

**Design Loads:**

**Table 3.3.1a: Main Plant Wastewater Characteristics / Loads**

Parameter	Design	Minimum	Maximum	Units	Notes
Instantaneous flow rate to inlet works	60		60	m <sup>3</sup> /hr	1
Daily flow rate to inlet works	1445	Not specified	1445	m <sup>3</sup> /d	1
Temperature	30	20	30	°C	2
pH	7.5	7.1	8.6	pH	2
Total COD concentration	1889	Not specified	1889	mg/l	
Total COD load	2730	Not specified	2730	kg/d	
Soluble COD/Total COD ratio	-	0.8	0.97	ratio	
TSS concentration	500	Not specified	500	mg/l	
TSS load	723	Calculated	723	kg/d	
FOG	< 10	Not specified	10	mg/l	
Ammonia as N	< 5	Not specified	5	mg/l	
TKN as N	295	Not specified	295	mg/l	
TKN as N Load	426	Not calculated	426	kg/d	
Nitrate as N	< 5	Not specified	5	mg/l	
Total Nitrogen as N	298	Not specified	298	mg/l	
Total Nitrogen Load	431	Not calculated	431	kg/d	
Total Phosphate as P	0	0	0	mg/l	
Total Phosphate Load	0	0	0	kg/d	
Orthophosphate as P	0	0	0	mg/l	
Orthophosphate as P Load	0	0	0	kg/d	
Alkalinity as HCO <sub>3</sub>	> 200	200	Not specified	mg/l	
Chlorides as Cl	TBA	Not specified	TBA	mg/l	
Sulphate as SO <sub>4</sub>	< 30	Not specified	30	mg/l	

**Table 3.3.1b: Fiber Line (X-Linker/A100) Wastewater Characteristics / Loads**

Parameter	Design	Minimum	Maximum	Units	Notes
Instantaneous flow rate to inlet works	45		45	m <sup>3</sup> /hr	
Daily flow rate to inlet works	1082	Not specified	1082	m <sup>3</sup> /d	
Temperature	30	20	30	°C	
pH	11	7.1	11	pH	
Total COD concentration	2205	Not specified	2205	mg/l	
Total COD load	2386	Not specified	2386	kg/d	
Soluble COD/Total COD ratio	-	0.8	0.97	ratio	
TSS concentration	500	Not specified	500	mg/l	
TSS load	541	Calculated	541	kg/d	
FOG	< 10	Not specified	10	mg/l	
Ammonia as N	< 5	Not specified	5	mg/l	
TKN as N	295	Not specified	295	mg/l	
TKN as N Load	319	Not calculated	319	kg/d	
Nitrate as N	< 5	Not specified	5	mg/l	
Total Nitrogen as N	298	Not specified	298	mg/l	
Total Nitrogen Load	322	Not calculated	322	kg/d	
Total Phosphate as P	357	Not specified	357	mg/l	
Total Phosphate Load	387	Not calculated	387	kg/d	
Orthophosphate as P	357	Not specified	357	mg/l	
Orthophosphate as P Load	387	Not calculated	387	kg/d	
Alkalinity as HCO <sub>3</sub>	> 200	Not specified	200	mg/l	
Chlorides as Cl	TBA	Not specified	TBA	mg/l	
Sulphate as SO <sub>4</sub>	< 30	Not specified	30	mg/l	

**Table 3.3.1c: Combined Wastewater Characteristics / Loads**

The Combined Wastewater Characteristics / Loads are included to provide a limit on the overall loads to the plant of the two main streams combined.

Parameter	Design	Minimum	Maximum	Units	Notes
Instantaneous flow rate to inlet works	105		105	m <sup>3</sup> /hr	
Daily flow rate to inlet works	2527	Not specified	2527	m <sup>3</sup> /d	
Temperature	30	20	30	°C	
pH	7.9	7.1	8.6	pH	
Total COD concentration	2040	Not specified	2040	mg/l	
Total COD load	5155	Not specified	5155	kg/d	
Biodegradable fraction of COD	> 0.8	0.65	Not specified	fraction	6
TKN as N	295	Not specified	295	mg/l	
TKN as N Load	745	Not calculated	745	kg/d	
Total Nitrogen as N	298	Not specified	298	mg/l	
Total Nitrogen Load	753	Not calculated	753	kg/d	
Chlorides as Cl	< 2500	Not specified	2500	mg/l	

Note 6: The biodegradable fraction as determined by a Zahn-Wellens test.