

# Risk Assessment Matrix

## What you need to do

- 1) Consider what can go wrong
- 2) Determine how bad the outcome would be (CONSEQUENCE)
- 3) Determine how likely it is to happen (PROBABILITY)
- 4) Calculate the risk level

### CONSEQUENCE

		Catastrophic	Critical	Marginal	Negligible
PROBABILITY	Frequent	1	1	1	3
	Probable	1	1	2	3
	Occasional	1	2	3	4
	Remote	2	2	3	4
	Improbable	3	3	3	4
RISK		Extreme	High	Moderate	Low
		Immediate action required	Action plan required, senior management attention needed	Specific monitoring or procedures required, management responsibility must be specified	Manage through routine procedures

## CONSEQUENCE

**Catastrophic** Death, loss of infrastructure/system, release causing irreversible high impact, wide scale, detrimental alteration of the environment, such that significant public interest or regulatory intervention occurs or reasonably could occur.

**Critical** Severe injury, major infrastructure/system damage, release causing reversible, localised, high impact, decrease in environmental value, such that minor public interest or regulatory intervention occurs or reasonably could occur.

**Marginal** Major injury, minor system damage, non-damaging environmental exposure.

**Negligible** Less than above.

## PROBABILITY

**Frequent** Likely to occur often during the life of an individual item or system or very often in operation of a large number of similar items.

**Probable** Likely to occur several times in the life of an individual item or system or often in operation of a large number of similar items.

**Occasional** Likely to occur sometimes in the life of an individual item, or will occur several times in the life of a large number of similar components.

**Remote** Unlikely, but possible to occur sometime in the life of an individual item or system or can reasonably be expected to occur in the life of a large number of similar components.

**Improbable** So unlikely to occur in the life of an individual item or system that it may be not assumed to be experienced, or it may be possible, but unlikely to occur in the life of a large number of similar components.

# Hierarchy of controls

**Elimination** Removing the hazard or hazardous work practice from the workplace. This is the most effective control measure.

**Substitution** Substituting or replacing the hazard or hazardous work practice with a less hazardous one.

**Isolation** Isolating or separating the hazard or hazardous work practice from people not involved in the work or the general work areas, for example, by marking off hazardous areas, installing screens or barriers.

**Engineering** This may include modifications to tools or equipment, or adding guards to machinery or equipment.

**Administration** Includes introducing documented work practices that reduce the risk, e.g. limiting the amount of time a person is exposed to a particular hazard or erecting signs to restrict access to particular areas.

**PPE (Personal Protective Equipment)** The last resort. This is the least preferred option and should be considered only when other control measures are not practicable, or to increase protection.

Most preferred safety control

Elimination

Substitution

Isolation

Engineering

Administration

PPE

Least preferred safety control

