / fall restraint equipment or installation by incompetent persons	<ul style="list-style-type: none"> Personal injury / fatality due to falls and impact of falling objects Damage due to falling objects leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Fall arrest equipment and accessories used on MENNO'S TRADING CC projects shall be manufactured to EN (European Norms) or equivalent e.g. ANSI (American National Standards) Fall arrest equipment shall be provided to workers who will in turn be sufficiently trained in its proper use in line with the requirements set out in 016 OHS-CoP-Working at Height and Fall Prevention Safety Lifelines shall be of steel wire rope with the correct number of clips for the intended loading. Nylon rope shall not be used for lifelines Where necessary lifelines and anchor bolts used as lanyard anchors shall be tested prior to use 	PM	5	1	05
Plant, Tools & Equipment											
43	Procurement of substandard plant, tools & equipment	<ul style="list-style-type: none"> Failure during operation e.g. during cutting, grinding, drilling etc, leading to personal injury Financial and production loss due to quarantine of plant, tools and equipment 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Request certificates of conformance and calibration at procurement stage Check all hand held / static plant and power tools before allowing onto site Thoroughly check incoming items to confirm no counterfeit or reconditioned items have been sold as new Maintain handheld / static plant and power tools with approved spare parts and fittings not, alternative non approved spare parts and fittings 	PM	4	1	04
44	Lack of plant, tools & equipment maintenance & certification	<ul style="list-style-type: none"> Failure during operation e.g. during cutting, grinding, drilling etc, leading to personal injury Financial and production loss due to damage Financial and production loss due to quarantine of hand held / static plant, tools and equipment 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	3	12	<ul style="list-style-type: none"> All hand held / static plant and power tools shall be inspected prior to entry to site. Hand held / static plant and power tools failing to meet the maintenance and certification requirements of MENNO'S TRADING CC and national statutory requirements shall be rejected All hand held static plant and power tools shall be routinely maintained and serviced. Records shall be retained on site for review by MENNO'S TRADING CC on request Power tools and accessories shall be routinely checked by a competent electrician, at least quarterly. Ideally PAT (portable appliance testing) shall be carried out. Power tools shall be clearly marked to show that they have been inspected in line with the current inspection programme. 	PM	4	1	04
45	Operation of plant, tools & equipment by incompetent persons	<ul style="list-style-type: none"> Personal injury due to inexperience Financial and production loss due to damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Only trained, experienced operators shall be permitted to use hand held plant and power tools on a MENNO'S TRADING CC project site. Competence may be internal onsite training but shall be in line with the requirements set out in 003 OHS-CoP-Maintenance of Equipment and the project HSE plan 	PM	4	1	04
46	Use of damaged plant, tools & equipment	<ul style="list-style-type: none"> Personal injury due to malfunction Financial and production loss due to damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Hand held / static plant and power tools shall be inspected prior to use by the user for any damage. The user shall be trained to identify issues with the equipment. Equipment damaged in use or identified as damaged / not fit for purpose shall be removed from site Damaged equipment shall be quarantined pending repairs so that it is not mistakenly reissued to site at a later date 	PM	4	1	04
47	Noise	<ul style="list-style-type: none"> Long term ill health – hearing loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	3	4	12	<ul style="list-style-type: none"> Noise assessments shall be carried out across the project site focusing on high use plant, tools and equipment. Workers exposed to continuous noise in excess of 85dB shall be required to wear hearing protection of at least SNR (Sound noise reduction) +30. Where national regulations or client requirements exceed this requirement, the more stringent requirement shall be implemented 	PM	3	2	06
48	Vibration	<ul style="list-style-type: none"> Long term ill health – vibration white finger 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	3	4	12	<ul style="list-style-type: none"> Low vibration tools shall be specified during the procurement phase Workers at risk of vibration white finger e.g. those using jack hammers for long periods shall be advised of the danger of vibration white finger and shifts using the high vibration equipment are to be minimised 	PM	3	2	06
Fire Safety & Emergency Planning											
49	Lack of fire safety and emergency planning	<ul style="list-style-type: none"> Work cessation leading to financial and production loss Personal injury Fire / smoke damage leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> A Fire Safety Coordinator and Emergency Coordinator shall be appointed A Fire Safety & Emergency Plan shall be developed utilising or in compliance with the MENNO'S TRADING CC recommended format The Fire Safety & Emergency Plan shall be in line with the requirements set out in 057 OHS-CoP-Fire Prevention and Protection Emergency equipment and arrangements shall be made known to all those entering the site through the induction programme 	PM	5	1	05

