

The content of this document is draft and relates to material [or data] which is still in the course of completion in travel to Gate 2 and should not be relied upon at this early stage of development. We continue to develop our thinking and our approach to the issues raised in the document in preparation for Gate 2.

Option: **Min-A-115 DS Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
Mixers	Top entry mixer	115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Pumps	Magnetite remix transfer pumps (D/S)	115MLD	2	6	12	24.00	288.00	105120.00				
Pumps	Waste sludge transfer pumps	115MLD	2	12	24	24.00	576.00	210240.00				
Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
Dryer		115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Chemical Consumption - Poly												
Power - Conveyence Pumping												
<i>Minworth</i>	115ML DS Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Labour												
<i>Min A 115</i>			20					1040.00				
Site Power - MCC, Services etc.												
<i>Min A 115</i>			1	70	70	24	1,680.00	613200.00				
Total (£):												

Annual kWh 13,757,580.00

Variable OPEX
Fixed OPEX

Option: **Min-B-115 DS Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
Mixers	Top entry mixer	115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Pumps	Magnetite remix transfer pumps (D/S)	115MLD	2	6	12	24.00	288.00	105120.00				
Pumps	Waste sludge transfer pumps	115MLD	2	12	24	24.00	576.00	210240.00				
Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
Dryer		115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Chemical Consumption - Poly												
<i>Treatment B - UV</i>												
Minworth 115MLD	160/40 lamps (D/S)	115ML	160	0.6	96	24.00	2,304.00	840960.00				
Power - Conveyence Pumping												
Minworth	115ML DS Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Labour												
Min B 115			35					1820.00				
Site Power - MCC, Services etc.												
Min B 115			1	110	110	24	2,640.00	963600.00				
Total (£):												

Annual kWh 14,948,940.00

Variable OPEX
Fixed OPEX

Option: **Min-C-115 DS Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
Mixers	Top entry mixer	115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Pumps	Magnetite remix transfer pumps (D/S)	115MLD	2	6	12	24.00	288.00	105120.00				
Pumps	Waste sludge transfer pumps	115MLD	2	12	24	24.00	576.00	210240.00				
Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
Dryer		115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Chemical Consumption - Poly												
<i>Treatment B - UV</i>												
Minworth 115MLD	160/40 lamps (D/S)	115ML	160	0.6	96	24.00	2,304.00	840960.00				
Power - Conveyence Pumping												
Minworth	115ML DS Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Power - Interstage Pumping												
Minworth	115ML		4	60	240	24.00	5,760.00	2102400.00				
Power - Return Pumping												
Minworth	115ML		1	9	9	12.00	108.00	39420.00				
Power - Backwash Pumping												
Backwash Pumps	115ML Works		1	22	22	12.00	264.00	96360.00				
Power - Air Blowers												
Blowers			2	30	60	24.00	1,440.00	525600.00				
Labour												
Min C 115			56					2880.00				
Site Power - MCC, Services etc.												
Min C 115			1	130	130	24	3,120.00	1,138,800.00				
Total (£):												

Annual kWh 17,887,920.00

Variable OPEX
Fixed OPEX

Option: **Min-A-115 US Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
Mixers	Top entry mixer	115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Pumps	Magnetite remix transfer pumps (D/S)	115MLD	2	6	12	24.00	288.00	105120.00				
Pumps	Waste sludge transfer pumps	115MLD	2	12	24	24.00	576.00	210240.00				
Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
Dryer		115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Chemical Consumption - Poly												
Power - Conveyence Pumping												
<i>Minworth</i>	115ML US Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Labour												
<i>Min A 115</i>			20					1040.00				
Site Power - MCC, Services etc.												
<i>Min A 115</i>			1	70	70	24	1,680.00	613200.00				
Total (£):												

Annual kWh 37,692.00 13,757,580.00

Variable OPEX
Fixed OPEX

Option: **Min-B-115 US Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
Mixers	Top entry mixer	115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Pumps	Magnetite remix transfer pumps (D/S)	115MLD	2	6	12	24.00	288.00	105120.00				
Pumps	Waste sludge transfer pumps	115MLD	2	12	24	24.00	576.00	210240.00				
Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
Dryer		115MLD	1	2.5	2.5	24.00	60.00	21900.00				
Chemical Consumption - Poly												
<i>Treatment B - UV</i>												
Minworth 115MLD	160/40 lamps (D/S)	115ML	160	0.6	96	24.00	2,304.00	840960.00				
Power - Conveyence Pumping												
Minworth	115ML US Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Labour												
Min B 115			35					1820.00				
Site Power - MCC, Services etc.												
Min B 115			1	110	110	24	2,640.00	963600.00				
Total (£):												

Annual kWh 14,948,940.00

Variable OPEX
Fixed OPEX

Option: **Min-C-115 US Warwick**

OPERATING COST EXPENDITURE PROFILE

	Sub - Description		Units	kW Rating	Total kW Rating	Daily Run Time	kWhr/day	Unit/Year	Rate	Unit	Cost/Year	Total (£)
Power - Treatment												
<i>Treatment A - CoMag</i>												
Shear Mill	Assumed D/S	115MLD	1	24	24	24.00	576.00	210240.00				
Magnetic drum separators	Assumed DD/SS	115MLD	2	6	12	24.00	288.00	105120.00				
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Air Compressor		115MLD	1	3.5	3.5	24.00	84.00	30660.00				
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Chemical Consumption - Poly												
<i>Treatment B - UV</i>												
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Power - Conveyence Pumping												
Minworth	115ML US Warwick		4	355	1420	24.00	34,080.00	12439200.00				
Power - Interstage Pumping												
Minworth	115ML		4	60	240	24.00	5,760.00	2102400.00				
Power - Return Pumping												
Minworth	115ML		1	9	9	12.00	108.00	39420.00				
Power - Backwash Pumping												
Backwash Pumps	115ML Works		1	22	22	12.00	264.00	96360.00				
Power - Air Blowers												
Blowers			2	30	60	24.00	1,440.00	525600.00				
Labour												
Min C 115			56					2860.00				
Site Power - MCC, Services etc.												
Min C 115			1	130	130	24	3,120.00	1138800.00				
Total (£):												

Annual kWh 17,887,920.00

Variable OPEX
Fixed OPEX