Business/Operating unit:	Kusile Project							Department:	OHS										Next Review Date (every 2 years):	30-Jun-28	Template identifier:	240-70044602
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Refer to Occupational Health and Safety Risk assessment procedure 32-520

List activity	Activity type (Routine/Non-routine)	Hazard nr	Hazard Identification	Risk Nr	Associated risk	Risk type	Cause(s) of the risk	Exposed group/employees	Risk Owner	Exposure patterns	What are the possible consequences?	Existing Controls				Risk Priority Rating	Additional Controls or Tasks Aimed at improving Existing Controls	Monitoring Mechanisms	Control Owner	Legal and Other Requirements	Target Date	Current Status	Integrated Risk Management (IRM) reference number
Lifting & Rigging	R	KS01	1) Adverse Weather Conditions 2)Crane	RS1	1) Lightning & strong winds 2) Boom Failure; tipping over and dropped loads	Safety	1) Natural causes. 2) unstable/uneven ground; improper operation of the crane; Inadequate Maintenance, Lack of Risk	KET Employees, Visitors,Equipments and Contractor's Employees	Construction Managers, Contractors Managers, Superintendent,Supervisors and Crane Co-ordinators	Daily	Fatality;injuries and damage to property	1) Weather Monitoring. 2) Training and awareness , inspections and maintenance, compliance to legislation and eskom procedures, Contractors Safe work procedures,	4	B	III	Fully effective	2) Competency verification, Crane Coordinators Forum.	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3.31, OHSAct (CR 22 and DMR18). Eskom	n/a	In-progress / continous	
													4	C	II	Fully effective						
		KS03	1) Lifting equipment 2) Rigging Equipment	RS2	1) Load falling	Safety	1) Mechanical Failure, Poor communications., Unauthorised operator, lack of barricade; not paying attention	KET Employees and Contractor's Employees	Construction Managers, Contractors Managers, Superintendent,Supervisors and Crane Co-ordinators	Daily	fatalities, injuries and Property damage	1 & 2) Competency and supervision, inspections and maintenance, DSTI, adherence to SWP and SWL and Spotter to guide plant	5	C	II	Fully effective	Review safe work procedures, Check Effectiveness of Maintenance on Equipment	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3.31, OHS Act (CR 18; DMR 18. Eskom Standard 39-98 .	n/a	In-progress / continous	
					2.pedestrian run-over								4	C	II	Fully effective						
				RS2	3. Equipment tip over		Overloading, ground Conditions,						4	C	II	Fully effective						
					4. Equipment failure		Sub-standard equipment: Mechanical Failure,						4	D	I	Fully effective						
					5. Dropped Load		Overloading and improper rigging						4	D	I	Fully effective						
Working at heights	R	KS03	Heights/ elevated position	RS3	1) personel Falling From Heights	Safety	1) Unprotected edges and medical conditions	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	fatalities, injuries	1) FAS Competency and fall protection and prevention systems, medical survailance provision of appropriate PPE 2) Site inspections; barricade drop zone and fall exposures; fall protection and prevention systems 3)competency, inspections and maintenance	5	C	II	Mostly effective	Review safe work procedures, check Effectiveness of Maintenance on Equipment, KET employees to be incorporated in contractors Fall protection plan(as per section 8 of OHS Act), awareness,	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 9.32 , OHS Act (sec 8 & CR 10). Eskom Standard 32-418 :SANS 10085	n/a	In-progress / continous	
					2)Falling Objects		2) unprotected edges; loose/unsecured material				property damage , injuries		3	C	II	Mostly effective						
					3)Structural collapse		3) Sub standard Scaffolding uneven surface				fatalities, injuries and Property damage		5	C	II	Mostly effective						
Electrical Installations	R	KS04	Electricity	RS4	1)Electrocution	Safety	1)Unauthorised access, No-lock out system, Working on a live plant, No earthing theft, unauthorised operations	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	fatalities, injuries and Property damage	1)competency,training and Awareness ,adherence to life saving rule 1 & 5,appropriate PPE,signages; security measures 2) inspections, maintenance & use of drawings 3)Signage, adherence to life saving rule 1 & 5;	4	B	III	Fully effective	Review safe work procedures, Check Effectiveness of Maintenance on Equipment; monitoring life saving rules violations	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3.26 &3.36, OHS Act (CR 24; EIR and EMR); Eskom Regulation 36-681; Eskom Standard 240-62196227; life saving	n/a	In-progress / continous	
					2)Equipment Failure		incorrect wiring and installations				Injury (minor to major)	competency training and Awareness,fire restraining electrical boards	4	B	III	Fully effective						
					3)Fires & Explosions		3)Overloading of Wires				fatalities		5	B	III	Fully effective						
