

GVK GROUP — MANUAL HANDLING RISK ASSESSMENT (STEELFIXING)

Hazardous manual tasks — assessed against force, repetition, posture, vibration & duration (model WHS Code of Practice)

#	Task / Hazard	Risk Factors & Potential Harm	INITIAL RISK			Suggested Controls (Hierarchy of Control)	RESIDUAL RISK			Responsible
			L	C	Rating		L	C	Rating	
1	Lifting & carrying reinforcing bar (long lengths 6–12 m)	High force + awkward over-reach + twisting carrying long/heavy bar; high-and-wide loads. Acute back & shoulder strain, disc injury.	4	4	H	ELIMINATE: order pre-cut lengths; prefabricate/pre-bend at ground level & crane in. ENGINEER: mechanical handling (crane, telehandler trolley, A-frame); land bar at the work face. ADMIN: define team-lift threshold — long bar is a 2–3 person lift, never a solo hero lift; share load on shoulders, coordinated lift/lower. PPE: gloves, supportive footwear.	2	3	M	Site Supervisor
2	Handling bundles & mesh sheets	Heavy, rigid, awkward loads with poor grip; sudden load shifts. Crush, strain, laceration.	4	4	H	ENGINEER: mechanical lift all bundles & mesh — vacuum/mechanic sheet lifters, slings, lifting clutches; do not manually carry bundles. ADMIN: break bundles to manageable sizes at delivery; set down at working height; plan placement to avoid double-handling. Stable stacking on level ground.	2	3	M	Crane Supervisor / Dogger
3	Sustained stooped / bent posture during slab tying	Prolonged forward flexion of spine over slab mat for hours. Chronic lower-back MSD, fatigue.	5	3	H	ADMIN: rotate workers off tying; micro-breaks every 20–30 min; sequence so tying isn't sustained all shift. Stretching program. Limit continuous stooped duration.	3	2	M	Leading Hand
4	Repetitive bar tying (wrist & hand)	Tens of thousands of repetitive wrist-flexion ties/day. Wrist/hand RSI, tendonitis, carpal-tunnel.	5	3	H	SUBSTITUTE: mechanical couplers/welded mesh to reduce tie count/detail to minimise ties. ADMIN: job rotation, micro-breaks, task variation. PPE: anti-vibration gloves. Health monitoring for symptoms.	3	2	M	Leading Hand
5	Floor / low-level work (squatting & kneeling)	Deep squatting, kneeling and crouching to fix at floor level. Knee, hip & back MSD.	4	3	H	ELIMINATE: prefabricate cages/mats at bench height and lift in. ENGINEER: bar stools/bench at waist height; standing platforms; long-handled tools. PPE: knee pads / kneeling boards. ADMIN: rotate tasks, limit time at floor level, rest breaks.	2	2	M	Site Supervisor
6	Overhead & reaching tying (verticals, columns, walls)	Sustained arms-above-shoulder & over-reach. Shoulder/neck strain, fatigue, dropped-tool risk.	4	3	H	ENGINEER: scaffold/EWP & work platforms to bring work to waist–chest height; extension-pole tying tools. ADMIN: reposition platform regularly to avoid over-reach; rotate workers; limit overhead duration. Plan fixing sequence to minimise reaching.	2	2	M	Site Supervisor
7	Manual cutting & bending of bar	High force + jarring/impact + awkward posture using hand cutters/benders. Strain, jarring injury, vibration.	3	3	H	ELIMINATE: order pre-cut/pre-bent bar. ENGINEER: powered bar cutter/bender at waist-height bench; secure workpiece. ADMIN: trained operators, correct technique, rotate task. PPE: anti-vibration & cut-resistant gloves, eye protection.	2	2	M	Plant Coordinator
8	Manual handling in heat (compounding factor)	Heat reduces grip & increases fatigue, magnifying all manual-task injury risk; dehydration.	4	3	H	ADMIN: heat-stress management plan; schedule heavy lifting outside peak heat; hydration & shaded rest; acclimatisation for new workers; monitor fatigue & symptoms; pair heavy tasks with mechanical aids when hot. PPE: UV clothing, hat brim, sunscreen.	2	2	M	Site Supervisor

Hierarchy of control: eliminate > substitute > engineer > administrative > PPE. The most effective controls for steelfixing manual handling are (1) mechanical handling of all bar/bundles and (2) battery tying tools on poles — together these address the force and repetitive-posture factors that drive the majority of claims. Ratings auto-calculated from the 'Risk Matrix' sheet; review for site-specific conditions.