TASK RISK ASSESSMENT WORKSHEET

CONTRACT NO	REF	DATE	REV
190707	RA-2026-UQqrqhir	12.03.2026	D

PROJECT 132 kv cable works

CLIENT	CONSULTANT	MAIN CONTRACTOR	SUBCONTRACTOR
Taqa	Green	El Sewdy	Heliopolis

ACTIVITY topographical survey

ASSESSORS	— PROJECT MANAGER *signature*	— HSE ENGINEER *signature*	— PROJECT MANAGER *signature*	— CIVIL ENGINEER *signature*	— HSE ENGINEER *signature*

SN	Activity	Hazard / Aspect	Consequence	Groups Exposed	Existing Controls	Initial Risk P × S = R	Additional Controls	Residual Risk P × S = R
1	**Complete HDPE Duct Infill**	1. Vehicle movement and traffic hazards 2. Manual handling during loading/unloading 3. Uneven ground conditions	Personal injury, property damage	Site Personnel, Subcontractors, Public	1. Implement traffic management plan 2. Designated walkways 3. Mandatory PPE 4. Speed limit enforcement	**P 3 × S 3** **9**	1. Comply with ADOSH SF CoP 27.0 2. Daily vehicle inspection 3. Toolbox talk	**P 2 × S 2** **4**
2	**Site mobilization and setup of temporary**	Passing high-speed public traffic and moving site vehicles	Personal injury, property damage	Site Personnel, Subcontractors, Public	Approved TTM plan, high-visibility clothing (Class 3), physical water-filled/concrete barriers, advanced warning signs, and trained flagmen.	**P 3 × S 3** **9**	Deployment of Truck Mounted Attenuators (TMA) and enforcement of reduced speed limit zone in coordination with local traffic authorities.	**P 2 × S 2** **4**
3	**Trench excavation and sub-surface ground preparation**	Accidental strike on existing buried live electrical cables or gas utilities	Personal injury, property damage	Site Personnel, Subcontractors, Public	Utility mapping review, CAT & Genny cable avoidance scanning, and manual trial pits (pot-holing) prior to mechanical excavation.	**P 3 × S 3** **9**	Mandatory Permit to Dig system, use of insulated hand tools near identified utilities, and continuous competent supervision.	**P 2 × S 2** **4**
4	**Uncoiling, handling, and positioning HDPE pipe**	Sudden release of stored mechanical spring energy in coiled HDPE pipe	Personal injury, property damage	Site Personnel, Subcontractors, Public	Use of specialized pipe reeler/uncoiler frame, controlled strap cutting procedures, and establishing exclusion zones.	**P 3 × S 3** **9**	Mandatory deployment of safety restraints/bands before unstrapping and wearing high-impact resistant safety glasses and gloves.	**P 2 × S 2** **4**
5	**HDPE pipe jointing via electrofusion and**	High-temperature heating elements, hot molten plastic, and portable electrical generators	Personal injury, property damage	Site Personnel, Subcontractors, Public	Certified welding equipment, RCD-protected generators, heat-resistant safety gloves, and portable fire extinguishers nearby.	**P 3 × S 3** **9**	Hot Work Permit implementation, provision of localized exhaust ventilation or respiratory protection (FFP3) in confined areas.	**P 2 × S 2** **4**
6	**Entry into underground chambers and manholes**	Hazardous atmosphere (oxygen deficiency, toxic gases like H2S/methane), engulfment, or fall from height	Personal injury, property damage	Site Personnel, Subcontractors, Public	Confined Space Entry Permit, pre-entry 4-gas atmospheric testing, forced air ventilation, and tripod rescue system with harness.	**P 3 × S 3** **9**	Continuous multi-gas monitoring during entry, dedicated trained top-person/standby monitor, and verified emergency rescue plan.	**P 2 × S 2** **4**