Commisioning activities / working in operating plant	R	KS05	1)electricity	RS5	1)Explosions, Electrocution,	Safety	1)Unauthorised access, No-lock out system, Working on a live plant, No earthing	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	Fatality, injuries and property damage	1)competency,training and Awareness ,adherence to life saving rule 1 & 5,appropriate PPE,signages 2)signages,Training and awareness; inspections , Eskom Procedures,compliance to Legislation, Contractors Safe work Procedures & Supervision	5	C	II	Fully effective	Task risk Assessment,walk through assessments,use of Arch Flash PPE	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 3.26 &3.36, OHS Act (CR 24; EIR, PER; and EMR); Eskom Regulation 36-681; Eskom Standard 240-62196227	n/a	In-progress / continous	
		KS06	2)pressurised systems	RS6	2)juncontrolled release of pressurerised systems, explosions		2)substandard Materials, Shortcuts & Incorrect Connections; system line cracks & burst; operator error,tempering; lack of maintenance						4	C	II	Mostly effective						
Hot work	R	KS07	1)gases& fumes	RS7	1)inhalation	Safety	1)gas leaks,heat treatment 2)improper storage of cylinders,heat trasfer	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	Fatality, injuries and property damage	1)proper ventilation, use of PPE 2)routine inspections,flashback arrestors,competency,	4	B	III	Mostly effective	Training & awareness, co-ordination permit	Audits,BBS,PTO,Inspections	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3,27-28 &3.36, OHS Act (GSR 9 and DMR 9). Eskom Regulation 36-681 and Eskom Standard	n/a	In-progress / continous	
		KS08	2)compressed cylinders	RS8	2)Fire &explosions		poor containment of Sparks, Hot Steel/Metals,				Fatality, injuries and property damage	3)routine inspections , good housekeeping;cable management,use of lanyard on hoses 4)use of appropriate PPE,use of welding screens,fire watch,hot work permit	4	C	II	Mostly effective						
		KS09	3)cables & hoses	RS9	3) Slips, Trips & Falls, whiplash		poor cable management, poor housekeeping,poor connections				injuries		4	C	II	Mostly effective						
		KS10	4)sparks, arch & flames	RS10	4) UV exposure & fire		Welding Slag,heat treatment				injuries		4	C	II	Mostly effective						
Working in open spaces and on structures	R	KS11	Adverse weather conditions lightning,storms, floods,heavy rains and strong winds	RS11	1)lightning strikes	Safety	1)Natural phenomenal	KET Employees and Contractor's Employees	EP Manager	Adhoc Basis	Fatality, LTI, minor injuries and property damage	1) Weather monitoring 2) controlled access point 3) competency	6	B	II	Fully effective	2)lifeboy rings & signages	Audits &Inspections	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 3.42, Emergency Preparedness Plan 240-26297330	n/a	In-progress / continous	
				RS12	2)drowning		2unprotected water courses				fatities		6	B	II	Fully effective						
				RS13	3)collapsing structures		poor design and erection; unsecured structures				fatalities		6	B	II	Fully effective						
Working in confined space	R	KS12	1)hazardous atmospherse and substances	RS14	1)Asphyxiation & Oxygen Enrichment, Airborne Combustable dust/vapours	Safety	1) Poor Ventilation & hot work by-products , 4) lack of log out tag out, 5), unguarded machinery 6) 8)poor judgement,	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	Loss of Consciousness, Injuries, Fatality, property damage, fire & explosions	1)artificial ventilation, environmetal monitoring 2)maintenace, safe work procedures 3) inspection prior entry 4) procedures 5) maintenance and inspections 6) adequate ventilation & PPE 7)hearing protection 8)training and awareness	3	A	IV	Fully effective	SWP, calibrated equipment,	Audits, Inspections , DSTI, Gas Monitoring	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3.40, General Safety Regulations 5	n/a		
		KS13	2) Electrical & mechanical Equipments	RS15	2)Eletrocution, fire & explosions		2)defective equipment, insufficient earthing				LTI		4	C	II	Mostly effective	Review safe work procedures, Check Effectiveness Maintenance	Audits, Inspections & BBS		KET SHE Specification Section 3,40; Traffic Management Plan , OHS Act (CR23). Eskom Procedure 32-345	n/a	In-progress / continous	
		KS14	3)animals	RS16	3) animal bite & stings		3)encroaching into animal habitat				injury		4	C	II	Mostly effective						
		KS15	4)Floods	RS17	4)drowning & electrocution		excessive rains				Fatality		4	C	II	Mostly effective						
		KS16	5)Limited Access, Egress & workspace	RS18	5)Enquifment,entrapment & entanglement		blocked systems				LTI		4	C	II	Mostly effective						
		KS17	6)temperature extremes	RS19	6) heat & cold stress	Health	external cold temperatures, lack of ventilation,				LTI		4	C	II	Mostly effective						
		KS18	7)noise	RS20	7)hearing loss		power tools & equipment				LTI		4	B	III	Fully effective						
		KS19	8) poor lighting	RS21	8)slip and falls	Safety	Poor Lighting,poor housekeeping				LTI		4	C	II	Mostly effective						
		KS20	9) surfaces	RS22	9)uneven & slippery surfaces		poor cable management , poor design/pipe leak				LTI		4	C	II	Mostly effective						
