

MCK GROUP – HS-RA-001 BRIDGE CONSTRUCTION RISK ASSESSMENT

Worker-Accessible App Extract – Master Document: HS-RA-001 Risk Assessment Register V1.1

Related Documents: HS-PR-001 Risk Assessment Procedure; HS-PR-002 Daily Plant Inspection Procedure; HS-PR-003 Personal Risk Assessment (Take 5) Procedure; HS-PR-005 Incident Investigation & Reporting Procedure; OP-PR-017 Unsafe Plant Isolation Procedure; OP-PR-018 Spill Management & Containment Procedure; Working Alone Procedure; Manual Handling Procedure; Fatigue Management Procedure; Fire Procedure; Operating Mobile Plant SWMS; Excavation & Earthworks SWMS; Loading & Unloading Plant & Equipment SWMS; Working in over or adjacent to Water SWMS; Working on or adjacent to Roads or Railways SWMS; Working at Heights SWMS; Relevant task-specific SWMS; Relevant Environmental Management Plans (EMP); Site Specific Safety Management Plans (SSMP); Project specifications and approved construction drawings; MCK Group IMS Registers Master.



Risk ID	Risk Event / Activity	Hazard	Causes	Potential Impacts	Current Controls	Initial Risk	Residual Risk
BC-001	Site establishment and access	Uncontrolled site access	Poor barriers, signage or induction	Worker/public injury, disruption	Induction; barriers; signage; controlled access; SSMP	12	4
BC-002	Road and public interface	Vehicle/public interaction	Traffic, cyclists, pedestrians	Collision, serious injury or fatality	Traffic controls; barriers; signage; spotters; TGS where required	15	4
BC-003	Work over or adjacent to water	Fall into water / drowning	Open edges, slippery surfaces, unstable banks	Drowning or serious injury	Edge controls; safe access; rescue arrangements; flotation equipment where required	15	4
BC-004	Changing watercourse conditions	Flooding / sudden water rise	Heavy rain or upstream rainfall	Drowning, plant loss, erosion	Weather monitoring; water-level checks; evacuation routes; stop-work criteria	15	4
BC-005	Foundation and abutment excavation	Excavation collapse	Unstable soil, water ingress, surcharge loads	Serious injury or fatality	Battering/benching/shoring where required; spoil setback; inspections; exclusion zones	15	4
BC-006	Work near excavation/bridge edges	Falls of people or plant	Open edges, unstable shoulders	Fatality, serious injury, rollover	Edge protection; exclusion zones; stop blocks; safe setbacks; spotters	15	4
BC-007	Underground services	Service strike	Poor locating or inaccurate plans	Electrocution, explosion, flooding, outage	Before You Dig; plans; locating/markings; potholing where required	15	4
BC-008	Overhead services	Plant contact with powerlines	Booms or lifting equipment within unsafe clearances	Electrocution, fire, fatality	Identify services; exclusion zones; height awareness; spotter	15	4
BC-009	Mobile plant operations	Plant/pedestrian interaction	Blind spots, reversing, confined work area	Crushing, collision, fatality	Competent operators; exclusion zones; radios; spotters; warning devices	15	4
BC-010	Lifting bridge components	Dropped or swinging loads	Rigging failure, poor communication, wind or ineffective exclusion zone	Crushing, fatality, structural damage	Lift planning; rated lifting equipment; competent personnel; verified lifting points; exclusion zones; no persons beneath suspended loads	15	4
BC-011	Placing structural or precast components	Dropped precast element / crush and pinch points	Component instability, lifting failure, poor alignment or workers entering exclusion zone	Serious injury or fatality; structural damage	Planned lifting and placement method; verified lifting points; competent personnel; exclusion zone; controlled positioning; no persons beneath suspended elements	15	4
BC-012	Temporary works and formwork	Collapse/failure	Incorrect installation, inadequate bracing, overload	Crushing, serious injury, structural failure	Approved design where required; competent installation; inspection; load limits	15	4
BC-013	Concrete placement	Wet concrete exposure / hose movement	Concrete contact, pressurised hose, vehicle movement	Burns, struck-by injury, slips	PPE; controlled delivery; safe hose handling; wash facilities	12	4
BC-014	Reinforcement installation	Cuts, punctures, impalement	Exposed reo, sharp wire, handling	Lacerations, puncture wounds, strains	Reo caps where required; gloves; housekeeping; mechanical handling	12	4
BC-015	Working at height	Fall from height	Incomplete deck, open edges, temporary access	Serious injury or fatality	Fall prevention; compliant access; edge protection; platforms; harness where required	15	4
BC-016	Scaffolds and temporary access	Fall or scaffold failure	Incorrect erection, unstable ground, overload	Serious injury or fatality	Competent erection; inspection; stable foundation; guardrails; load limits	15	4
BC-017	Falling objects during bridge construction	Falling tools, materials or components	Unsecured tools/materials; storage near edges; overhead work; scaffolding; formwork; lifting activities	Serious injury or fatality to workers or public; property damage	Eliminate work below overhead activities where practicable; exclusion zones; secure tools/materials; store materials away from edges; good housekeeping; toe boards or containment where required; restrict public access; tool lanyards where appropriate as supplementary control	15	4
BC-018	Hand and power tools	Cuts, entanglement, shock, flying particles	Damaged tools, missing guards, misuse	Serious injury or eye injury	Pre-use inspection; guards; competent users; PPE; test/tag where applicable	12	4

