



ARCUS

RETFORD CIRCULAR ECONOMY PROJECT

TECHNICAL APPENDIX 12.1: CONSTRUCTION AND OPERATIONAL PLANT LIST

FEBRUARY 2023



Table 12.1: Construction Plant List

Activity	Location	Plant Description	BS 5288 Reference	Activity L _{Aeq} @ 10 m	Number of Plant	Start Date	End Date	Percentage On-time (Mon-Fri, 08:00 – 18:00)
Aggregate and concrete for roadways and hard surfaces	Haul Road and Conveyor Route	Tracked Excavator	C.5.18	80	2	Month 1	Month 3	50
		Dozer	C.5.13	82	2			50
		Vibratory Roller	C.5.20	75	1			50
		Asphalt Paver (+tipper lorry)	C.5.31	77	1			25
Conveyor sections and plant	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 3	50
		Mobile Crane	C.3.29	70	1			25
		Water Bowser	C.4.88	68	1			10
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
CHP Plant	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 1	50
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Gas reception infrastructure – for road tanker delivery	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 1	50
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Gas main infrastructure	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 7	Month 12	50

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		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Drying Plant	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 24	50
		Mobile Crane	C.3.29	70	1			25
	Main Processing Site	Fork Lift Truck	C.4.13	71	1			25
	Tipper Lorries	C.8.20	79	5/day	25			
Silos	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 24	50
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Fencing and gating, and infrastructure for site security	Main Processing Site	Cutters, drills and small tools	C.4.73	84	4	Month 1	Month 3	50
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Offices, welfare, toilets, labs and canteen	Main Processing Site	Hand tools	C.4.73	84	5	Month 1	Month 12	25
		Tracked Excavator	C.5.18	80	1			50
		Dozer	C.5.13	82	1			50
		Concrete mixer truck	C.4.20	80	2			10
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Spoil removal		Tracked Excavator	C.2.14	79	2	Month 1	Month 3	25
		Dumpers	C.4.4	76	1			25

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		Tipper Lorries	C.8.20	79	5/day			25
Storage building - trial	Main Processing Site	Hand tools	C.4.73	84	5	Month 1	Month 1	25
		Tracked Excavator	C.5.18	80	1			50
		Dozer	C.5.13	82	1			50
		Concrete mixer truck	C.4.20	80	2			10
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Storage building - Main	Main Processing Site	Hand tools	C.4.73	84	5	Month 7	Month 12	25
		Tracked Excavator	C.5.18	80	1			50
		Dozer	C.5.13	82	1			50
		Concrete mixer truck	C.4.20	80	2			10
		Mobile Crane	C.3.29	70	1			25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25
Other works - contingency	Whole Site	Hand tools	C.4.73	84	5	Month 1	Month 3	25
		Fork Lift Truck	C.4.13	71	1			25
		Tipper Lorries	C.8.20	79	5/day			25

Table 12.2: Operational Plant List

Activity	Plant Description	BS 5288 Reference	Activity L _{Aeq} @ 10 m	Number of Plant	Percentage On-time (Mon-Fri, 07:00 – 19:00)	Percentage On-time (Saturdays, 07:00 - 13:00)
Processing Areas 1	Cat 966 Loader	manufacturers data	81	1	75	75
	Mobile Screen- Finlay 683	manufacturers data	80	1	90	90
	Conveyor	manufacturers data	66	1	100	100
	Tipper Lorries	C.8.20	79	60/day		
Processing Area 2	Cat 966 Loader	manufacturers data	81	1	75	75
	Mobile Screen	manufacturers data	80	1	90	90
	Conveyor	manufacturers data	66	1	100	100
	Tipper Lorries	C.8.20	79	60/day		
Processing Area 3	Cat 966 Loader	manufacturers data	81	1	75	75
	Mobile Screen	manufacturers data	80	1	90	90
	Conveyor	manufacturers data	66	1	100	100
	Tipper Lorries	C.8.20	79	60/day		
Main Processing Area	CHP Installation	manufacturers data	65	1	100	100
	Drying Modules (All Units)	manufacturers data	65 (All units fitted with standard acoustic enclosure)	10	100	100
	Cyclones	manufacturers data	< 35 dB(A)	n/a		
	Silos	manufacturers data	< 35 dB(A)	n/a		
	Material Storage Building	n/a	Internal Noise Levels to not exceed 80 dB(A)	n/a	100	100
	Small excavator (13T)	BS 5228-1:2009 Table C.4:64	75	1	50	50

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Site Establishment	Tracked Excavator	C.5.18	80	2	50	50
	Dozer	C.5.13	82	1	50	50
	Mobile Crane	C.3.29	70	1	25	25
	Cat 966 Loader	manufacturers data	81	1	75	75
	Tipper Lorries	C.8.20	79	60/day		
Restoration	Dozer	C.5.13	82	3	90	90
	Cat 966 Loader	manufacturers data	81	1	75	75
Excavation	Tracked Excavator	C.5.18	80	2	50	50
	Dozer	C.5.13	82	1	50	50
	Tipper Lorries	C.8.20	79	60/day	80	80
	Cat 966 Loader	manufacturers data	81	1	75	75
Soakaway Ponds Construction	Tracked Excavator	C.5.18	80	2	50	50
	Dozer	C.5.13	82	1	50	50
	Cat 966 Loader	manufacturers data	81	1	75	75
	Tipper Lorries	C.8.20	79	60/day		
Filter Ponds Construction	Tracked Excavator	C.5.18	80	2	50	50
	Dozer	C.5.13	82	1	50	50
	Cat 966 Loader	manufacturers data	81	1	75	75
	Tipper Lorries	C.8.20	79	60/day		