50	Lack of firefighting equipment	<ul style="list-style-type: none"> Fire spread Work cessation leading to financial and production loss Personal injury / fatality Fire / smoke damage leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	5	4	20	<ul style="list-style-type: none"> Sufficient firefighting equipment shall be provided for the project site, in line with the scope and scale of the works Firefighting equipment, including extinguishers, shall be of the correct type relevant to the potential emergency e.g. CO2, Water, Foam, Powder, Wet Chemical etc Firefighting equipment shall be checked weekly and recharged / replaced as required Firefighting equipment shall be placed at strategic locations and shall be easily visible and accessible 	PM	5	1	05
51	Procurement of substandard firefighting equipment	<ul style="list-style-type: none"> Work cessation leading to financial and production loss Personal injury / fatality Fire / smoke damage leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	5	4	20	<ul style="list-style-type: none"> Fire safety / firefighting equipment used on MENNO'S TRADING CC projects shall be manufactured to EN (European Norms) or equivalent e.g. ANSI (American National Standards). Non conforming items shall be removed from site and replaced 	PM	5	1	05
52	Use of firefighting equipment by incompetent persons	<ul style="list-style-type: none"> Fire spread Work cessation leading to financial and production loss Personal injury Fire / smoke damage leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> A Fire Safety Coordinator shall be appointed for the project. The Fire Safety Coordinator, in conjunction with the project HSE team shall select and train a sufficient number of Fire Marshalls for the project. Fire Marshalls shall be trained in evacuation procedures and basic fire fighting techniques 	PM	5	1	05
53	Unsafe storage of flammable materials and substances	<ul style="list-style-type: none"> Fire ignition / spread leading to potential personal injury / fatality / MENNO'S TRADING CC property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	5	3	15	<ul style="list-style-type: none"> Hot works shall be defined in the project HSE plan but shall normally include welding (stick / gas), gas cutting, steel cutting / grinding, brazing and elements of waterproofing using open flames / boilers Hot works shall be controlled by permit to work Where possible, hot work shall be segregated using fire blankets or by fabricating hot work bays Firefighting equipment shall be present during hot works Fire watch shall be applied to all works where there is a risk of fire for up to 1 hour after the work is complete (smoldering ignition sources) 	PM	5	1	05
54	Unsafe or unplanned hot works	<ul style="list-style-type: none"> Fire ignition / spread leading to potential personal injury / fatality / MENNO'S TRADING CC property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Hot works such as welding (stick / gas), gas cutting, steel cutting / grinding, brazing and elements of waterproofing using open flames / boilers shall be controlled by a permit to work Hot work in progress without a valid permit will immediately be stopped on discovery. Disciplinary action will be taken against workers and supervision 	PM	5	1	05
55	Failure to respond to changing conditions	<ul style="list-style-type: none"> Lack of firefighting equipment in key locations Failure to recognise changing fire risk / fire loading Failure to replace discharged firefighting equipment leading to lack of firefighting equipment Personal injury / fatality / MENNO'S TRADING CC property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Fire risk assessment (to be carried out quarterly as a minimum) Carry out weekly visual inspection of firefighting equipment Move / replace signage for firefighting equipment when the placement of equipment is changed 	PM	5	1	05
56	Failure to recognise and respond to infection hazards	<ul style="list-style-type: none"> Ill health / epidemic from viral or bacterial infection Ill health / poisoning from venomous / diseased wild life 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	4	3	12	<ul style="list-style-type: none"> Identify likely infection hazards Identify wild life threats in the region Ensure necessary vaccinations are advised and administered for all persons at risk Prepare and distribute guidance information for staff and workers utilising or in compliance with 057 OHS-CoP-Fire Prevention and Protection Stock medical supplies to combat emergency requirements 	PM	4	1	04
57	Failure to recognise and respond to political, weather and environmental hazards	<ul style="list-style-type: none"> Personal risk of injury / fatality and / or ill health due to failure to prepare contingency plan for weather / environmental hazards (earthquake / hurricane or cyclone / Tsunami or flooding / Terrorism or armed conflict) Loss of property / possessions 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Identify likely emergency scenarios utilising MENNO'S TRADING CC Emergency Plan formats and emergency scenario risk assessments Implement preventative controls and prepare contingency plans Prepare and distribute guidance information 	PM	4	1	04
Electrical											

