

	Plant Capacity		GGBFS	400,000	tonnes		Ground Granulated Blast Furnace Slag						
	Feed Stock		GBFS				Granulated Blast Furnace Slag						
	Moisture		GBFS	8 - 12	%								
	Mill Rate		GGBFS	63	tph		Finished Product Rate						
	Natural Gas Consumption			30,000	MJ/h		Based on air temp of 15 °C and maximum feed moisture of 12 %						
				37,000	kJ/Nm ³		Calorific Value of the Natural Gas at 15 °C						
				811	Nm ³ /h		Gas consumption in Nm ³ /h at 15 °C						
		Total per annum		5,148,005	Nm ³								
		Total per annum		190	TJ								
	NOX emissions	98mg/Nm ³ , calculated as NO ₂		505	kg/annum		NO _x Max = 48 ppm		From Mill Supplier				
	SOX emissions	26mg/Nm ³		133.85	kg/annum		SO _x Max < 9 ppm		From Mill Supplier				
	CO ₂ emissions	51.4 kg CO _{2-e} /GJ		9,790.48	t CO _{2-e} /annum		Data from Table 2.3.2A of NGER Technical Guidelines 2017-18.pdf						
	Mill Air Exit Temp			95	°C								
	Air Flow through Mill			192,000	m ³ /h		At 95 °C						
				142,435	Nm ³ /h								
	Particulate (dust emission)		less than	10	mg/Nm ³		Guarantee for the Process Bag Filter						
	Ratio of Air Recycled back to mill vs air discharged to stack			55	%								
	Air discharged to stack		less than	45	%		Significant part of airflow returned to mill - energy efficiencies						
1	Mill Process	Dust emissions to atmosphere	less than	0.6409575	kg/hr								
		Total per annum	less than	4.07	tonnes								
		Total per day	less than	15.38	kg/day		During Operation						
		Total per day	less than	11.15	kg/day		Annualized						
	Fugitive Dust Collectors		less than	10	mg/Nm ³		Guarantee for the Nuisance Bag Filters						
	Loading Spouts			900	Nm ³ /h		Air to be collected, based on Silo Blower 10m ³ /min and Airlside Fan 5m ³ /min						
		Truck loading rate		160	tph								
2	Loading Spouts	Dust emissions to atmosphere	less than	0.009	kg/hr								
		Total per annum	less than	22.500	kg								
		Total per day	less than	0.062	kg/day								

3	Silo Filter			1600	Nm ³ /h								
		Dust emissions to atmosphere	less than	0.016	kg/hr		During operation						
		Total per annum	less than	101.587	kg								
		Total per day	less than	0.278	kg/day		Annualized						
4	Transfer Points			2000	Nm ³ /h								
		Dust emissions to atmosphere	less than	0.020	kg/hr		During operation						
		Total per annum	less than	126.984	kg								
		Total per day	less than	0.348	kg/day		Annualized						

Equipment	Description	kW	Department	Power Consumption															
Based On Loesche Option																			
5E1-BC1.M1	Belt Conveyor	22	Ship Receival	Total Kilowatts	853.10														
5E1-BW1	Belt Scale		Ship Receival	Diversity	0.80														
5E1-SX1.M1	Spillage Conveyor	0.75	Ship Receival	Total Tonnes	400,000														
5E1-BC5.M1	Belt Conveyor (riversible)	9.2	Ship Receival	Ship Discharge Tonnes/hr Average	400.00														
5E1-SX5.1.M1	Spillage Conveyor	0.75	Ship Receival	Total Hours for Discharge	1,000.00														
5E1-SX5.2.M1	Spillage Conveyor	0.75	Ship Receival	Total kWhrs per annum	682,480.00														
5E1-BC2.M1	Belt Conveyor	45	Ship Receival																
5E1-SX2.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-BC3.M1	Belt Conveyor	15	Ship Receival																
5E1-BW2	Belt Scale		Ship Receival																
5E1-SX3.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-BC6.M1	Belt Conveyor (riversible)	9.2	Ship Receival																
5E1-SX6.1.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-SX6.2.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-BC4.M1	Belt Conveyor	22	Ship Receival																
5E1-BW3	Belt Scale		Ship Receival																
5E1-SX4.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-BC7.M1	Belt Conveyor (riversible)	9.2	Ship Receival																
5E1-SX7.1.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-SX7.2.M1	Spillage Conveyor	0.75	Ship Receival																
5E1-CA1.M1	Overhead Cranes	357	Ship Receival																
5E1-CA2.M1	Overhead Cranes	357	Ship Receival																
511-3B1	Level Monitoring																		
511-3B1	Electric Data Analyser Hopper Level																		
531-WF1.M1	Dosing Belt Weighing Feeder	5.5	Mill Feed	Total Kilowatts	382.95														
531-WF1.U1	Dosing Belt Weighing Feeder		Mill Feed	Diversity	0.80														
531-SX1.M1	Spillage Conveyor	0.75	Mill Feed	Total Tonnes	400,000														
531-BC2.M1	Belt Conveyor	7.5	Mill Feed	Mill tph	63.00														
531-BC21.U1	Belt Conveyor		Mill Feed	Total Hours Equipment will Run	6,349.21														
531-SX2.M1	Spillage Conveyor	0.75	Mill Feed	Total kWhrs per annum	1,945,142.86														
531-MS1.M1	Magnetic Separator	1.5	Mill Feed																
531-MT1	Metal Detector		Mill Feed																
531-DG1	Two-Way Distribution Chute		Mill Feed																
531-BC3.M1	Belt Conveyor	9.2	Mill Feed																
531-BC31.U1	Belt Conveyor		Mill Feed																
531-SX3.M1	Spillage Conveyor	0.75	Mill Feed																
551-HG1.M1	Burner Fan Motor	2	Milling	Total Kilowatts	2,564.77														
551-HG1.M1	Burner Fan	22	Milling	Diversity	0.80														
				Total Tonnes	400,000														
561-SC1.M1	Screw Conveyor	18.5	Milling	Mill tph	63.00														
				Total Hours Equipment will Run	6,349.21														
561-MD1.M1	Mill motor	1700	Milling	Total kWhrs per annum	13,027,423.49														
561-CR1.M1	Classifier	132	Milling																
561-CR1.U1	Classifier converter		Milling																
562-VT1.M1	Sealing air fan motor	15	Milling																
562-EN1.U1	Inching drive FC		Milling																

