

1 Impact Rating

1.1 Impact Rating Procedure

The assessment of impacts will be based on the professional judgement of specialists at SRK Consulting, fieldwork, and desk-top analysis. The significance of potential impacts that may result from the proposed development will be determined in order to assist DEA in making a decision.

The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur. The criteria that are used to determine impact consequences are presented in Table 1-1 below.

Table 1-1: Criteria used to determine the Consequence of the Impact

Rating	Definition of Rating	Score
A. Extent– the area over which the impact will be experienced		
None		0
Local	Confined to project or study area or part thereof (e.g. site)	1
Regional	The region, which may be defined in various ways, e.g. cadastral, catchment, topographic	2
(Inter) national	Nationally or beyond	3
B. Intensity– the magnitude of the impact in relation to the sensitivity of the receiving environment		
None		0
Low	Site-specific and wider natural and/or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and/or social functions or processes are severely altered	3
C. Duration– the time frame for which the impact will be experienced		
None		0
Short-term	Up to 2 years	1
Medium-term	2 to 15 years	2
Long-term	More than 15 years	3

The combined score of these three criteria corresponds to a Consequence Rating, as follows:

Table 1-2: Method used to determine the Consequence Score

Combined Score (A+B+C)	0 – 2	3 – 4	5	6	7	8 – 9
Consequence Rating	Not significant	Very low	Low	Medium	High	Very high

Once the consequence has been derived, the probability of the impact occurring will be considered using the probability classifications presented in Table 1-3.

Table 1-3: Probability Classification

Probability– the likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts will be determined by considering consequence and probability using the rating system prescribed in the table below.

Table 1-4: Impact Significance Ratings

Significance Rating	Possible Impact Combinations		
	Consequence		Probability
Insignificant	Very Low	&	Improbable
	Very Low	&	Possible
Very Low	Very Low	&	Probable
	Very Low	&	Definite
	Low	&	Improbable
	Low	&	Possible
Low	Low	&	Probable
	Low	&	Definite
	Medium	&	Improbable
	Medium	&	Possible
Medium	Medium	&	Probable
	Medium	&	Definite
	High	&	Improbable
	High	&	Possible
High	High	&	Probable
	High	&	Definite
	Very High	&	Improbable
	Very High	&	Possible
Very High	Very High	&	Probable
	Very High	&	Definite

Finally, the impacts will also be considered in terms of their status (positive or negative impact) and the confidence in the ascribed impact significance rating. The system for considering impact status and confidence (in assessment) is laid out in the table below.

Table 1-5: Impact status and confidence classification

Status of impact	
Indication whether the impact is adverse (negative) or beneficial (positive).	+ ve (positive – a 'benefit')
	– ve (negative – a 'cost')

Confidence of assessment	
The degree of confidence in predictions based on available information, SRK's judgment and/or specialist knowledge.	Low
	Medium
	High

The impact significance rating should be considered by authorities in their decision-making process based on the implications of ratings ascribed below:

- Insignificant: the potential impact is negligible and will not have an influence on the decision regarding the proposed activity/development.
- Very Low: the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity/development.
- Low: the potential impact may not have any meaningful influence on the decision regarding the proposed activity/development.
- Medium: the potential impact should influence the decision regarding the proposed activity/development.
- High: the potential impact will affect the decision regarding the proposed activity/development.
- Very High: The proposed activity should only be approved under special circumstances.

Practicable mitigation measures will be recommended and impacts will be rated in the prescribed way both with and without the assumed effective implementation of mitigation measures.

1.2 Impact Assessment Matrix

The significance of identified impacts, rated according to the method above, is detailed in Table 6.