Transportation of Materials	R	KS21	1) improper stacking/securing of loads 2)uneven roads 3) mode of transportation	RS23	falling materials /loads; spillage	Safety	1) substandard equipment, limited space, untrained personnel; 2) poor maintenance and poor workmanship	KET Employees and Contractor's Employees & Visitors & public	Contractor SHE Managers, Contractor Managers KET SHE Manager	2 - 4 hours	Fatality, LTI and property damage	1) regular inspection; training and awareness 2) road maintenance and inspection 3) competency and vehicle maintenance	4	C	II	Fully effective						
													4	B	III	Fully effective						
Manual handling	R	KS22	1) heavy loads	RS24	(1) Dropped/falling loads, pinch points	Safety	(1) Overloading, unsecured loads, poor lifting technique and equipment failure	KET Employees and Contractor's Employees	Construction Manager, Construction Supervisors, SHE manager and Operators	Daily	fatalities, injuries and Property damage	(1) SWP, buddy systems, pallet/dunnage, Assistance lifting (mechanical), inspection and maintence (2) Rotation of team, SWP (3) Proper stacking and storage, good housekeeping, supervision, proper access/egress (4) Inspections, maintenance, proper body position (away from the line of fire) 5) Installation of build in bins.	5	C	II	Fully effective	Engineering drawings, adherence to load bearing capacity and detailed ergonomics risk assessment to be conducted	Audits, Inspections & BSO	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification Section 3.31 , OHS Act (CR 28; DMR 18), Eskom Standard 39-98 .	n/a	In-progress / continous	
		KS23	(2) ergonomics	RS25	(2) Awkward body positioning, repetitive movement		(2)Restricted/congested work area, task requirements						4	B	III	Fully effective						
		KS24	(3) Storage area layout	RS26	(3) Entrapment, slips,trips and falls		3) Poor design of storage/work area, poor illumination, poor housekeeping						4	C	II	Fully effective						
		KS25	(4) stored energy	RS27	(4) swinging loads and rotating equipment		(4) Equipment failure, poor handling technique						4	C	II	Fully effective						
		KS26	5) moving guard (Guillotine)	RS28	pinch points	Safety	procedure not being followed	Contractors Employees	Construction Manager	Daily	LTI, serious injury	1) install additional fixed guards 2 implement lock out procedure 3 on the job training	4	B	III		Awareness	Inspection and BBS	KET SHE Manager	KET SHE Specification, DMR 10		In-progress / continous	
Tightning, hammering and chipping	R	KS27	1) Restricted spaces	RS29	1) Poor Ergonomics	Health	1) Poor body postures, Unsafe practice	Contractor Employees KET employees	Contractor SHE Managers, Contractor Managers KET SHE Manager	Daily	LTI, Medical treatment case	(1) Rest breaks 2) Inspection and maintenance, SWP and awarenesses 3) dust suppresion and proper PPE 4) Proper PPE	3	B	III	Fully effective	Training & awareness & Behavioural based observations	Audits, Inspections & BBS, Audiometric tests	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 3.28, EMR 10	n/a	In-progress / continous	
		KS28	2) Tools	RS30	2) Pinch point	Safety	2) Defective tools						4	C	II	Mostly effective						
		KS29	3) Dust	RS31	3) Dust inhalation	Health	3) Incorrect/ No usage of respiratory equipment						3	B	III	Fully effective						
		KS30	4) Noise	RS32	4) Noise exposure		4) No or incorrect usage of hearing protection						4	C	II	Mostly effective						
Drilling	R	KS31	Drill rig/bits	RS33	1)Flying debris	Safety	1) Release of the drilled material	KET Employees and Contractor's Employees	Construction Managers and supervisors	Weekly	LTI and medical cases	(1) SWP, Dust suppression and screens 2) dust suppresion and proper PPE 3) Proper PPE	3	A	IV	Fully effective	Review safe work procedures, Check Effectiveness of Maintenance on Equipment , 1 in 10 changes of this activity to be done on site	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 3.28, EMR 10	n/a	In-progress / continous	
		KS32	Drilling surface	RS34	2) Dust inhalation	Health	2) Incorrect/ No usage of respiratory equipment						3	A	IV	Fully effective						
		KS33	Noise	RS35	3) Noise exposure		3) No or incorrect usage of hearing						3	B	III	Fully effective						
Piling	N	KS34	Open holes	RS36	Falling into the hole	Safety	unbarricaded holes	KET Employees and Contractor's Employees	Construction Managers and supervisors	Ad-hoc	LTI and medical cases	excution zone/ barricade and covers	4	C	II		Awareness	Audits and site inspections	SHE Managers, Construction Managers and Contracts Manager	SHE Spec, NIHL Regs, HCA regs and CR	n/a	Completed	
		KS35	Noise	RS37	noise exposure	Health	Machinary operations				Irreversible NIHL	Awareness, noise zone darmacation and Hearing protection	4	C	II							
		KS36	Dust / debris	RS38	Dust exposure	Health	Suspended/ disloged earth material				Irreversible respiratory illness	dust suppresion and proper PPE	4	C	II							
		KS37	Moving machinery	RS39	Stuck by / caught by	safety	congested working areas				Fatality and LTI	SOP, contractor interface	4	B	II							
