JHA — JOB HAZARD ANALYSIS

Job Safety Analysis (JSA)

A Job Hazard Analysis breaks the job into steps, identifies the hazards in each step, rates the risk before and after controls, and records who is responsible. Complete it BEFORE work starts and have every worker sign on.

JOB INFORMATION

JOB / TASK	LOCATION / AREA	DATE	JHA NO.
Install precast culvert units at CH 1240	**South batter crossing**	**17 Jun 2026**	**JHA-2026-114**
PREPARED BY	**REVIEWED / APPROVED BY**	**PERMITS / HIGH-RISK WORK**	**PPE REQUIRED**
K. Ramsay (Supervisor)	**D. Okafor (Project Manager)**	**Excavation, Lifting operation, Live traffic**	**Hard hat, hi-vis, steel-cap boots, gloves, eye & hearing protection**

JOB STEPS, HAZARDS, RISK RATING & CONTROLS

#	Job step / task	Hazards	Inherent risk	Controls (top of hierarchy first)	Residual risk	Responsible
1	**Mobilise plant & set up exclusion zone**	Mobile plant / pedestrian interaction; Vehicle movement & reversing	**4×4 = 16 Critical**	Exclusion zones & physical barricading; Traffic management plan & spotter; Hi-vis clothing	**2×4 = 8 Moderate**	Site Supervisor
2	**Excavate culvert trench to design depth**	Excavation & trench collapse; Electrical — overhead & underground services	**4×5 = 20 Critical**	DBYD & potholing; Battering / benching; Isolation & lock-out / tag-out	**2×4 = 8 Moderate**	Excavator Operator
3	**Rig & lift precast units into position**	Uncontrolled or stored energy; Mobile plant / pedestrian interaction	**4×5 = 20 Critical**	Lift plan & exclusion zone; Tag lines; Standard operating procedure & competency	**2×5 = 10 High**	Dogger / Crane Operator
4	**Backfill & compact in layers**	Silica & airborne dust; Manual handling	**4×3 = 12 High**	Dust suppression (water cart / misting); Task rotation; Respiratory protection (P2)	**2×2 = 4 Moderate**	All workers

⚑ **RESIDUAL RISK HIGH OR ABOVE — senior site management authorisation is required before this work proceeds. Verify controls are achievable and re-rate where possible.**

APPROVAL

PREPARED BY / WORKER	SUPERVISOR / APPROVER
Signature: _____	Signature: _____
Name: **Jordan Mete**	Name: **K. Ramsay**
Date: **17 Jun 2026**	Date: **17 Jun 2026**

WORKER SIGN-ON — I HAVE READ, UNDERSTOOD AND WILL COMPLY WITH THIS JHA

#	Name	Company	Signature	Date
1	Jordan Mete	Northbridge Civil		17 Jun 2026
2	Sam Whitcombe	Northbridge Civil		17 Jun 2026
3	Aroha Ngata	Vantage Lifting		17 Jun 2026
4				
5				

RISK MANAGEMENT FRAMEWORK

How to rate and control risk

Every hazard is rated twice — an INHERENT rating before controls and a RESIDUAL rating with the chosen controls in place. Work is justified by the residual rating, never the inherent one. Rate likelihood and consequence against the tables below, multiply them for the risk score, then read the band and required action. Any residual rating of High or above (score ≥ 10) must escalate to a JHA before work starts.

RISK MATRIX & RATING KEY · RISK SCORE = LIKELIHOOD × CONSEQUENCE (1–25)

L ↓ / C →	1 Insig.	2 Minor	3 Mod.	4 Major	5 Catas.
5 Almost certain	5 Moderate	10 High	15 High	20 Critical	25 Critical
4 Likely	4 Moderate	8 Moderate	12 High	16 Critical	20 Critical
3 Possible	3 Low	6 Moderate	9 Moderate	12 High	15 High
2 Unlikely	2 Low	4 Moderate	6 Moderate	8 Moderate	10 High
1 Rare	1 Low	2 Low	3 Low	4 Moderate	5 Moderate

Rating	Score	Required action & accountability
Low	1 – 3	Acceptable. Manage by routine procedures; record on the Take 5. Monitor and review. (Accountable: Worker)
Moderate	4 – 9	Tolerable. Documented controls and supervisor monitoring required before starting. (Accountable: Supervisor)
High	10 – 15	Do not proceed without additional controls. A JHA is required and senior site management must review. (Accountable: Site / Project Manager)
Critical	16 – 25	STOP. Do not start or continue. Eliminate or substitute the hazard, or obtain written executive authorisation; re-rate to residual High or below. (Accountable: Senior Management)

LIKELIHOOD — HOW PROBABLE IS IT THAT THE HAZARD CAUSES HARM?

Rating	Descriptor	Plain meaning	Indicative frequency	Indicative chance
5	**Almost certain**	Expected to occur in most circumstances; has happened here before.	Several times a year on this type of work	>90%
4	**Likely**	Will probably occur at some point.	About once a year	60–90%
3	**Possible**	Might occur occasionally.	Once every few years	30–60%
2	**Unlikely**	Could occur but is not expected.	Once in 5–10 years	5–30%
1	**Rare**	Only in exceptional circumstances.	Less than once in 10 years	<5%

CONSEQUENCE — HOW SEVERE IS THE HARM IF IT OCCURS?

Rating	Descriptor	People & safety	Environment	Asset & financial	Legal & reputation
5	**Catastrophic**	Fatality or permanent total disability (one or more people).	Massive, irreversible release; long-term harm beyond site boundary.	Greater than $1M; major plant destroyed.	Prosecution / licence loss; sustained national attention.
4	**Major**	Serious injury; lost-time injury needing hospitalisation; permanent partial disability.	Significant release needing outside agency clean-up; notifiable.	$100k – $1M loss.	Notifiable incident; regulator involvement; state media.

Rating	Descriptor	People & safety	Environment	Asset & financial	Legal & reputation
3	**Moderate**	Injury needing medical treatment by a doctor; restricted duties.	On-site release contained with site resources; reportable.	$10k – $100k loss.	Reportable; improvement / warning notice; local attention.
2	**Minor**	First-aid injury; no lost time.	Minor spill contained and cleaned immediately.	$1k – $10k loss.	Internal report only.
1	**Insignificant**	No injury or negligible effect.	No measurable environmental effect.	Less than $1k.	No legal or reputational issue.

HIERARCHY OF CONTROLS — ALWAYS CHOOSE FROM THE TOP DOWN; PPE IS THE LAST LINE OF DEFENCE

#	Control level	Reliability	Examples
1	**Elimination**	Most effective	Remove the task entirely; pre-fabricate offsite so there is no work at height.
2	**Substitution**		Swap a hazardous chemical for a safer one; use smaller / lower-energy plant.
3	**Engineering**		Guarding, exclusion zones, barricading, ROPS/FOPS, isolation & lock-out, dust suppression.
4	**Administrative**		Procedures & permits, training & competency, spotters, traffic management, rotation, signage.
5	**PPE**	Least effective — last line	Hard hat, hearing & respiratory protection, hi-vis clothing, gloves, eye protection.

A JHA rates each step's INHERENT risk (before controls) and RESIDUAL risk (after controls). Only the residual rating drives the escalation rule.