

CAR Supporting Tool B: QLDC Applicant risk assessment and analysis

Introduction

This CAR Supporting Tool explains the types of risk assessment and analysis documentation that may be provided in support of a Corridor Access Request (CAR), where requested by QLDC as part of the CAR review process.

When risk analysis documentation may be requested

As part of peer risk review, QLDC may request supporting documentation that explains how the applicant has:

- analysed and evaluated identified risks
- selected and justified risk treatments and controls
- considered whether risks have been reduced to a level that is as low as reasonably practicable (ALARP)

Requests for risk analysis documentation are risk- and context-dependent and may be requested as part of the CAR review process to support the applicants risk identification and risk control conclusions

Acceptable forms of risk analysis

Applicants may use a range of risk analysis approaches, depending on:

- The nature and complexity of the activity
- The operating environment
- The level of potential consequence
- Organisational risk management practices

Risk analysis may be qualitative, quantitative, or a hybrid of both.

Scalar (quantitative or semi-quantitative) risk analysis

Scalar risk analysis methods typically assign **numerical or ranked values** to likelihood and consequence to support comparison and prioritisation of risks.

Common scalar examples are included in Table 5

Table 5: Scalar risk assessment tools

Risk analysis example	How it is typically used	What it helps demonstrate
Risk matrix (numbered likelihood and consequence)	Likelihood and consequence are each assigned a numerical value (e.g. 1–5) and combined to give an overall risk rating.	Relative risk levels and prioritisation of risks.

Risk analysis example	How it is typically used	What it helps demonstrate
Semi-quantitative risk scoring system	Risks are scored using weighted or combined numerical inputs to reflect severity and likelihood.	Comparison of risks and justification for control selection.
Risk ranking table	Identified risks are ordered from highest to lowest based on numerical scores or rankings.	Prioritisation of controls and review focus.
Pre- and post-control risk ratings	Risk scores are assigned before and after controls are proposed or applied.	Changes in assessed risk following treatment.

Non scalar (qualitative) risk analysis

Non-scalar risk analysis methods do not assign numerical values to risk and do not demonstrate numerical risk reduction. These methods are acceptable within the CAR process provided risks are clearly identified and the relationship between risks and controls is explained.

Common non scalar examples are included in Table 6

Table 6: Non scalar risk assessment tools

Risk analysis example	How it is typically used	What it helps demonstrate
Bowtie analysis	Identifies a central risk event, the threats that could lead to it, and the preventive and mitigative controls on either side.	Clear understanding of risk pathways and how controls prevent or mitigate consequences.
Descriptive / narrative risk assessment	Risks and controls are described in words rather than scores, focusing on context and reasoning.	How risks have been identified and treated in a site-specific way.
Control-based risk analysis	Focuses on identifying existing and proposed controls against known hazards.	Whether appropriate controls are in place to manage identified risks.
Descriptive risk matrix (non-numerical)	Uses qualitative descriptors (e.g. low / medium / high) without numerical scoring.	Relative risk without implying numerical precision.
Scenario-based risk analysis	Considers “what-if” scenarios to test how controls perform under different conditions.	Resilience of controls and preparedness for change or failure.

Requests for additional analysis to address uncertainty

As part of the CAR review process, QLDC may seek input from internal subject matter experts (SMEs), such as transport engineers, where aspects of the proposed activity introduce uncertainty that cannot be adequately resolved through the information provided in the CAR submission, TMP, or supporting risk analysis. In these circumstances, the

applicant may be requested to provide additional supporting analysis to assist with understanding and managing potential impacts.

Requests for additional analysis:

- Are risk- and context-dependent
- Are not required for all CAR applications
- Are made to address specific uncertainties, not to re-design the applicant's proposal
- Do not imply that the applicant's risk management approach is inadequate by default

Examples of additional analysis may include:

- Traffic impact assessments or reports
- Traffic modelling or network performance analysis
- Capacity or queuing assessments

Such analysis supports QLDC to:

- Understand potential network or operational impacts
- Inform coordination, conditions, or timing decisions
- Meet statutory duties as RCA/TAO under the Local Government Act and other applicable legislation

End of CAR Supporting Tool B