		KS38	Underground services	RS40	electrocution, drowning	safety	Unmarked or undetected underground services / not following procedures				fatality and property damage	Excavation permit procedure	5	C	II							
Excavation and Trenching	R	KS39	1) machinery or plant	RS41	1) falling inside the excavation; employees struck by machinery; wall collapse, noise exposure exposure to exhaust fumes	Safety	1) poor ground stability; lack of inspection prior excavation; unprotected excavations; uncontrolled man machine interaction; lack of shoring and bracing,vibration and overloading of excavation walls; operating plant	KET Employees and Contractor's Employees	Construction Managers and supervisors	Weekly	fatalities; injuries and property damage	(1) training and competencies; inspections of excavations; plant inspection and maintenance; excavation permit; SWP and work coordination; PPE	3	A	IV	Fully effective	Review SWP; bracing and shoring	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Spec 3.30 and CR 13	n/a	In-progress / continous	
		KS40	2) hand tools	RS42	2) pintch points; struck by; ergonomic risks	Safety	2) substandard tools; working in close proximity; restricted working space; awkward body position and repititive work				Injuries	2) tool inspections; SWP and use of PPE	4	C	II	Mostly effective						
		KS41	3) excavations	RS43	3) wall collapse; falling into; slips trips and falls	Safety	3) improper sloping; inadequate bracing and shoring; unprotected excavations slippery and wet conditions; poor housekeeping and uneven surface				LTI, injuries	3) inspections; signage; barricade; sloping; benching; housekeeping; awerness training and proper PPE	4	C	II	Mostly effective						
		KS42	4) underground services	RS44	4) eletrocution; flooding	Safety	4) undetected underground services, unknown services				fatalities	4) underground services detection ; Permit to work; SWP	5	C	II	Mostly effective						
		KS43	5) Barricading	RS45	Collapse;	Safety	structural interity and lack of maintenance.				injuries and property damage	inspections; signage; maintenance ; awareness training	3	C	II	Mostly effective		Inspections and audits				
Concrete works	R	KS44	1)cement dust	RS46	1)dust exposure	Safety	1-3)Inadequate PPE, improper handling of equipment, poor positioning, poor house keeping	KET Employees and Contractor's Employees	Construction Managers and supervisors	weekly	injuries and property damage	1-3) Training & awareness, SWP, work coordination,appropriate PPE, maintenance and inspection of plant, access restrictions and visible signage,	4	B	III	Fully effective	Review safe work procedures, check Effectiveness of Maintenance on Equipment	Audits, Inspections & BBS	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 33.5 & 3.38, OHS Act (Construction Regulations 13) & HCA	n/a	In-progress / continous	
		KS45	2)equipment	RS47	2)whiplash, pinch points, falling debris						injuries and property damage		2	C	III	Fully effective						
		KS46	3)concrete mixture	RS48	3)contact with concrete						dermatitis		2	C	III	Fully effective						
Driving	R	KS47	1)Motor Vehicle, Buses & Taxis	RS49	1 & 2)motor vehicle accidents	Safety	1) human behaviour , reckless driving (speeding, overtaking etc) and poor maintenance of vehicles, weather conditions (fog & mist), attention distraction,driving under the influence of alcohol & drugs	KET Employees, Contractor's Employees and Public	Security and line Management	Daily	Multiple Fatalities,Property damage and injuries	1) Vehicle Training & campaigns, inspections and servicing of vehicles, substance abuse programme, licence renewal 2) Routine road maintenance and monitoring	6	B	II	Fully effective	Vehicle access permit and continuous traffic management, Enforcement (consequence management-affected employee to be re-inducted)	MVA trend analysis; Audits and drug and alcohol abuse random testing	SHE Managers, Construction Managers and Contracts Manager	KET SHE Specification 3.22, Construction Regulations 23;Eskom Driver Training Standard, National Traffic Act	n/a	In-progress / continous	
		KS48	2)Pedestrians	RS50	2) pedetrians knocked down/ struck by		Lapse in concentration 2) Poor maintenance and construction of road						4	C	II	Mostly effective						
		KS49	3)Poor Road conditions	RS51	3) motor vehicle accidents		3) Poor visibility, weather conditions (fog & mist) ,use of cellphones.						4	C	II	Mostly effective						
		KS50	4) sitting position	RS52	4) body strains	Health	Ergonomics	KET Employees, Contractor Employees	Fleet Manager	Daily	Medical	1. Ergonomic awareness 2. use of appropriate ergonomic furnitures	2	B	IV	Mostly effective	1. Use of extra back support 2. Conduct ergonomic risk assessment	Ergonomic survey		Ergonomic regulation &Construction regulation	n/a	In-progress / continous	
