TASK RISK ASSESSMENT WORKSHEET

CONTRACT NO	REF	DATE	REV
190707	RA-2026-hA8AvJP6	10.08.2026	A

PROJECT 132 kv cable works

CLIENT	CONSULTANT	MAIN CONTRACTOR	SUBCONTRACTOR
Taqa	Green	El Sewdy	Heliopolis

ACTIVITY cable laying

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	**Cable Drum Transportation, Loading, and Unloading**	Unstable drum, mechanical crane/forklift failure, improper rigging	Crushing injuries, severe physical trauma, equipment damage, fatality	Riggers, crane operators, banksmen, site personnel	Utilize certified lifting equipment and color-coded slings; employ competent/certified riggers; establish drop zone barricades; inspect drum spindles prior to lift.	P 4 × S 4 **16**	Mandatory use of tag lines to control load swing; formal Lift Plan approval by HSE Manager before execution.	P 2 × S 3 **6**
10	**Trench Excavation and Ground Preparation for Direct Burial**	Striking underground live utilities, collapse of trench side walls	Electrocution, gas explosion, engulfment, suffocation, severe injury	Excavator operators, ground workers, utility surveyors	Issue Permit to Work (PTW); perform CAT and Genny cable avoidance scan; dig trial pits manually; shore or bench trenches deeper than 1.2 meters.	P 4 × S 5 **20**	Enforce 1-meter safe distance hand-digging rule around identified services; continuous gas monitoring in deep trenches.	P 2 × S 4 **8**
11	**Cable Drum Setup and Jack Elevation**	Unstable ground, drum jack collapse, uncontrolled rotation of drum	Pinch injuries, foot crushing, structural tipping, fractures	Cable laying technicians, mechanical crew	Position drum jacks on level, compacted ground with steel outrigger plates; inspect jack hydraulic systems; use properly rated spindle bars.	P 3 × S 4 **12**	Fit mechanical drum braking systems; enforce safety footwear with metatarsal protection.	P 2 × S 2 **4**
12	**Manual Handling and Physical Cable Pulling**	Overexertion, awkward posture, sharp edges along trench/tray route	Musculoskeletal disorders (MSDs), spinal strain, severe lacerations, pinch injuries	Cable pulling crew, field laborers	Limit individual manual pull load; use job rotation; place cable rollers at maximum 2-meter intervals; mandate cut-resistant level E gloves.	P 4 × S 3 **12**	Conduct ergonomic pre-shift stretching sessions; conduct Toolbox Talk (TBT) on manual handling limits.	P 2 × S 2 **4**

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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.