CLIENT	CONSULTANT	CONTRACTOR	SUB-CONTRACTOR

TASK RISK ASSESSMENT WORKSHEET

CONTRACT NO	REF	DATE	REV
—	RA-2026-n8ceZnjk	10.08.2026	A

PROJECT —

CLIENT	CONSULTANT	MAIN CONTRACTOR	SUBCONTRACTOR
—	—	—	—

ACTIVITY **fabrication installation of concrete**

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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SN	Activity	Hazard / Aspect	Consequence	Groups Exposed	Existing Controls	Initial Risk P × S = R	Additional Controls	Residual Risk P × S = R
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	**Underground Utility Surveying and Cable Detection**	Encountering hidden live underground power cables or buried utilities during survey and marking	Electrocution, severe electrical arc burns, flash injuries, localized power grid disruption	Land Surveyors, Civil Engineers, HSE Inspectors, Groundworkers	Obtain valid Permit to Work (PTW) and Excavation Permit; Review cable route drawings; Perform CAT and Genny electromagnetic scan across the entire footprint; Mark identified utility paths clearly.	P 4 × S 5 **20**	Mandatory hand-digging of trial pits using insulated non-conductive hand tools prior to any mechanical activity; Re-scan area continuously during excavation.	P 1 × S 4 **4**
10	**Mechanical Excavation for Concrete Foundations and Cable Trenches**	Excavation sidewall collapse, contact with live utilities, heavy equipment strike	Engulfment, asphyxiation, crushing injuries, fatal electrocution, struck-by injuries	Excavator Operators, Banksmen, Groundworkers, Spotters	Implement 45-degree slope benching or certified shoring box systems for depths >1.2m; Maintain 3-meter safe distance from overhead and underground utility zones; Install hard physical barricades with warning signage around trench edges.	P 4 × S 5 **20**	Appoint a dedicated trained Banksman with high-visibility clothing; Daily pre-shift trench inspection by a competent HSE Supervisor.	P 2 × S 3 **6**
11	**Rebar Cutting, Bending, and Off-site/On-site Fabrication**	Flying metal debris, high-noise generation, protruding rebar ends, pinch points on benders	Lacerations, eye injuries/impalement, noise-induced hearing loss, finger amputation	Steel Fixers, Fabricators, Machine Operators, Nearby Personnel	Equip all open vertical rebar ends with high-visibility mushroom safety caps; Install safety guards on rebar cutters and benders; Wear cut-resistant gloves (Level 5) and impact safety glasses.	P 4 × S 4 **16**	Mandatory full-face shields during abrasive disc cutting; Provide double hearing protection (earplugs + earmuffs) in rebar fabrication yards.	P 2 × S 2 **4**
12	**Formwork Shuttering Assembly and Erection**	Protruding nails, falling shuttering panels, manual handling of heavy formwork components	Puncture wounds, head injuries, foot/hand crush injuries, acute musculoskeletal disorders	Carpenters, Helpers, Scaffolders, Riggers	De-nail timber immediately after removal; Team lifting mandatory for items >20kg; Wear safety helmets with chin straps, steel-toe boots, and heavy-duty leather gloves.	P 4 × S 3 **12**	Inspect formwork ties and bracing layout against structural engineering sign-off before concrete pour; Maintain neat stacking and staging areas.	P 2 × S 2 **4**

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13	**New Activity sdsadsdsadsadsadsadsadsad**	Identify hazards here	Describe consequences	All personnel	List control measures	**P 3 × S 3** **9**	Additional controls	**P 2 × S 2** **4**

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

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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.