Office work	R	KS51	1)hot water from hydroboiler	RS53	1) Contact with hot boiler or spilled with hot water	Safety	1) overfilled container, damaged container, improper handling, bumping into, defective hydroboiler,	KET Employees and Contractor's Employees	1) Site services manager 2) Occupational Hygine Officer	Daily/ Monthly	LTI, Section 24 and property damage	1) Awareness and maintenance (use of central e-mail for reporting	4	B	III	Mostly effective	1)Detailed ergonomics risk assessment to be conducted	Inspections(e.g.SHE representative inspection); VFL and surveys	Site service manager	OHS Act ,Ergonomic regulation and Environmental regulation and Facilities regulations	n/a	In-progress / continous	
		KS52	2)office furniture & equipment	RS54	2)Edges,pinch points, cut by, ergonomics, glare, fall offfrom;on	Health	2) defective furniture, improper position,					2) Illumination survey, ergonomic configuration and maintenace	3	D	II	Fully effective						
		KS53	3) Inadequate Building maintenance	RS55	3) Inadequate ventilation,Poor illumination,Leakages,blocked ablution facilities	Health	3). Not following planned maintenance schedule,Delay in Procurement processes					2) Indoor Air Quality Survey 3) training and awareness	4	C	II	Mostly effective						
		KS54	4)cables, conduits and uneven surface	RS56	4) trip and fall	Safety	4) poor management of cables, poor design and lack of maintenance and poor management of cables, poor design and lack of maintenance					4) Use of building maintenance service provider (use of central e-mail for reporting),awareness and good housekeeping	4	C	II	Mostly effective						
		KS55	5) uneven surface; heavy loads	RS57	5) Slip trips and falls;	Safety	5) Lack of facility / resouces for the disabled	People with disabilities	Line managers and HR	Daily	Injuries	Ramps, provision of disabled facilities, assigning of duties to consider disability	4	C	II	Mostly effective	requesting for assistance from co-workers	inspections		BCE Act and EE Act	n/a	In-progress / continous	

Working in shared spaces	R	KS56	Pandemic	RS58	1)Human to human transmission through droplets; 2)transmission through contaminated surface	Health	1) Touching contaminated surface and exposed virus to mouth, eyes and nose; 2) Inhale droplets from infected person	KET Employees, Contractors Employees, suppliers, visitors.	Appointed pandemic representatives for both client and contractors	Daily	Fatalities & illness	1) Encourage work from home if possible, mandatory wearing of protective mask in public, washing of hands with soap, sanitisation with sanitizer at least 70% alcohol, social distancing, controll access gates, daily screening and taking body temperature, promote hygiene	5	C	II	Mostly effective	Disinfection of transports and offices, mandatory PPE signage to be posted, enforce soacial distancing at all times, induction to all employees about Corona	DEL inspections at work places	Appointed COVID- 19 Coordinators for both client and contractors	Occupational health and safety measures in workplace (COVID-19 (C19 OHS)	n/a	In-progress / continous	
animal encounter	N	KS57	Insects, reptiles and stray animals	RS59	1) bites/stings	Health and safety	1) natural defence of animals; attack by animals & immune reaction due to animal sting or fur 2) being startled or fleeing		Contract Managers and supervisors	Daily/ Monthly	Injury; illness and fatality	1) Pest control contract, snake catchers; 24/7 EMS 2) awareness; housekeeping , signage and barricade	5	C	II	Mostly effective	Re-fresher awareness	Site inspection	SHE Manager and Contstruction manager	OHSAct and FCD Act	n/a	In-progress / continous	
Use of lifts (e.g.Alimak etc.)	R	KS58	Equipment operation at heights	RS60	1) brake failure; equipment dropping; strong winds; equiment runing out of control	Safety	1) Mechanical Failure, Overloading, Unauthorised operator,	KET Employees, Contractor's Employees and visitors	Contractor SHE Managers, Contractor Managers	Daily	fatalities, injuries and property damage	1) competency, inspections and maintenance; Weather monitoring and SWP and load limit signages	5	C	II	Mostly effective	Barometers for operators or wind monitoring information communicated to operators	Inspections and surveys	SHE Managers, Construction Managers and Contracts Manager	OHSAct and lift, escalators & passenger conveyor regulations	n/a	In-progress / continous	
		KS59		RS61	2) equipment (parts) breaking; material dropping from heights		2) Sub-standard equipment; Mechanical Failure				property damage , injuries	2) Inspection and use of genuine parts	4	B	III	Fully effective							
Site-wide lighting	R	KS60	Poor lighting/ visibility on construction areas	RS62	Trip and fall,	Health	1) Poor coordination amongst the contractors and KET; 2) Lack of lighting maintainance, 3)	KET Employees and Contractors Employees	Construction Managers and supervisors	Daily	Eye/ sight disturbance, injury	DSTI, Mobile lights,	2	B	IV	Mostly effective	Appoint responsible service provider for lighting	daily inspections audits	Construction Managers and Supervisors	OHS Act and Environmental and Facilities regulations	n/a	In-progress / continous	
