



MasterDrain  
SW 12.23



The alternative drainage design software

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Job No. <b>1234/2010</b>		
Sheet no. <b>1</b>		
Date <b>21/09/10</b>		
By	Checked	Approved

Project **Crown Estates**

Title **Printout of excavations for COLLEGE.SW**

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Gran.	Fill Granular	Selected	Soil Traffic	Water x1.25	Loads kN	Total	Crush strength	Strut. & Wal.	Comments
1	1.01	20.0	150	0.80	1.46	23.3	S	00.00	4.00	00.00	17.7	11.34	42.90	0.13	67.96	28	Yes	
2	1.02	60.0	150	0.90	1.79	96.8	S	00.00	13.50	00.00	77.9	12.32	37.18	0.13	62.04	25	Yes	

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Aver. Vol m3	Class	Bedding Conc.	Bedding m3	Gran. Conc.	Granular m3	Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
3	2.01	17.0	150	0.80	1.71	23.2	S	00.00	3.40	00.00	18.5	11.34	42.90	0.13	67.96	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran. m3	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN Total	Crush x1.25	Strut. strength	Comments & Wal.
4	1.03	40.0	225	0.90	2.15	77.5	S	00.00	11.70	00.00	62.2	19.66	24.44	0.29	55.49	23	Yes		

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Aver. Vol m3	Class	Bedding Conc.	Bedding m3	Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
5	3.01	20.0	150	0.80	1.46	23.3	S	00.00	4.00	00.00	17.7	11.34	42.90	0.13	67.96	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran. m3	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush strength	Strut. & Wal.	Comments
6	3.02	60.0	150	0.90	1.90	102.8	S	00.00	13.50	00.00	83.9	12.32	37.18	0.13	62.04	25	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran. Conc.	Granular m3	Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
7	4.01	32.0	150	0.80	1.51	38.6	S	00.00	6.40	00.00	29.7	11.34	42.90	0.13	67.96	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran.	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
8	5.01	25.0	150	0.80	1.51	30.2	S	00.00	5.00	00.00	23.2	11.34	42.90	0.13	67.96	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Aver. Vol m3	Class	Bedding Conc.	Bedding m3	Gran. Granular	Fill m3	Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
9	4.02	45.0	225	0.90	1.83	74.1	S	00.00	13.16	00.00	56.9	16.23	34.15	0.29	63.34		26	Yes		

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Gran. m3	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
10	4.03	12.0	225	0.90	2.19	23.7	S	00.00	3.51	00.00	19.1	20.30	22.98	0.29	54.47	22	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush x1.25	Strut. strength	Comments & Wal.
11	1.04	20.0	300	0.90	2.32	41.8	S	00.00	7.20	00.00	32.8	26.57	20.40	0.51	59.35	24	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush strength	Strut.	Comments & Wal.
12	6.01	75.0	300	0.90	1.91	129.1	S	00.00	27.00	00.00	95.3	17.40	40.23	0.51	72.67	30	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Fill Gran.	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
13	1.05	65.0	450	1.20	2.48	193.7	S	00.00	42.90	00.00	143.0	38.44	18.67	1.15	72.83	30	Yes		

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
14	7.01	75.0	225	0.90	2.02	136.4	S	00.00	21.94	00.00	107.7	14.59	40.22	0.29	68.88	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
15	8.01	75.0	225	0.90	2.02	136.4	S	00.00	21.94	00.00	107.7	14.59	40.22	0.29	68.88	28	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
16	1.06	40.0	600	1.35	2.65	143.0	S	00.00	37.80	00.00	99.8	53.86	15.74	2.05	89.56	36	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran. m3	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total	Crush	Strut.	Comments
17	9.01	15.0	450	1.20	1.56	28.0	S	00.00	9.90	00.00	16.3	24.26	37.73	1.15	78.93		32	Yes		

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Loads kN	Traffic	Water	Total x1.25	Crush strength	Strut.	Comments & Wal.
18	9.02	30.0	450	1.20	1.65	59.4	S	00.00	19.80	00.00	36.0	25.29	35.79	1.15	77.80	32	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Fill Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush strength	Strut.	Comments & Wal.
19	9.03	20.0	450	1.20	1.75	42.1	S	00.00	13.20	00.00	26.5	27.38	32.19	1.15	75.91	31	Yes		

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Bedding Class	Bedding Conc.	Fill Gran. m3	Fill Granular Selected	Soil	Loads kN	Traffic Water	Total	Crush strength x1.25	Strut. & Wal.	Comments	
20	10.01	25.0	150	0.80	1.59	31.7	S	00.00	5.00	00.00	24.7	11.34	42.90	0.13	67.96	28	Yes	

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Gran. m3	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush	Strut.	Comments
21	9.04	25.0	150	0.90	2.25	50.6	S	00.00	5.62	00.00	42.7	13.80	30.01	0.13	54.93	22	Yes			

Pipe material = Concrete

Entry No.	Section No.	Length m	Diam mm	Trench Width	Aver. depth	Vol m3	Class	Bedding Conc.	Bedding m3	Fill Gran.	Fill m3	Granular Selected	Soil	Traffic	Water	Loads kN	Total	Crush strength	Strut.	Comments & Wal.
22	1.07	10.0	750	1.65	2.72	44.8	S	00.00	14.03	00.00	29.2	68.70	14.45	3.21	107.95	44	Yes			

*Summary of calculations:-*

Total volume of concrete required = 0m<sup>3</sup>  
Total volume of bedding required = 764m<sup>3</sup>  
Total volume of selected fill required = 2337m<sup>3</sup>  
Total volume of spoil to remove required = 764m<sup>3</sup>  
Total volume of excavation = 3101m<sup>3</sup>

Total length of pipe diameters required:-

Total length 150mm pipe = 284 m  
Total length 225mm pipe = 247 m  
Total length 300mm pipe = 95 m  
Total length 450mm pipe = 130 m  
Total length 600mm pipe = 40 m  
Total length 750mm pipe = 10 m

N.B. NO cutting allowance has been made in these figures.