BC-019	Hot works, cutting and welding	Fire, burns and fumes	Sparks, combustibles, poor ventilation	Burns, fire, respiratory exposure	Hot work controls; extinguisher; PPE; ventilation; competent personnel	15	4
BC-020	Manual handling	Musculoskeletal injury	Heavy/awkward components, repetitive lifting	Sprains and strains	Mechanical aids; team lifts; task planning; Manual Handling Procedure	9	4
BC-021	Material delivery and unloading	Vehicle movement / falling materials	Poor ground, unstable loads, inadequate exclusion	Crushing, collision, serious injury	Designated unloading area; competent operators; exclusion zones; spotters	15	4
BC-022	Soft, wet or unstable ground	Plant rollover / ground failure	Rain, saturated soil, undermined banks	Serious injury, plant damage	Ground assessment; suitable access; weather monitoring; competent operators	15	4
BC-023	Environmental protection	Sediment/contamination entering water	Disturbed soil, concrete washout, spills, rainfall	Water pollution, habitat damage	EMP; erosion controls; spill kits; controlled washout; inspections	15	4
BC-024	Fuel/hydraulic systems near water	Fuel or oil spill	Leak, hose failure, refuelling incident	Water contamination, environmental harm	Daily inspections; spill kits; maintenance; controlled refuelling	15	4
BC-025	Vegetation and habitat	Unauthorised flora/fauna disturbance	Work outside approved footprint	Habitat loss, fauna injury, client action	Approved limits; EMP; fauna checks; exclusion areas; induction	12	4
BC-026	Cultural heritage / unexpected finds	Heritage disturbance	Excavation in unidentified area	Heritage damage, work stoppage	Approved boundaries; stop-work and notification process; worker awareness	8	2
BC-027	Extreme weather	Lightning, wind, heat, heavy rain	Exposed bridge work and Queensland climate	Falls, heat illness, flooding, unstable lifting	Weather monitoring; hydration; breaks; stop-work criteria	15	4
BC-028	Remote bridge locations	Delayed emergency response	Blackspots and long travel distances	Injury escalation, delayed rescue	Working Alone Procedure; check-ins; emergency contacts; first aid resources	10	4
BC-029	Completion and handover	Residual hazards / incomplete works	Missing barriers, loose material, incomplete inspection	Public injury, vehicle damage, client complaint	Final inspection; defect close-out; controlled removal of temporary measures	10	2
BC-030	Noise exposure	Excessive occupational noise	Prolonged operation of mobile plant, cutting, grinding, drilling and other high-noise activities	Hearing damage, reduced communication and increased risk of incidents	Select quieter plant/equipment where reasonably practicable; maintain plant and equipment; separate workers from noise sources where practicable; limit exposure; hearing protection where required; ensure communication methods remain effective	12	4
BC-031	Psychosocial	Psychosocial hazards associated with bridge construction activities	High workloads, time pressure, fatigue, remote or isolated work, poor communication, interpersonal conflict, bullying or harassment, exposure to stressful or traumatic events, and lack of role clarity or support	Psychological or physical harm, stress, fatigue, reduced concentration, increased risk of incidents and absence from work	Worker consultation; clear roles and work expectations; appropriate work planning and supervision; fatigue management; reasonable workloads and breaks; respectful workplace requirements; reporting pathways for psychosocial hazards and inappropriate behaviour; management support; confidential handling of concerns	12	6

Controlled Document Notice: This document is a worker-accessible extract from the MCK Group HS-RA-001 Risk Assessment Register. The controlled master register contains the complete risk assessment, action tracking and review information. Refer to the current controlled version for full details.