		KS61	1) night conditions	RS63	1)poor illumination	Safety	1)poor lighting, natural conditions	KET Employees and Contractor's Employees	Construction Managers and supervisors	Daily	fatalities, injuries and property damage	1) additional lighting	5	B	II	Fully effective	head lamps and torches	Inspections and surveys	Contractor SHE Managers, Contraction Managers	OHSAct and Environmental and Facilities regulations	n/a	In-progress / continous	
Opening and Closing of doors	R	KS62	vehicles and facility doors	RS64	Struck by and pinch point	Safety	Poor maintainance, Lack of concentration, lack of knowledge/ awareness (restricted area) 2) Adverse weather condition	KET Employees and Contractors Employees	KET and Contractors Managers	Daily	Injury (minor to major)	Inspections, Awareness, warning signages	4	C	II	Mostly effective	SHE and Formen Forums, Safety vehicle campaign, installation of door transparency screen and PPE (gloves and safety boots)	Inspections audits	Security Manager, Support Services, SHE manager	OHS Act, Facilities regulations and Construction Regulation 23, Kusile SHE Specification	n/a	In-progress / continous	
workplace Pycho-Socio & Human Factors	R	KS63	1) workload	RS65	1) Fatigue 2) Frustration	Health	1) Overworked; 2) uneven distribution of duties/responsibilities; planned events and acceleration of activities affect the schedule	KET Employees and Contractors Employees	Line managers and HR	Weekly	stress, mental illness	Proper planning (allocation of resources); Eskom assistance program and wellness clinic	3	C	II	Mostly effective	Targeted awareness campaigns; improvement of working relationship with line manager (brothers keeper)	Leave of absence monitoring; Time sheet	line manager and HR	Leave management procedure; Basic conditions of service, basic condition of employment Act and labour relations Act	n/a	In-progress / continous	
	R	KS64	2) work hours	RS66	1) Fatigue from working long hours		1) Long hours (overtime) and long travel times outside the feeding towns				1) mental illness (e.g stress) and Motor vehicle incidences	1) Project Labour Agreement and Basic conditions of service; Planned overtime schedule and	5	C	II	Mostly effective	Add extra resources to minimize long working hours	Time sheet; complain register to IR	line manager and HR	Leave management procedure; Basic conditions of service, basic condition of employment Act and labour relations Act	n/a	In-progress / continous	
	R	KS65	3) Inherent work place dynamics	RS67	1)Harassment 2) Unfair treatment		1) lack of diversity in a workforce,violation of human right, poor management of stress,lack of people management 2) Prejudice				mental illness(i.e. depression,stress, etc.)absenteeism,Resignation	1) EAP, Internal relation intervention,Diversity management Awareness ,Ethics training	2	C	III	Mostly effective	External professional medical assistance	Complain register to IR	line manager and HR	Leave management procedure; Basic conditions of service, basic condition of employment Act and labour relations Act	n/a	In-progress / continous	
	R	KS66		RS68	3) Bullying		1) Power dynamics, Cultural and language difference in the workplace & Immoral				stress, mental illness, depression, absenteeism	EAP, awareness training on code of conduct practices and employees rights	2	C	III	Mostly effective	Ensure cultural diverse employees understand laws at workplace,	leave of absence monitoring; Time sheet, complain register to IR	line manager and HR	Leave management procedure; OHSAct Sec 14 Basic conditions of service, basic condition of employment Act and labour relations Act	n/a	In-progress / continous	
	R	KS67		RS69	Less aware of laws and workplace norms		2) lack of orientation of new employees ,				stress, depressed, absenteeism	EAP, induction and training of new employees	3	C	II	Mostly effective	full Orientation and continuouse awareness training on legal updates and organisation norms and standards	leave of absence monitoring; Time sheet, complain register to IR	line manager and HR	Leave management procedure; Basic conditions of service, basic condition of employment Act and labour relations Act	n/a	In-progress / continous	
Provision of food and water	R	KS68	Hot (surfaces ,steam,oil)Fire ,Gas , machinery	RS70	Burns ,explosion , machine failure	Safety	Not following SWP,Inspections on machinery not done , lack of machinery service	Contractor employees	site services	Daily	Fatality, injuries and property damage	SWP , Maintenace ,training and awareness	5	C	II	Mostly effective	Regular Audit inspections	Inspections	Support Service Manager	FCD Act ; Food Hygiene and safety management standard rev 3	n/a	In-progress / continous	
	R	KS69	food handling, preparation and storage	RS71	expired food, and Food contamination	Health	No food labelling ,No food samples ,Not following swp,poor food hygiene practices, poor cleaning	Contractor employees	site services	Daily	fatalities ,medicals	SWP,Training , food samples ,food labelling for consumption period, awareness, Certificate of acceptability	5	C	II	Mostly effective	Regular Audit inspections	Inspections	Support Service Manager	FCD Act ; Food Hygiene and safety management standard rev 3	n/a	In-progress / continous	