561-DA4	Control Flap	0.5	Milling																	
561-DA5	Control Flap "Z"	0.5	Milling																	
591-FN1.M1	Fan	7.5	Mill Product Transport	Total Kilowatts	70.87															
591-RF1.M1	Rotary Valve	5.5	Mill Product Transport	Diversity	0.80															
				Total Tonnes	400,000															
591-FN2.M1	Fan	15	Mill Product Transport	Mill tph	63.00															
591-SM1.M1	Sampling Station	2.2	Mill Product Transport	Total Hours Equipment will Run	6,349.21															
591-FN3.M1	Fan	11	Mill Product Transport	Total kWhrs per annum	359,974.60															
591-RF2.M1	Rotary Feeder	0.37	Mill Product Transport																	
591-BE1.M1	Bucket Elevator	15	Mill Product Transport																	
591-BE1.M2	Bucket Elevator	1.1	Mill Product Transport																	
591-FN4.M1	Fan	2.2	Mill Product Transport																	
591-FN5.M1	Fan	11	Mill Product Transport																	
611-BL1.M1	Silo Aeration Blower	15	Truck Loading	Total Kilowatts	20.34															
611-SG1.M1	Silo Shut-off Gate	0.14	Truck Loading	Diversity	0.80															
611-DB1.M1	Distribution Box	1.5	Truck Loading	Total Tonnes	400,000															
				Truck loading is 27 tonnes every 15mins => 108 tonnes per hour																
621-PG1.M1	Proportional Flow Gates	0.75	Truck Loading	Total Hours Equipment will Run	108.00															
622-PG1.M1	Proportional Flow Gates	0.75	Truck Loading	Total kWhrs per annum	3,703.70															
621-FN1.M1	Fan	2.2	Truck Loading																	
622-FN1.M1	Fan	2.2	Truck Loading																	
621-LA1.M1	Truck Loading Spout	0.55	Truck Loading																	
621-LA1.M2	Truck Loading Spout	0.37	Truck Loading																	
622-LA1.M1	Truck Loading Spout	0.55	Truck Loading																	
622-LA1.M2	Truck Loading Spout	0.37	Truck Loading																	
D30-CP01.M1	Compressor System	37	Services	Total Kilowatts	75.50															
D30-CP02.M1	Compressor System (Stand-by)	37	Services	Diversity	0.80															
D01-CL01.M1	Cooling System	5.5	Services	Hours in year	8,760															
D01-CL01.M2	Cooling System	11	Services	Run only 50% of time	0.50															
D01-CL01.M3	Cooling System	11	Services	Total Hours Equipment will Run	4,380.00															
D01-CL01.M4	Cooling System	11	Services	Total kWhrs per annum	264,552.00															
				Total kWhrs per year	16,339,839.62															
	Total Connected kW	3,652		Total MWhrs per year	16,340															
				CO₂ emissions - related to power consumption																
				1.08 kg CO _{2-e} /kWhr - Victoria	1.08															
				t CO_{2-e}/annum	17,650															