58	Procurement of substandard electrical distribution equipment and accessories	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Electrical components and accessories (distribution boards, switches, fuses, circuit breakers, cabling, sockets and splitters) used on MENNO'S TRADING CC projects shall be manufactured to EN (European Norms) or equivalent e.g. ANSI (American National Standards) 	PM	5	1	05
59	Unsafe / unstable electrical distribution	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> A Competent Electrician Engineer shall design the temporary distribution system in line with expected loading requirements Circuit protection shall be built into the design and suitable circuit breakers installed in all distribution boards. The minimum standard shall be 100mA ELCB (earth leakage circuit breaker), however, 30mA RCD (residual current device) is preferable 	PM	5	1	05
60	Installation or extension of electrical distribution by incompetent persons	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Only competent, qualified electricians shall be permitted to carry out electrical works. No person shall be permitted to work as an electrician until valid certification is provided to the competent Electrical Engineer 	PM	5	1	05
61	Damage to trailing cables	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Armored cabling shall be used for principle distribution where there is a risk of damage to the cable sheath Cables crossing roads shall be armored and protected / buried Cable hangers and cable stands shall be utilised on construction sites to elevate trailing cables and provide additional protection from damage or water ingress 	PM	5	1	05
62	Unsafe connections / splicing	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff 	5	4	20	<ul style="list-style-type: none"> Cables shall not be extended or repaired through cut and splice. Only industrial cable connectors shall be used as set out in 023 OHS-CoP-Electrical Equipment and Supplies Only competent electricians shall be permitted to construct and repair cables. Manufactured cables are to be only utilised for the purpose employed by the supplier Where transformers are used to step down voltages, the competent engineer and site electricians shall ensure that all transformers are inspected before use and included within a quarterly (or higher frequency) inspection programme 	PM	5	1	05
63	Lack of routine inspection and maintenance	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Specific electricians shall be designated to check / test all site distribution boards on a weekly basis. A record of inspection shall be retained and a signature sheet shall be attached to each board to allow for immediate verification by the MENNO'S TRADING CC project HSE team Power tools and accessories shall be routinely checked by a competent electrician, at least quarterly. Ideally PAT (portable appliance testing) shall be carried out. Power tools shall be clearly marked to show that they have been inspected in line with the current inspection programme. This may be by PAT labels or through the use of color coded tape 	PM	5	1	05
64	Lack of warning / communication	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Electrical hazard / warning signage shall be set out in line with the requirements of 023 OHS-CoP-Electrical Equipment and Supplies Electrical hazards shall be detailed in the project induction and reinforced via tool box talks and training 	PM	5	1	05
65	Contact with existing electrical services (underground / overhead)	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Contact with existing electrical services underground is most likely during excavation and is detailed in this register in the site establishment and excavation section above Overhead services present a contact risk for hydraulic arms and crane jibs. Hydraulic arms may be limited utilising the onboard computer of modern equipment The overhead line may also be protected with a steel 'goalpost' to prevent passing vehicles with elongated loads from contacting the overhead lines Highly visible warning / hazard signage shall be posted where there is a danger for underground or overhead electrical services 	PM	5	1	05
66	Unauthorised access to electrical rooms / boards	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Electrical rooms shall be fitted with door and locks once equipment is installed (whether live or not) An electrical safe system of work (ESSW) incorporating access permits shall be developed. Access to live electrical rooms shall be controlled by permit in line with 049 OHS-CoP-Live Electrical High Voltage All electrical rooms / equipment shall display highly visible warning / hazard signage 	PM	5	1	05

67	Unauthorised switching	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> An electrical safe system of work (ESSW) shall be developed. Authorised persons shall be appointed to control access to electrical rooms, work on electrical equipment and energisation / de-energisation of electrical equipment. Refer to 018 OHS-CoP-Lockout and Tagout Safety The ESSW shall be documented and shall include: <ul style="list-style-type: none"> Responsibilities and duties of authorized persons Permit systems Training of other contractors Emergency procedures Safe Isolation / Switching – Lock out / Tag Out 	PM	5	1	05
