

## **APPENDIX D: RISK ASSESSMENT CRITERIA**

Both the criteria used to assess the impacts and the method of determining the significance of the impacts is outlined below. This method complies with the method provided in the EIA guideline document. Part A provides the approach for determining impact consequence (combining intensity, extent and duration). Impact consequence and significance are determined from Part B and C. The consequence rating is considered together with the probability of occurrence in order to determine the overall significance of each impact. The interpretation of the impact significance is given in Part D. The significance of the impact can be related to the level of risk associated with a specific issue.

## IMPACT ASSESSMENT METHODOLOGY

PART A: DEFINITIONS AND CRITERIA*		
<b>Definition of SIGNIFICANCE</b>	<b>Significance = consequence x probability</b>	
<b>Definition of CONSEQUENCE</b>	<b>Consequence is a function of intensity, spatial extent and duration</b>	
<b>Criteria for ranking of the INTENSITY of environmental impacts</b>	<b>VH</b>	Severe change, disturbance or degradation. Associated with severe consequences. May result in severe illness, injury or death. Targets, limits and thresholds of concern continually exceeded. Substantial intervention will be required. Vigorous/widespread community mobilization against project can be expected. May result in legal action if impact occurs.
	<b>H</b>	Prominent change, disturbance or degradation. Associated with real and substantial consequences. May result in illness or injury. Targets, limits and thresholds of concern regularly exceeded. Will definitely require intervention. Threats of community action. Regular complaints can be expected when the impact takes place.
	<b>M</b>	Moderate change, disturbance or discomfort. Associated with real but not substantial consequences. Targets, limits and thresholds of concern may occasionally be exceeded. Likely to require some intervention. Occasional complaints can be expected.
	<b>L</b>	Minor (Slight) change, disturbance or nuisance. Associated with minor consequences or deterioration. Targets, limits and thresholds of concern rarely exceeded. Require only minor interventions or clean-up actions. Sporadic complaints could be expected.
	<b>VL</b>	Negligible change, disturbance or nuisance. Associated with very minor consequences or deterioration. Targets, limits and thresholds of concern never exceeded. No interventions or clean-up actions required. No complaints anticipated.
	<b>VL+</b>	Negligible change or improvement. Almost no benefits. Change not measurable/will remain in the current range.
	<b>L+</b>	Minor change or improvement. Minor benefits. Change not measurable/will remain in the current range. Few people will experience benefits.
	<b>M+</b>	Moderate change or improvement. Real but not substantial benefits. Will be within or marginally better than the current conditions. Small number of people will experience benefits.
	<b>H+</b>	Prominent change or improvement. Real and substantial benefits. Will be better than current conditions. Many people will experience benefits. General community support.
	<b>VH+</b>	Substantial, large-scale change or improvement. Considerable and widespread benefit. Will be much better than the current conditions. Favourable publicity and/or widespread support expected.
<b>Criteria for ranking the DURATION of impacts</b>	<b>VL</b>	Very short, always less than a year. Quickly reversible
	<b>L</b>	Short-term, occurs for more than 1 but less than 5 years. Reversible over time.
	<b>M</b>	Medium-term, 5 to 10 years.
	<b>H</b>	Long term, between 10 and 20 years. (Likely to cease at the end of the operational life of the activity)
	<b>VH</b>	Very long, permanent, +20 years (Irreversible. Beyond closure)
<b>Criteria for ranking the EXTENT of impacts</b>	<b>VL</b>	A part of the site/property.
	<b>L</b>	Whole site.
	<b>M</b>	Beyond the site boundary, affecting immediate neighbours
	<b>H</b>	Local area, extending far beyond site boundary.
	<b>VH</b>	Regional/National

PART B: DETERMINING CONSEQUENCE							
INTENSITY = VL							
<b>DURATION</b>	Very long	<b>VH</b>	<b>Low</b>	<b>Low</b>	<b>Medium</b>	<b>Medium</b>	<b>High</b>
	Long term	<b>H</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Medium</b>	<b>Medium</b>
	Medium term	<b>M</b>	<b>Very Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>	<b>Medium</b>
	Short term	<b>L</b>	<b>Very low</b>	<b>Very Low</b>	<b>Low</b>	<b>Low</b>	<b>Low</b>
	Very short	<b>VL</b>	<b>Very low</b>	<b>Very Low</b>	<b>Very Low</b>	<b>Low</b>	<b>Low</b>

INTENSITY = L							
DURATION	Very long	VH	Medium	Medium	Medium	High	High
	Long term	H	Low	Medium	Medium	Medium	High
	Medium term	M	Low	Low	Medium	Medium	Medium
	Short term	L	Low	Low	Low	Medium	Medium
	Very short	VL	Very low	Low	Low	Low	Medium
INTENSITY = M							
DURATION	Very long	VH	Medium	High	High	High	Very High
	Long term	H	Medium	Medium	Medium	High	High
	Medium term	M	Medium	Medium	Medium	High	High
	Short term	L	Low	Medium	Medium	Medium	High
	Very short	VL	Low	Low	Low	Medium	Medium
INTENSITY = H							
DURATION	Very long	VH	High	High	High	Very High	Very High
	Long term	H	Medium	High	High	High	Very High
	Medium term	M	Medium	Medium	High	High	High
	Short term	L	Medium	Medium	Medium	High	High
	Very short	VL	Low	Medium	Medium	Medium	High
INTENSITY = VH							
DURATION	Very long	VH	High	High	Very High	Very High	Very High
	Long term	H	High	High	High	Very High	Very High
	Medium term	M	Medium	High	High	High	Very High
	Short term	L	Medium	Medium	High	High	High
	Very short	VL	Low	Medium	Medium	High	High

VL	L	M	H	VH
A part of the site/ property	Whole site	Beyond the site, affecting neighbours	Extending far beyond site but localised	Regional/ National
EXTENT				

PART C: DETERMINING SIGNIFICANCE							
PROBABILITY (of exposure to impacts)	Definite/ Continuous	VH	Very Low	Low	Medium	High	Very High
	Probable	H	Very Low	Low	Medium	High	Very High
	Possible/ frequent	M	Very Low	Very Low	Low	Medium	High
	Conceivable	L	Insignificant	Very Low	Low	Medium	High
	Unlikely/ improbable	VL	Insignificant	Insignificant	Very Low	Low	Medium
		VL	L	M	H	VH	
CONSEQUENCE							

PART D: INTERPRETATION OF SIGNIFICANCE	
Significance	Decision guideline
Very High	Potential fatal flaw unless mitigated to lower significance.
High	It must have an influence on the decision. Substantial mitigation will be required.
Medium	It should have an influence on the decision. Mitigation will be required.
Low	Unlikely that it will have a real influence on the decision. Limited mitigation is likely required.
Very Low	It will not have an influence on the decision. Does not require any mitigation
Insignificant	Inconsequential, not requiring any consideration.

\*VH = very high, H = high, M= medium, L= low and VL= very low and + denotes a positive impact.