TASK RISK ASSESSMENT WORKSHEET

CONTRACT NO	REF	DATE	REV
190707	RA-2026-3ARiOZI8	10.08.2026	A

PROJECT 132 kv cable works

CLIENT	CONSULTANT	MAIN CONTRACTOR	SUBCONTRACTOR
Taqa	Green	El Sewdy	Heliopolis

ACTIVITY Route Marker

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	**Site Survey & Pre-excavation Utility Locating**	Unmarked underground live electrical cables, gas mains, and telecom lines	Electrocution, arc flash, gas explosion, severe burns, utility outage, or fatality	Site Personnel, Subcontractors, Public	Review utility drawings, use CAT & Genny (Cable Avoidance Tool) to scan the route, mark detected utilities clearly on the ground.	P 4 × S 5 = 20	Issue a formal Permit to Dig (PTD); perform manual trial pits using non-conductive hand tools prior to any heavy work.	P 2 × S 4 = 8
10	**Setting Up Temporary Traffic & Pedestrian Management**	Passing vehicular traffic, distracted drivers, and public pedestrian movement near work zone	Vehicle-pedestrian collision, crushing injuries, public slips/trips, fatality	Site Personnel, Subcontractors, Public	Erect temporary traffic cones, warning signs, and pedestrian barriers in accordance with local roadwork standards; wear Class 3 Hi-Vis clothing.	P 4 × S 5 = 20	Utilize temporary traffic lights or flaggers for high-density areas; position a safety vehicle with amber beacons upstream of the work site.	P 2 × S 3 = 6
11	**Offloading and Manual Handling of Concrete Marker Blocks and Posts**	Heavy loads, awkward lifting postures, dropping heavy concrete/metal objects	Musculoskeletal disorders (MSDs), spinal injuries, crushed fingers/feet, cuts	Site Personnel, Subcontractors, Public	Assess load weights prior to lifting; use two-person team lifts for loads over 20kg; wear safety boots (steel/composite toe) and cut-resistant gloves.	P 4 × S 3 = 12	Use mechanical lifting aids such as hydraulic cranes, mechanical grabs, or site trolleys; enforce maximum individual lifting limit of 25kg.	P 2 × S 2 = 4
12	**Manual Excavation for Marker Post Footings**	Sharp digging tools, repetitive motion, struck-by hidden cable/pipe, soil collapse	Hand/leg puncture wounds, electric shock, ergonomic strain, muscle fatigue	Site Personnel, Subcontractors, Public	Use insulated dig tools (rated to 1000V); dig parallel to expected utility lines; rotate workers frequently to prevent fatigue.	P 3 × S 4 = 12	Re-scan the pit with CAT locator as excavation depth increases; bench or shore pit walls if depth exceeds 1.2 meters.	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.