68	Failure to respond to changing conditions	<ul style="list-style-type: none"> Electric shock leading to injury or fatality Electrical fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Loading requirements shall be continually monitored by the competent electrical engineer as conditions change. Additional distribution boards shall be located where power requirements significantly increase. Where power generation is through stand alone generators, additional units or higher rated units shall be installed to prevent overloading 	PM	5	1	05
Material Storage, Handling & Movement											
69	Unsafe storage of materials	<ul style="list-style-type: none"> Fire Overloading and collapse of racking / shelving Chemical spills Tipping / collapse of stacked materials Unsafe movement of large diameter rails Personal injury / fatality / equipment damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	3	15	<ul style="list-style-type: none"> Materials shall be stored, handled and moved in a safe manner. Site stores shall include heavy duty racking with safe ladder / stair access Flammable and / or hazardous materials shall be stored separately in steel containers with air conditioning if necessary with regard to local conditions <ul style="list-style-type: none"> Petroleum based substances (petrol / diesel, oil) shall be stored on drip trays or inside purpose built bunds. Bunds shall be 110% of the stored volume Stacked materials shall be secured against tipping / collapse and shall be palletised where possible to allow safe movement by forklift or crane <ul style="list-style-type: none"> Blocks shall be palletised and banded Pipe racks shall be prepared for pipe storage Sheet racks shall be prepared for glass and dry wall or other sheet material Cables shall be stored on drums in a level area and chocked Large diameter steel or pre-cast pipes shall be stored in a level area and be chocked Gas cylinders shall be stored in a separate cage located in an external area Lockable storage boxes shall be used for general items stored on site All stores shall include signage for both identification of materials and safety Stores shall be fitted with suitable firefighting equipment and fire alarms Packaging and waste materials shall be removed from stores at the earliest opportunity to reduce fire loading 	PM	5	1	05
70	Unsafe handling and movement of materials	<ul style="list-style-type: none"> Tipping / collapse of stacked / stored materials Personal injury through excessive manual handling Personal injury through contact with sharp edges / abrasions / contact with moving materials 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> Store men shall be issued with suitable PPE as required. Heavy duty rigger gloves shall be used for general handling of materials Manual handling shall be minimised and mechanical aids shall be utilised to lift and move heavy materials. Mechanical aids shall be fit for purpose. 	PM	4	1	04
71	Lack of maintenance and certification of mechanical aids (equipment)	<ul style="list-style-type: none"> Failure of mechanical equipment leading to injury or fatality / property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> All lifting equipment and lifting accessories used in site stores, such as cranes, winches, chain blocks, jacks etc shall be operated, maintained and certified in line with 020 OHS-CoP-Safe Crane Operations All mobile plant and vehicles used in site stores, such as forklifts, tele-handlers, truck and trailer, MEWPS etc shall be operated, maintained and certified in line with 021 OHS-CoP-Mobile Elevated Work Platforms and 024 OHS-CoP-Forklifts and Powered Industrial Trucks 	PM	5	1	05
72	Unauthorised access to material stores	<ul style="list-style-type: none"> Personal injury / damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	3	12	<ul style="list-style-type: none"> Site stores shall be lockable and external storage areas shall be secured by fencing to prevent unauthorised access. Tampering with stored materials may lead to an incident at a later date if safe conditions are altered. Unauthorised persons intent on theft may injure themselves and others. To deter theft, site security shall routinely patrol site stores in addition to adequate lighting in place as a deterrent 	PM	4	1	04

73	Movement of Plant and heavy / unstable loads	<ul style="list-style-type: none"> Personal injury / fatality due to trapping or crushing when moving heavy or unstable loads. Damage due to tipping over or contact with structures / equipment leading to financial and production loss 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	5	4	20	<ul style="list-style-type: none"> Plant may include major items of plant such as chillers, air handling units, generators, turbines, pumps, prefabricated concrete or steel structures and cladding etc A specific method statement shall be generated for the movement of major plant items Mechanical aids and accessories shall be fit for purpose and in line with the typical items set out by MENNO'S TRADING CC 	PM	5	1	05
Access / Egress											
74	Failure to designate and separate external traffic / pedestrian routes	<ul style="list-style-type: none"> Traffic accident – fatality / damage / lost production 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours General public 	5	3	15	<ul style="list-style-type: none"> Traffic management shall be in line with the requirements of 030 OHS-CoP-Road Traffic Management Site access / egress shall be in line with the requirements of MENNO'S TRADING CC / client / project A site logistics plan shall be prepared. This shall detail the site boundary, pedestrian and vehicle access and site roads Pedestrian routes shall be clearly marked and illuminated where necessary. Signage should be in a language understood by the majority of the labour / bi-lingual Traffic management signage and lighting shall be installed as necessary Traffic management arrangements for labour drop off / collection shall be implemented. Labour shall not be put at risk from moving vehicles and machinery Traffic Marshalls or 'Flag' men shall control heavy traffic routes and crossing points. Flag men shall be suitably trained 	PM	5	1	05
