

[illegible]

ACTIVITY ON NODE DIAGRAM

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COST ESTIMATE AND COST CONTROL																										
	TYPE	COST	Quantity	Cost per unit	Amount																					
	Land	Land (540m * 10")	135	0	£0.00																					
	Materials																									
		Cement	37	740.00	\$219.04																					
		Sand (tonnes)	3,75	1,900.00	\$57.00																					
		Ballast (tonnes)	13	2,300.00	\$239.20																					
		Rebars (Ø 10)	9	900.00	\$64.80																					
		Angle line frame metal	2	1,500.00	\$24.00																					
		Metal sheets (flat sheet)	1	4,200.00	\$33.60																					
		Wood	8	250.00	\$16.00																					
		Wood screws	1	300.00	\$1.61																					
		Gypsum boards	0	0.00	\$0.00																					
		Chippings	9.5	950	\$48.52																					
		Total			\$655.25																					
	Labour																									
	CM	Direct wages	1	900	£4.84																					
		Fringes	1	300	£1.61																					
		Insurance	1	150	£0.81																					
		Tax	1	150	£0.81																					
		Total		1500	£8.06																					
	Foreman	Direct wages	2	400	£4.30																					
		Fringes	2	175	£1.88																					
		Insurance	2	115	£1.24																					
		Tax	2	60	£0.65																					
		Total		750	£8.06																					
	Equipment																									
		Pick up truck	1	1200	£6.45																					
		Total			£6.45																					
	Total				£669.77																					
	Earned Value Method Analysis																									
	Class	Type	BCAC	ACWP	BCWP		BCAC	ACWP	BCWP		Class	Type	BCAC	ACWP	BCWP		Class	Type	BCAC	ACWP	BCWP		BCAC	ACWP	BCWP	
	DAY 3						DAY 5					DAY 7					DAY 9					DAY 11				
	Procurement						Procurement					Procurement					Procurement									
		Transport						\$0.00	\$12.00	\$12.00				\$9.60	\$9.60	\$0.00			Transport	\$ 9.60	\$ 9.60	\$ 9.60				
		Materials						\$34.80	\$44.80					\$56.52	\$56.52	\$56.52			Materials	\$ 43.44	\$ 43.44	\$ 43.44				
		AOC	\$ -	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$1.00	\$0.00	\$0.00			AOC	\$ -	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Design						Design					Design					Design									
		Preliminary design																		Preliminary design						
		Schematic design																		Schematic design						
		Technology c	\$ 1.00	\$ 0.10	\$ 0.10									\$ 1.00	\$ 0.10	\$ 0.10			Technology c	\$ 1.00	\$ 0.10	\$ 0.10				
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$1.00	\$0.00	\$0.00			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Construction						Construction					Construction					Construction									
		Labor cost	\$ 9.60	\$ 12.00	\$ 12.00			\$36.00	\$27.60	\$24.00				\$16.36	\$ 16.36	\$ 12.00			Labor cost	\$ 24.00	\$ 24.00	\$ 24.00	\$24.00	\$24.00	\$24.00	
		Equipment cost																		Equipment cost						
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	TOTAL		\$ 12.60	\$ 12.10	\$ 12.10			\$73.80	\$84.40	\$84.40		TOTAL		\$ 21.36	\$ 16.46	\$ 12.10			TOTAL	\$ 80.04	\$ 77.14	\$ 77.14	\$27.00	\$24.00	\$24.00	
	DAY 4						DAY 6					DAY 8					DAY 10					DAY 12				
	Procurement						Procurement					Procurement					Procurement									
		Transport						\$0.00	\$12.00	\$12.00									Transport	\$ 9.60	\$ 12.00	\$ 12.00	\$11.20	\$11.20	\$11.20	
		Materials	\$ 96.00	\$ 96.00	\$ 96.00			\$34.80	\$44.80	\$44.80									Materials	\$ 27.52	\$ 27.52	\$ 27.52	\$26.80	\$26.80	\$26.80	
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Design						Design					Design					Design									
