



Annex 5: Impacts Assessment

The impact of each activity on each receptor was assessed according to magnitude on a scale of -10 to 10, where negative values indicate a negative influence on the receptor, and importance on a scale of 0 to 10, which encompasses the probability of occurrence, frequency of the impact etc. The numbering system is used as a relative measure, where more negative numbers correspond to impacts having a higher negative magnitude. Susceptible receptors and corresponding activity are deduced and addressed if both magnitude and importance are of minor severity.

Further, the Buroz Relevant Integrated Criteria and is used to determine the total importance, I, of the impact for each activity on all receptors and of the project overall.

On the basis of the value of the importance of impact, I, obtained, the severity of the impact of an activity is assessed.

Criteria	Definition	Scoring Scale
Intensity (IN)	Degree of destruction of activity on receptor	1 (lowest)-12 (highest)
Extension (EX)	Theoretical area of influence of the impact	1 (localized) – 8 (widespread)
Momentum (MO)	Period of time for manifestation of the impact	4 (immediate: <1 year) – 2 (medium: 1-5 years)- 1 (long term: > 5 years)
Persistence (PE)	Duration of the effect of the impact	1 (fleeting, < 1 year), 2 (temporary, 1-5 years), 4 (permanent, >5 years)
Reversibility (RV)	Possibility of returning to pre-activity initial conditions by rebuilding or natural means	1 (short term, < 1 year)- 2 (medium term, 1-5 years) – 4 (long term, > 5 years or irreversible)
Recoverability (MC)	Possibility of reconstruction with corrective measures	1 -2 (full and immediate recovery)- 4 (partial recovery and medium term)- 8 (unrecoverable)
Synergy (SI)	Reinforcement ability of manifested effects	1(No synergy of actions on a receptor) -2 (moderate synergism)-4 (high synergy)
Accumulation (Ac)	Progressive increase of the effect	1 (no cumulative effect)-4(cumulative effect)
Effect (EF)	Directionality of impact-the cause (action)- effect (impact)	4 (direct)- 1 (indirect)





Criteria	Definition	Scoring Scale				
Frequency (PR)	Regularity of manifestation of the effect	4 (continuous) – 2 (irregular)-1 (periodic)				
Importance of Impact (I)	$I = \pm (3 \times IN + 2 \times EX + MO + PE + RV + SI + AC + EF + PR + MC)$					





The table below is based on the Buroz's Relevant Integrated Criteria

				PROJECT PHASES																							
				CONSTRUCTION OPERATION																							
Receptor CATEGORY	COMPONENT	ACTIVITIES	Transport of equipment/machinery-truck driving	Temporary storage/unloading of equipmennt and materials	Site preparation: Area delination & Fencing	Working in outdoor environment	Excavation: intermediate pressure network	Pipe laying (PE100)	Welding PE100	Backfilling	Excavation: low pressure PE80 connections	Pipe laying: low pressure connections	Welding PE80	Backfilling	Building odorizing unit	Household installation-carbon steel pipe threading	Household installations and working at heights	Appliance conversion	Leakage testing: pneumatic (N2)	Waste Generation	Water consumption	Odorizing unit (replacing tanks)	Gas network processing	Magnitude of the constraint of	ruction	Magnitude	ration
	Soil	Soil degradation Soil pollution					-1 1		-1 1		-1	ı								-5 5				-2 -6	2	0	0
Physical	Air	Landscape Emission of gases Emission of dust	-2 2 -4 4	2	-3 10		-2 5 -3 1 -8 8	-2 2	-4 4		-2 : -3 :	5 1 -2 2	2 -4 4	-5	5 -5 5 -2 2	-2 2	2			-3 3 -4 4		-10	2 -10 1	-8 -27 -32	35 23	0 -20 0	3
퓝	Water	Surface water pollution					V				,									-3				-3	3	0	0
	Noise	Background noise levels	-3 1	-1	-1 1 1		-8 6	-5 4	-5 4	-2	-4	-5 3 4	-5 1 4	-2	-6 2 2	-4		-1 1	ı					-52	37	0	0
	Flora	Trees and plants along canal																		-2 2				-2	2		
	Fauna	Dogs, cats, pigeons						-2		-2		-2		-2	1					-2 2				-10	6		
Socio- Econbomic		OHS Workers	-2	-5	-1 4 1	6	-8 8	-6 2	-8 2	-4	-6	-6 1 2	-8	-4	-5 4 2	-8	-8	-2	-8	-2 1		-4	-2 4 2	-97	66	-6	6
ocio	Social	Integrity of UG facilities					-5 4				-5 4	1												-10	8	0	0
S		Community Health, Safety & Security	-2 2	-1	1		-6 6	-6 6	-5 4	-4	-6 (-6 5 6	-5 5 4	-4	2 1	-6	-6	1	-4 2	-4 2			-4 2	-66	54	-4	2
			-13	-7	-5 <u>-</u>	6	-41		-23	-15	-33		-22	-15	-19 9 13	-20	-14	-3	-12	-25	0	-14	-16				





The table below is based on the Buroz's Relevant Integrated Criteria

Ac	tiv	ities

Type of impact
Intensity (IN)/12
Extension (EX)/8
Momentum (MO)/4
Persistence (PE)/5
Reversibility (RV)/4
Sinergy (SI)/4
Acumulation (AC)/4
Effect (EF)/4
Frequency (PR)/4
Recoverability (MC)/8

 $\begin{array}{c} \text{Importance of impact} \\ \text{(I)} \end{array}$

Project phase										
	Construction									
Working in outdoor environment	Excavation: intermediate pressure network	Pipe laying (PE100)	Welding PE100	Backfilling	Excavation: low pressure PE80 connections	Pipe laying: low pressure connections	Leakage testing: pneumatic	Waste Generation	Odorant unit	Gas network
				-	-	-	-	-	-	
9	9	9	9	5	9	9	12	6	6	8
1	1	1	1	1	1	1	4	1	2	4
0	4	0	0	0	4	0	0	4	0	4
1	4	4	4	1	4	4	1	4	1	1
1	4	4	4	1	4	4	1	1	4	1
2	1	1	1	1	1	1	1	4	1	2
2	1	1	1	1	1	1	1	4	2	1
4	4	4	4	4	4	4	4	4	4	4
1	1	1	1	1	1	1	1	4	1	1
4	4	4	4	1	4	4	4	1	4	1
44	52	48	48	27	52	48	57	46	39	47
	45.5									
	44.3									

None/ Irrelevant	0	25
Minor severity	26	50
Medium severity	51	75
Major severity	76	300