75	Failure to communicate and maintain internal pedestrian routes, entrances and exits	<ul style="list-style-type: none"> Pedestrian injury / fatality 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours General public 	5	3	15	<ul style="list-style-type: none"> Internal access routes shall not be blocked with materials and equipment and shall be maintained in clean and tidy condition at all times Vehicles shall not travel on designated pedestrian routes without a flag man / banks man Internal routes shall be protected against leading edges and open holes / voids Entrances / exits and emergency exits shall be clearly marked and shall be free from obstructions at all time MENNO'S TRADING CC shall continually monitor pedestrian routes and exits and take immediate action against unsafe conditions 	PM	5	1	05
76	Lack of illumination	<ul style="list-style-type: none"> Personal injury Property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	4	16	<ul style="list-style-type: none"> To prevent general slips / trips / falls internal access shall be free from obstructions, clean, dry and clearly marked with signage. Festoon or other temporary lighting shall be set out Illumination levels (LUX) shall be in line with that set out 008 OHS-CoP-Night Work Requirements, the Project HSE Manual and national legislature (whichever is the more stringent) 	PM	4	1	04
77	Protection of pedestrians from falling objects	<ul style="list-style-type: none"> Personal injury / fatality Property damage 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours General public 	5	3	15	<ul style="list-style-type: none"> Where possible, pedestrian access shall not be routed directly beneath work in progress. Where this is not possible catch nets or crash decks shall be installed where there is a danger of falling objects 	PM	5	1	05
COSHH (Control of Substances Hazardous to Health)											
78	Failure to identify substances hazardous to health	<ul style="list-style-type: none"> Personal injury / longer term ill health 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	3	12	<ul style="list-style-type: none"> Material safety data sheets (MSDS) shall be requested for all products at the procurement stage A COSHH Assessment shall be generated for all hazardous substances Unsafe work with hazardous substances shall be stopped by the MENNO'S TRADING CC project HSE team until the necessary precautions are implemented 	PM	4	1	04
79	Issue / unsafe handling of substances hazardous to health without information / instruction	<ul style="list-style-type: none"> Personal injury / longer term ill health 	<ul style="list-style-type: none"> General site workers General site staff Site visitors 	4	3	12	<ul style="list-style-type: none"> COSHH Assessments shall be retained in the relevant stores. Workers issued with hazardous substances shall be verbally advised of the handling precautions and issued relevant PPE as necessary 	PM	4	1	04
80	Unsafe transportation of substances hazardous to health	<ul style="list-style-type: none"> Personal injury / longer term ill health Fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours General public 	4	3	12	<ul style="list-style-type: none"> Hazardous / flammable substances shall not be decanted into unmarked containers particularly water bottles or unmarked buckets. Containers shall be clearly labeled with relevant warning symbols as set out in 004 OHS-CoP-Chemicals and Hazardous Material Substances hazardous to health are to be transported in appropriate vehicles and sufficiently sealed and stored to prevent any spillages. 	PM	4	1	04

81	Failure to store substances hazardous to health in line with manufacturers guidelines	<ul style="list-style-type: none"> Personal injury / longer term ill health Fire 	<ul style="list-style-type: none"> General site workers General site staff Site visitors Neighbours 	4	3	12	<ul style="list-style-type: none"> Hazardous and / or flammable substances shall be stored separately from general materials as set out in 004 OHS-CoP-Chemicals and Hazardous Material COSHH / Flammable stores shall be locked to prevent unauthorised access COSHH stores shall be temperature controlled should the local conditions / environment prevent safe storage at local temperatures COSHH stores shall be clearly marked with appropriate, highly visible signage 	PM	4	1	04
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Project:	Menno's Inn Trading CC-Bid No:WRFQ/MWB-119/2021 - Municipality of Walvis Bay, (Namibia)	PM – Project Manager CM – Construction Manager PLM – Plant Manager HSEM – HSE Manager PS – Project Supervisor (MENNO'S TRADING CC / Subcontractor) SC – Subcontractor
Assessment Carried out by:	Project Team Manager (Antonius Shiimi)	
Assessment Date:	25/07/2021	

Risk Matrix

		Severity				
		1	2	3	4	5
Likelihood of Harm	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Key

S = Severity	15 to 25	High
L = Likelihood	8 to 12	Medium High
Rating = S X L	4 to 6	Medium Low
	2 to 3	Low
	1	Insignificant