	R	KS70	Food conveyer	RS72	pinch point	Safety	No machine guard , not adhering to SWP , lack of maintenance	Contractor,Eskom employees & Visitors	site services	Daily	LTI	Maintenance , Training and SWP	4	C	II		Regular Audit inspections	Inspections	Support Service Manager	FCD Act ; Food Hygiene and safety management standard rev 3	n/a	In-progress / continous	
	R	KS71	Walk in fridges	RS73	suffocation	Health	Not adherering to the swp ,	Contractor,Eskom employees & Visitors	site services	Daily	Fatalities ,medicals	SWP, Training , maintanance ,safety lock system	5	B	II		Regular Audit inspections	Inspections	Support Service Manager	FCD Act ; Food Hygiene and safety management standard rev 3	n/a	In-progress / continous	
	R	KS72	drinking water	RS74	contaminated water	health	Poor cleaning, contamination from the source , poor hygine practices	Contractor,Eskom employees & Visitors	site services	Daily	medicals and LTI	cleaning schedule, SWP and Water sampling	4	C	II	Mostly effective	Regular Audit inspections	Inspections	Support Service Manager	FCD Act ; Food Hygiene and safety management standard rev 3	n/a	In-progress / continous	
Cleaning	R	KS73	1) Chemicals 2) Wet surfaces 3) Tools 4) Hot surfaces (Hydrobolis) and water	RS75	1)Skin irritations contact with chemicals ,2). slip trip and fall ,3) cut by tools 4) Burn	Safety	1) Not adherering to SOP and MSDS 2).No wet surface signage, 3) Defective tools , poor maintenance of facility,Using wrong tool for the job 4) Using wrong tool for the job, Not adhering to SWP,Tap not properly labelled	Contractor,Eskom employees & Visitors	site services	Daily	LTI, Medical and first aid	MSDS ,SWP, Training	4	C	II	Mostly effective	Awareness campaignes	Inspections	Support Service Manager	OHS Act; HCA Regulation Facilities reg 9	n/a	In-progress / continous	
Site and Public Unrest	N	KS74	1) Violent Uncontrolled people	RS76	1) Instability, fighting, damaging to property	Safety	1) Disputes and disgrantled public / employees	KET public,visitors,employees and Contractors Employees	Security Manager	Adhoc Basis	Fatality, injuries and property damage	Project Labour agreement,Central management forum,stakeholder engagement, Communication alert sent to employees during unrest	5	C	II	Mostly effective	Intelligence gathering, Periodical refresher training and Mock drills	Mock drills	Security Management	PLA agreement, Criminal Law Procedure Act. Labour Relation Act.	n/a	In-progress / continous	
Waste Handling	R	KS75	Medical waste and biological waste	RS77	Cut by,splashed by	Health	Improper handling,Not adhering to SOP	Contractor employee	Site services	Daily/ Monthly	Medical	Training, Disposal in designated containers/Waste Separation, Use of approriate PPE	3	C	II	Mostly effective	Awareness	Inspections and audits	Support service manager	NEMWA	n/a	In-progress / continous	
Walking on site	R	KS76	Uneven & slippery surfaces, cables, ropes, conduits, pipes,bricks	RS78	Slips, trips and falls	Safety	Poor housekeeping, liquid spillages, lack of maintenance and poor design of structures and surfaces, using substandard shoes	Contractor,Eskom employees & Visitors	KET and Contractors Managers	Daily	LTI, Medical and first aid	Awareness and site rules (*i.e* no running and no texting while walking), Promote housekeeping, barricading hazadous area, maintenance of buildings and structures, designated walk ways and wearing appropriate safety boots	4	C	II	Mostly effective	drainage/ detour of walkways during rainy seasons	Inspections and audits	KET Mangement	OHS Act and SHE Spec 3,32	n/a	In-progress / continous	
Handling fire arms	R	KS77	Fire arms	RS79	Accidental discharge	Safety	Deviation from Procedures, unfamiliar with a specific fire arm	Contractor,Eskom employees & Visitors	Security Manager	Daily	Fatality, Medical and First aid cases	Gun Competency training, Fire arm procedures, bullet trap bin	5	B	II	Mostly effective	Re-fresher awareness and shift manager to over see process	inspections	Security Management	NKPAct and Fire arms control Act	n/a	In-progress / continous	
Horticulture	R	KS78	Uneven surfaces	RS80	Slips, trips and falls	Safety	landscape	Contractor,Eskom employees & Visitors	Contruction Managers	Daily	Medical and first aid cases	awarenes (foot placement) and correct PPE to be worn	4	C	II	Mostly effective		Inspections and audits	Construction manager	OHS Act, Construction Regulations 23 and SHE Spec Rv 8	n/a	In-progress / continous	
		KS79	animal and insects	RS81	Bites and stings	Safety	animal encouter				Fatality, Medical and First aid cases	assess area before carrying out work	5	C	II	Mostly effective	snake catching and relocation						
		KS80	Hand tools	RS82	Pinched points, Cut by and struck by	Safety	Damaged tools, improper handling, congested work areas,working near buildings/vehicles				injuries and property damage	inspect before use, employee training, screening and use of alternative equipment	3	C	II	Mostly effective	Relocation of vehicles, signages and spotters						
