12.6 Annexure - Environmental Impact Assessment

Environmental impact assessment was performed based on the severity and likelihood of the environmental impacts. The Probability of Occurrence (PoC) and severity of negative and positive impacts were categorised five-point attributes as presented in table A6.1 and A6.2 respectively. The significance score of every environmental impact was determined using the empirical equation 1 and its correspondence in table A6.3. An environmental impact was considered as significant when its overall significance score was more than or equal to 15, or an environmental impact was complained about by the interested parties, or an environmental impact comes under mandatory compliance obligations or the value of severity is > 3 or any combination of these.

Table A 12.6 (1) : Probability of Occurrence

Rating for PoC	Probability of Occurrence (PoC)
1	More than six months
2	Once in a month to six months
3	Once in a week to month
4	Once in a day to week
5	Multiple times a day or continuous

Table A6.1 presents the significance matrix to evaluate the impacts. The significant environmental aspects shall be communicated among the various levels and functions of the organization as appropriate.

Table A6.2: Attributes of negative and positive environmental impact

Rating for Severity	Impact limits (physical)	Severity of Noise	Severity of Air pollution	Severity of Water pollution	Severity of Resource Depletion	Severity of other impacts
						Land Contamination/release of toxins/gases
1	Within work station	< 40 dB	AQI ranging from 0 - 50	Within permissible limits, no risks	Easily available renewable resources (e.g., Wind, Sun)	Impact on work environment/people/property/soil/flora/fauna due to release of non-toxic that affects within the department/ non-hazardous/ non-inflammable substance
2	Within department	40 - 74 dB	AQI ranging from 51 - 100	Within acceptable limits, no risks	Scarcely available renewable resources (e.g., Water)	Impact on work environment/people/property/soil/flora/fauna due to release of non-toxic that affects overall premises/ non-inflammable substance
3	Within work building	75 - 89 dB	AQI ranging from 101 - 200	Slightly greater than acceptable limits, limited risks	Easily available/ non renewable resource/ recyclable (e.g., plastic)	Impact on work environment/people/property/soil/flora/fauna due to release of toxic that affects within the department/hazardous/ inflammable substance but controlled
4	Within campus premises	90 - 104 dB	AQI ranging from 201 - 300	Greater than acceptable limits, pose risks to health and environment	Hazardous material/ chemical/ non-recyclable (e.g., used oils, used chemicals)	Impact on work environment/people/property/soil/flora/fauna due to release of toxic that affects overall premises/hazardous/ inflammable substance
5	Outside campus premises	> 104 dB	AQI > 300	Very poor water quality with odour, pose serious risks to health and environment	Scarcely available non renewable resources (e.g., Petroleum, LPG)	Impact on Globe due to controlled release of toxic/hazardous/ flammable substances into atmosphere

Severity	Probability of Occurrence					
		1	2	3	4	5
	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Fig A6.1: Significance matrix

Qualitative assessment

Significance score = severity x probability of occurrence **equation 1 Table A6.3: Level of significance**

Significance score	Nature of Impact
<=8	Low
9 to 14	Medium
>= 15	High