
C552 Qualitative Assessment of Source-Pathway-Receptor Linkages

Based on the information provided in this report, the following preliminary risk assessment table has been formulated, which identifies possible pollutant and pollutant linkages at the site.

A qualitative risk assessment is undertaken for the identified potential source-pathway-receptor linkages based on CIRIA (C552)¹ guidance. This assessment is based on consideration of both:

- The likelihood of an event (probability – takes into account both the presence of the hazard and receptor and the integrity of the pathway); and
- The severity of the potential consequence (takes into account both the potential severity of the hazard and the sensitivity of the receptor)

The following categorization of risk has been used (after CIRIA C552):

Classification of Severity of Risk

Severe	Short-term (acute) risk likely to result in significant harm. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.
Medium	Chronic damage to human health (long term risk). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings / structures / services or the environment. (This classification does not refer to human health.)
Minor	Harm (not necessarily significant harm) which may result in financial loss or expenditure to resolve. Non-permanent health effects to human health (can be easily prevented by PPE). Easily repairable effects of damage to buildings, structures and services.

Note:

- The classification of severe relates to short-term (acute) risks only;
- The classification of medium relates to chronic harm;
- The classification of mild relates to significant chronic harm but applies to less sensitive receptors;
- The classification of minor relates to harm, while not considered “significant”, may have a financial implication;
- Both a severe and medium classification can result in death.

Classification of Likelihood of Risk

High Likelihood	Pollution linkage identified and an event that either appears very likely in the short term and almost inevitable over the long term; or There is evidence at the receptor of harm or pollution.
Likely	Pollution linkage identified and it is probable that an event will occur. Event is not inevitable but possible in the short term and likely over the long term.
Low Likelihood	Pollution linkage identified and circumstances are possible under which an event could occur. No certainty that event would take place even in the long term and is less likely in the shorter term.
Unlikely	Pollution linkage identified but circumstances are such that it is improbable that an event would occur even in the very long term.

¹ CIRIA C552, 2001. Contaminated Land Risk Assessment.

The comparison of severity and likelihood will allow a risk to be determined as defined below:

Comparison of Severity against Likelihood

		Severity (or consequence)			
		Severe	Medium	Mild	Minor
Likelihood (or probability)	High likelihood	Very high risk	High risk	Moderate risk	Moderate / low risk
	Likely	High risk	Moderate risk	Moderate / low risk	Low risk
	Low likelihood	Moderate risk	Moderate / low risk	Low risk	Very low risk
	Unlikely	Moderate / low risk	Low risk	Very low risk	Very low risk

Description of the Classified Risk

Classification Description

Very high risk	<p>There is a high probability that severe harm could arise to a receptor from an identified hazard; or</p> <p>There is evidence that severe harm to a designated receptor is currently happening.</p> <p>This risk, if realised, is likely to result in a substantial liability.</p> <p>Urgent investigation (if not undertaken already) and remediation are likely to be required.</p>
High risk	<p>Harm is likely to arise to a designated receptor from an identified risk.</p> <p>Realisation of the risk is likely to present a substantial liability.</p> <p>Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the long term.</p>
Moderate risk	<p>It is possible that harm could arise to a designated receptor from an identified hazard. Harm is unlikely to be severe or would be relatively mild.</p> <p>Investigation (if not already undertaken) is normally required to clarify the risk and determine the potential liability. Some remedial works may be required in the longer term.</p>
Low risk	<p>It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.</p>
Very low risk	<p>There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.</p>

Note: It is not possible to classify an identified risk as presenting “no risk”, rather than “very low risk”.