		Preliminary design																		Preliminary design						
		Schematic design																		Schematic design						
		Technology c	\$ 1.00	\$ 0.96	\$ 0.96			\$0.00	\$0.00	\$0.00				\$ 1.00	\$ 0.96	\$ 0.96			Technology c	\$ 1.00	\$ 0.96	\$ 0.96	\$0.00	\$0.00	\$0.00	
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Construction						Construction					Construction					Construction									
		Labor cost	\$ 30.00	\$ 30.00	\$ 30.00			\$24.00	\$24.00	\$24.00				\$16.36	\$ 16.36	\$ 12.00			Labor cost	\$ 12.00	\$ 12.00	\$ 12.00	\$12.00	\$12.00	\$12.00	
		Equipment cost																		Equipment cost						
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	TOTAL		\$ 100.00	\$ 96.96	\$ 96.96			\$37.80	\$56.80	\$56.80		TOTAL		\$ 34.00	\$ 30.96	\$ 30.96			TOTAL	\$ 53.12	\$ 52.48	\$ 52.48	\$53.00	\$50.00	\$50.00	
	DAY 15						DAY 17					DAY 19					DAY 21					DAY 23				
	Procurement						Procurement					Procurement					Procurement									
		Transport						\$0.00	\$12.00	\$12.00									Transport	\$ -	\$ 1.60	\$ 1.60				
		Materials	\$ 34.80	\$44.80				\$34.80	\$44.80										Materials	\$ 6.00	\$ 6.00	\$ 6.00				
		AOC	\$ -	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 2.00	\$ -	\$ -			AOC	\$ -	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Design						Design					Design					Design									
		Preliminary design																		Preliminary design						
		Schematic design																		Schematic design						
		Technology c	\$ 1.00	\$ 0.10	\$ 0.10									\$ 1.00	\$ 0.10	\$ 0.10			Technology c	\$ 1.00	\$ 0.10	\$ 0.10				
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	Construction						Construction					Construction					Construction									
		Labor cost	\$ 9.60	\$ 12.00	\$ 12.00			\$36.00	\$27.60	\$24.00				\$ 16.36	\$ 16.36	\$ 12.00			Labor cost	\$ 18.00	\$ 18.00	\$ 18.00	\$18.00	\$18.00	\$18.00	
		Equipment cost																		Equipment cost						
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00				\$ 1.00	\$ -	\$ -			AOC	\$ 1.00	\$ -	\$ -	\$1.00	\$0.00	\$0.00	
	TOTAL		\$ 12.60	\$ 12.10	\$ 12.10			\$73.80	\$84.40	\$84.40		TOTAL		\$ 21.36	\$ 16.46	\$ 12.10			TOTAL	\$ 27.00	\$ 25.70	\$ 25.70	\$21.00	\$18.00	\$18.00	
	DAY 16						DAY 18					DAY 20					DAY 22					DAY 24				
	Procurement						Procurement					Procurement					Procurement									
		Transport						\$0.00	\$12.00	\$12.00									Transport	\$ 9.60	\$ 9.60	\$ 9.60	\$9.60	\$9.60	\$9.60	
		Materials	\$ 96.00	\$ 96.00	\$ 96.00			\$34.80	\$44.80	\$44.80									Materials	\$ 47.60	\$ 47.60	\$ 47.60	\$21.60	\$21.60	\$21.60	
		AOC	\$ 1.00	\$ -	\$ -			\$1.00	\$0.00	\$0.00																

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	COST OF INVESTMENT		ESTIMATE AMOUNT OF PROJECT VALUE										
			YEAR	1	2	3	4	5	6	7	8	9	10
		£1,267.25		£905.18	£1,551.74	£2,013.57	£2,343.44	£2,579.07	£2,747.37	£2,867.59	£2,953.46	£3,014.79	£3,058.60

Assumptions					
1. Labor provides 9 working hours for 5 working days.					
2. Work does not take place during weekends and public holidays.					
3. Agent CM is the type of construction management.					
4. Risk is regulated by 25% of project budget.					
5 BCI to CPI index is less than 1.4.					
6. Risk of project complpetion is undertaken by Agent CM.					
7. Environment, health and safety standards are met at construction site.					
8. The scope of the project must be satisfied prior to final payment date.					
9. Allowable project cost does not exceed market value of project at 40% IRR.					
10. Risk of equipment investment, repair and maintainance is undertaken by A					