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7	**Mechanical winch pulling of HDPE sub-ducts**	High-tension winch wire snap, rotating capstans, and pinch/nip points	Personal injury, property damage	Site Personnel, Subcontractors, Public	Properly rated winching wire with calibrated weak-link swivel, emergency stop switches, and safety guards over rotating parts.	P 3 × S 3 **9**	Integrated load monitoring with automatic shut-off at peak tension limits and strict exclusion zones along the tension line.	P 2 × S 2 **4**
8	**Duct proving (mandrel testing) and air**	Uncontrolled high-pressure compressed air release and projectile ejection of foam pig or mandrel	Personal injury, property damage	Site Personnel, Subcontractors, Public	Calibrated pressure relief valves, secure containment/catcher cage at receiving duct end, clear exclusion zone enforcement.	P 3 × S 3 **9**	Mandatory Pressure Testing Permit, full-face protection shields for operators, and calibrated double-gauge manifolds.	P 2 × S 2 **4**
9	**Mobilization and foot transit across uneven terrain and dense vegetation**	Unstable ground, hidden holes, dense brush, and trip hazards	Ankle sprains, fractures, cuts, lacerations, or slips/trips/falls	Survey Technicians, Site Engineers	Visual ground inspection prior to walking, wearing ankle-support safety boots, clearing paths where necessary	P 4 × S 2 **8**	Mandatory use of high-visibility snake gaiters in dense brush, establishing designated walking corridors, carrying first-aid kits	P 2 × S 2 **4**
10	**Surveying near overhead high-voltage power lines**	Encroachment into safe clearance distances using extended survey poles or prism rods	Electrical arcing, severe electric shock, third-degree burns, fatality	Surveyors, Instrument Operators	Use of fiberglass non-conductive survey rods, maintaining safe distance limits per electrical safety regulations	P 3 × S 5 **15**	Deploy height restrictors/goalposts, maintain strict minimum approach distances (MAD), appoint a dedicated spotter, obtain a Permit to Work (PTW)	P 1 × S 5 **5**
11	**Topographical mapping inside active electrical substations and switchyards**	Accidental contact or close proximity to live busbars, transformers, and energized equipment	Arc flash explosion, severe electrical burns, fatal injury, power outage	Survey Crew, Substation Escort	Substation safety induction, work restricted to designated demarcated zones, mandatory escort by authorized electrical personnel	P 3 × S 5 **15**	Wear minimum Category 2 Arc Flash rated PPE, utilize laser scanners/robotic total stations to minimize personnel movement near live bay limits	P 1 × S 5 **5**
12	**Driving survey stakes/pins into the ground near electrical infrastructure**	Striking underground energized high-voltage cables or buried utilities	Electrocution, arc flash, power disruption, gas leaks/explosions	Surveyors, Field Assistants	Review of existing utility drawings and subterranean mapping before staking	P 4 × S 5 **20**	Perform CAT & Genny ground scan before driving pins, use non-conductive wooden/plastic markers where underground utilities are suspected, soft-dig/hand-dig exploratory holes	P 1 × S 5 **5**

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LIKELIHOOD / FREQUENCY

Descriptor	Likely Frequency	Probability
Frequent	Occurs frequently	5
Often	Occurs several times per year	4
Likely	Has occurred more than once	3
Possible	Has occurred	2
Rare	Never occurred	1

RISK MATRIX — PROBABILITY × CONSEQUENCE

Probability	Consequence				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Rare (1)	1	2	3	4	5
Possible (2)	2	4	6	8	10
Likely (3)	3	6	9	12	15
Often (4)	4	8	12	16	20
Frequent / Almost Certain (5)	5	10	15	20	25

15 - 25	Extreme Risk	Activity or industry should not proceed in current form.
8 - 12	High Risk	Activity or industry should be modified to include remedial planning and action and be subject to detailed EHS assessment.
4 - 6	Moderate Risk	Activity or industry can operate subject to management and/or modification.
1 - 3	Low Risk	No action required, unless escalation of risk is possible.