Table 6: Impact Assessment Matrix

Impact		Construction		Operation		Decommissioning		No-Go Alternative
		Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation
Risk from catastrophic failure of LPG tank (e.g. Fire)	Significance	None	None	High	Low	None	None	None
	Extent	-	-	Regional: defined in various ways, e.g. cadastral, catchment, topographic	Local: Confined to project or study area or part thereof (e.g. site)	-	-	-
	Intensity	-	-	High: Functions and processes are severely altered	Medium: functions & processes continue in an altered way	-	-	-
	Duration	-	-	Long-term (>15 years)	Long-term (>15 years)	-	-	-
	Consequence							
	Probability	-	-	Improbable (< 40% chance of occurring)	Improbable (< 40% chance of occurring)	-	-	-
	Status	-	-	Negative	Negative	-	-	-
	Confidence	-	-	High	High	-	-	-
General construction impacts	Significance	Insignificant	Insignificant	None	None	None	None	None
	Extent	Local: Confined to project or study area or part thereof (e.g. site)	Local: Confined to project or study area or part thereof (e.g. site)	-	-	-	-	-
	Intensity	Low: Negligibly altered functions & processes	Low: Negligibly altered functions & processes	-	-	-	-	-
	Duration	Short-term (< 2 years)	Short-term (< 2 years)	-	-	-	-	-

Impact		Construction		Operation		Decommissioning		No-Go Alternative
		Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation
	Consequence							
	Probability	Possible (40% - 70% chance of occurring)	Improbable (< 40% chance of occurring)	-	-	-	-	-
	Status	Negative	Negative	-	-	-	-	-
	Confidence	High	High	-	-	-	-	-
Socio-economic impacts	Significance	Insignificant	Very low	None	None	None	None	Low
	Extent	Local: Confined to project or study area or part thereof (e.g. site)	Local: Confined to project or study area or part thereof (e.g. site)	-	-	-	-	Regional: defined in various ways, e.g. cadastral, catchment, topographic
	Intensity	Low: Negligibly altered functions & processes	Low: Negligibly altered functions & processes	-	-	-	-	Medium: functions & processes continue in an altered way
	Duration	Short-term (< 2 years)	Short-term (< 2 years)	-	-	-	-	Medium-term: 2-15 years
	Consequence							
	Probability	Possible (40% - 70% chance of occurring)	Probable (70% - 90% chance of occurring)	-	-	-	-	Possible (40% - 70% chance of occurring)
	Status	Positive	Positive	-	-	-	-	Negative
	Confidence	High	High	-	-	-	-	Medium
Traffic impacts	Significance	Very Low	Insignificant	None	None	None	None	None
	Extent	Regional: defined in various ways, e.g. cadastral, catchment, topographic	Regional: defined in various ways, e.g. cadastral, catchment, topographic	-	-	-	-	-

Impact		Construction		Operation		Decommissioning		No-Go Alternative
		Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation	With mitigation	Without mitigation
	Intensity	Low: Negligibly altered functions & processes	Low: Negligibly altered functions & processes	-	-	-	-	-
	Duration	Short-term (< 2 years)	Short-term (< 2 years)	-	-	-	-	-
	Consequence							
	Probability	Probable (70% - 90% chance of occurring)	Possible (40% - 70% chance of occurring)	-	-	-	-	-
	Status	Negative	Negative	-	-	-	-	-
	Confidence	High	High	-	-	-	-	-
Soil, stormwater and groundwater contamination from excavated soil	Significance	Low	Insignificant	None	None	None	None	None
	Extent	Regional: defined in various ways, e.g. cadastral, catchment, topographic	Local: Confined to project or study area or part thereof (e.g. site)	-	-	-	-	-
	Intensity	Low: Negligibly altered functions & processes	Low: Negligibly altered functions & processes	-	-	-	-	-
	Duration	Long-term (>15 years)	Short-term (< 2 years)	-	-	-	-	-
	Consequence							
	Probability	Possible (40% - 70% chance of occurring)	Improbable (< 40% chance of occurring)	-	-	-	-	-
	Status	Negative	Negative	-	-	-	-	-
	Confidence	High	High	-	-	-	-	-