APPENDIX A
RISK EVALUATION METHODOLOGY

The methodology set out in CIRIA C552 (2001), *Contaminated Land Risk Assessment – A Guide to Good Practice*, has been used to assess whether or not risks are acceptable, and to determine the need for collating further information or remedial action. The following tables have been used to classify the risk for each pathway. Tables A2 to A4 have been revised to include for circumstances where no plausible risk has been identified.

Table A1 - *Classification of Consequence*

Classification	Definition	Examples
Severe	• Short-term (acute) risk to human health likely to result in *Significant Harm*. • Short-term risk of pollution to a sensitive water resource. • Catastrophic damage to buildings/property. • Short-term risk to ecosystem, or organism forming part of that ecosystem.	• High concentrations of Cyanide at surface of informal recreation area. • Major spillage of contaminants from site into controlled water. • Explosion causing building collapse.
Medium	• Chronic damage to human health. • Pollution of sensitive water resource. • A significant change to ecosystem, or organism forming part of that ecosystem.	• Contaminant concentrations exceed assessment criteria. • Leaching of contaminants to Secondary A aquifer. • Death of species within nature reserve.
Mild	• Pollution of non-sensitive water resources. • Significant damage to crops, buildings, structures. • Damage to sensitive buildings, structures or the environment.	• Pollution of Secondary groundwater sources. • Damage to building rendering it unsafe to occupy.
Minor	• Harm, although not necessarily significant harm, which may result in financial loss, or expenditure to resolve. • Non permanent risks to human health (easily prevented by means of PPE). • Easily repairable effects of damage to buildings and structures.	• The presence of contaminants at such concentrations that PPE is required during site works. • The loss of plants in a landscaping scheme. • Discoloration of concrete.

Table A2: *Classification of Probability*

Classification	Definition
High Likelihood	There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the longer term. Or, there is already evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the longer term.
Low Likelihood	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place, and is less likely in the shorter term.
Unlikely	There is a pollutant linkage, but circumstances are such that it is improbable that an event would occur, even in the very long term.
No Linkage	No plausible linkage has been established.

Table A3*: Risk Categories – Comparison of consequence against probability*

		Consequence			
		Severe	Medium	Mild	Minor
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
	No Linkage	No Risk			

Table A4: *Description of Risk Categories*

Classification	Description
Very High Risk	• There is a probability that severe harm could arise to a designated receptor from an identified hazard. Or, there is evidence that severe harm to a designated receptor is currently happening. • The risk, if realised, is likely to result in a substantial liability. • Urgent investigation (if not already undertaken) and remedial action are likely to be required.
High Risk	• Harm is likely to arise to a designated receptor from an identified hazard. • Realisation of the risk is likely to present a substantial liability. • Urgent investigation (if not already undertaken) is required, and remedial action may be necessary in the short term and are likely over the longer term.
Moderate Risk	• It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur, it is more likely that the harm would be mild. • Investigation (if not already undertaken) is normally required to clarify the risk and to determine potential liability. Some remedial action may be required in the longer term.
Low Risk	• 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.
Very Low Risk	• There is a very low possibility that harm could arise at a receptor. In the event of such harm being realised, it is not likely to be severe.
No Risk	• No risk mitigation required.