		KS81	Vegetation	RS83	Skin irritation and respiratory irritation	Health	allergic reaction				Medical cases	Use of long sleeve overalls , dust mask and job placement	3	B	III	Mostly effective	Awareness						
		KS82	Servitudes	RS84	1) Electrocution 2) uncontrolled release of substances	Safety	No scanning of the area; use of incorret equipment/tools for the job; as built drawings not used to identifying services in the ares; Failure to conduct a DSTI and no spotter to guide the operator				property damage and injuries	Updated as built drawings to be used, Scanning the area, Barricading of visible servitudes, hand excavations to exposed underground service lines, Detailed DSTI to be done and communicated to all involved parties	5	D	I	Mostly effective	Spotters, supervision and awareness						
		KS83	Chemical	RS85	Skin irritation and fires	Safety	Fuel and horticultural chemicals				injuries and property damage	Training, Use of chemical as per SDS and correct PPE	3	B	III	Mostly effective	Awereness						
		KS84	Barricade	RS86	Collapse;	safety	structural interity and lack of maintenance.			Daily	injuries and property damage	inspections; signage; maintenance ; awareness training	3	C	II	Mostly effective	Use alternative safer barricade	Inspections and audit			n/a		
Handling ash	R	KS85	Fly ash dust	RS87	Ash inhalation	Health	Suspended ash particles due moving machinery, manual handling, malfunctioning plant and strong winds	Eskom employees, contractor employees and visitors	Construction Managers	Daily	Fatality, Medical, first aid cases and property damage	Regular maintenance of plant, dust suspression, PPE	3	D	II	Mostly effective	Awareness and Air Monitoring	Inspections and audits	Construction Managers	HCA Regulation	n/a	In-progress / continous	
				RS88	Skin contact	Safety							3	D	II	Mostly effective							
				RS89	Eye irritation	Safety							3	D	II	Mostly effective							
				RS90	Poor visibility	Safety				adhoc			5	B	II	Mostly effective	Temporary stop activities						
Blasting	N	KS86	uncontrolled blasting	RS91	exposure to flying debris	Safety	area not demarcated, blasting notification not done, incorrect explosives and type of rock.	Eskom employees, contractor employees; visitors and farmers	Construction Manager, Supervisor	Ad-hoc	Fatality, injuries and property damage	competent and registered contractor; blasting zone demarcation; notification of the blasting	5	B	II	Mostly effective	Blasting to be done outside normal working hours	inspections and aaudits	Construction Manager	Explosives Regulations and CR	n/a	In-progress / continous	
			Explosives are left unattended to on the construction site	RS92	Explosives can be stolen and used for criminal activities	Safety	Explosives not properly controled as legally required and as per procedure.	Employees	Construction Manager, Supervisor, Safety Officer	Daily	Multiple fatalities	Explosives are delivered on the day of the blast in exact qualities as is required and immediately charged into the blast holes on arrival at the construction site, left-overs are removed from site by the blasting contractor.	5	B	II	Fully effective	Security checks are conducted at the access gates, all explosives are recorded and signed off in an explosives control register	All explosives are accounted for and utilized accordingly	Project Manager, Explosives Contractor, Supervisor	Explosives Regulations, Client Safety Specification, Contractor Safety Plan, Contractor Method Statement & Risk Assessment for Managing & Use of Explosives on site		Completed	
			Fly rock becomes airborne	RS93	Employees & Infrastructure can be struck by blasted fly rock	Safety	Blasting procedure not followed thus exposing employees and equipment to fly rocks.	Employees	Construction Manager, Supervisor, Safety Officer	Daily	Fatality or life threatening health effects	Blasting is done as per the approved procedure and all employees and plant that might be affected gets evacuated from the danger zone.	5	B	II	Mostly effective	A register of explosives on site, inspection of the blasting area after the blast	Inspections		Explosives Regulations		Completed	
Road works	N	KS87	Earthworks (Clear and Grub, Layerworks)	RS94	1. Struck by machinery 2. Animal encounter	Safety	1. Man and Machine interaction 2. natural habitat	Eskom employees, contractor employees; visitors	Construction Manager	Daily	Fatality or Injuries and property damage	1. Traffic management plan, lifesaving rules 2. snake catcher	5	B	II	Mostly effective	Awareness, Toolbox talks and VFLs	Inspections and audits	SHE Manager, Construction manager and Contracts manager	CR23, SHE Spec	n/a	In-progress / continous	
Painting	R	KS88	Paint	RS95	Contact paint and inhalation of vapours	Health	Improper handling,not adhering to SOP	Eskom employees, contractor employees; visitors	Construction Manager	Daily	Ill health affects	Adequate ventilation; SOPs; SDS;Training and correct PI	2	C	III	Mostly effective	Awareness, Toolbox talks and VFLs	Hygiene Surveys; Inspections and audits	SHE Manager, Construction manager and Contracts manager	HCA Regulations and SHE Spec	n/a	In-progress / continous	