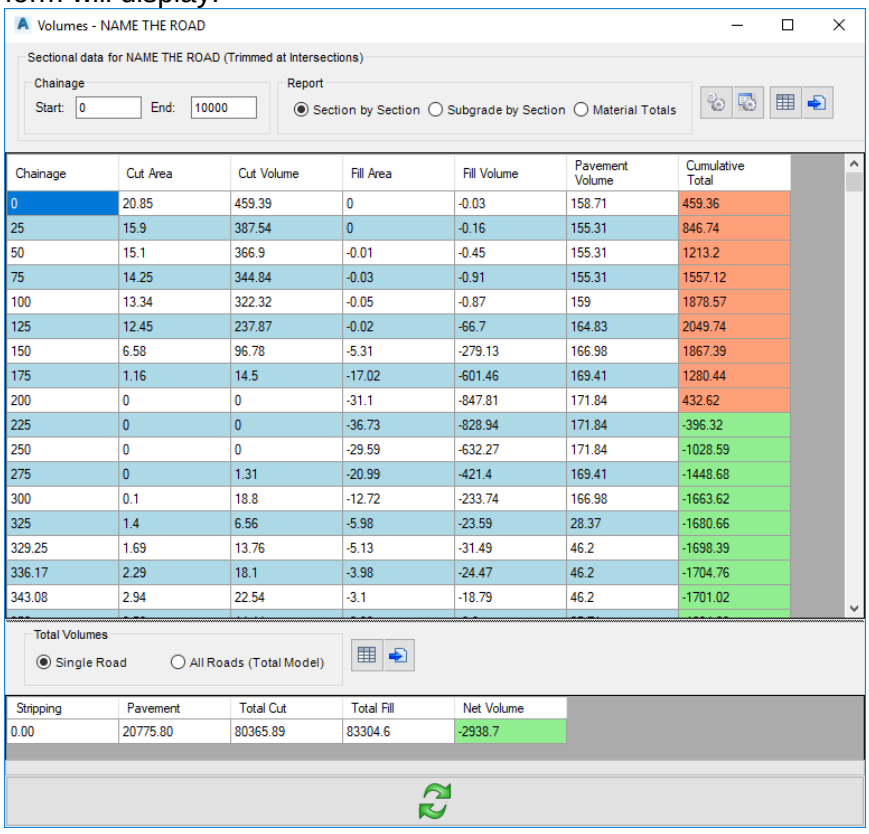
Generating Mass Haul Diagrams from Civil Site Design, using Excel

During your design you can generate a volume report – this will display the section-by-section volumes over your design sampling (eg; 25m) and a total earthworks value in the form. These values apply any compaction factors that you have set.

You can run the volume report directly from the Vertical Grading Editor. Open the Vertical Grading Editor if required.

1. From the Vertical Grading Editor, click on the **Compute Volume Report.** The following form will display:

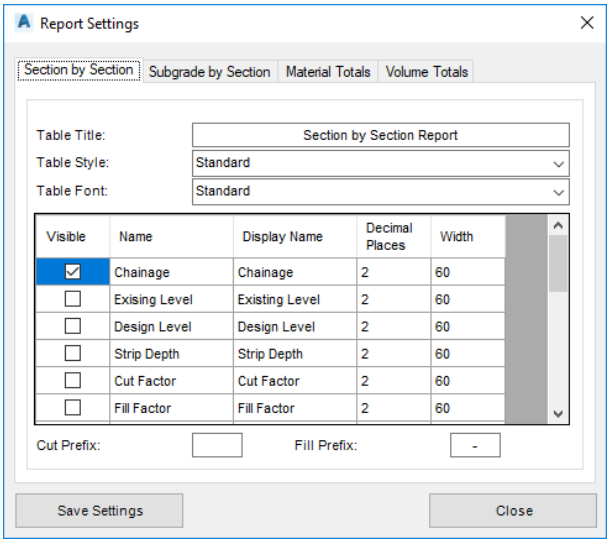


Chainage	Cut Area	Cut Volume	Fill Area	Fill Volume	Pavement Volume	Cumulative Total
0	20.85	459.39	0	-0.03	158.71	459.36
25	15.9	387.54	0	-0.16	155.31	846.74
50	15.1	366.9	-0.01	-0.45	155.31	1213.2
75	14.25	344.84	-0.03	-0.91	155.31	1557.12
100	13.34	322.32	-0.05	-0.87	159	1878.57
125	12.45	237.87	-0.02	-66.7	164.83	2049.74
150	6.58	96.78	-5.31	-279.13	166.98	1867.39
175	1.16	14.5	-17.02	-601.46	169.41	1280.44
200	0	0	-31.1	-847.81	171.84	432.62
225	0	0	-36.73	-828.94	171.84	-396.32
250	0	0	-29.59	-632.27	171.84	-1028.59
275	0	1.31	-20.99	-421.4	169.41	-1448.68
300	0.1	18.8	-12.72	-233.74	166.98	-1663.62
325	1.4	6.56	-5.98	-23.59	28.37	-1680.66
329.25	1.69	13.76	-5.13	-31.49	46.2	-1698.39
336.17	2.29	18.1	-3.98	-24.47	46.2	-1704.76
343.08	2.94	22.54	-3.1	-18.79	46.2	-1701.02

Stripping	Pavement	Total Cut	Total Fill	Net Volume
0.00	20775.80	80365.89	83304.6	-2938.7

The form displays multiple columns of data. You can use the Chainage and Cumulative Total columns to generate a Mass Haul diagram.

If desired, you can click on the **Report Settings** button in the Volumes form and untick all columns EXCEPT for the Chainage and Cumulative Total.

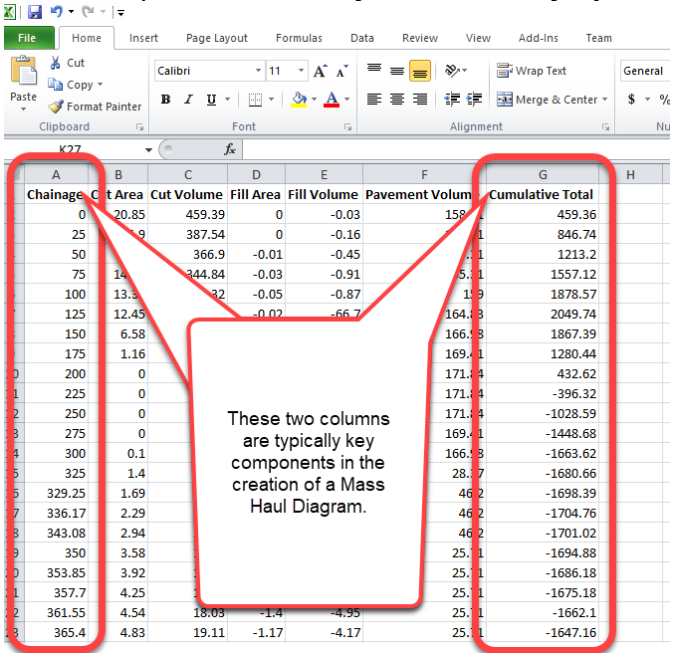


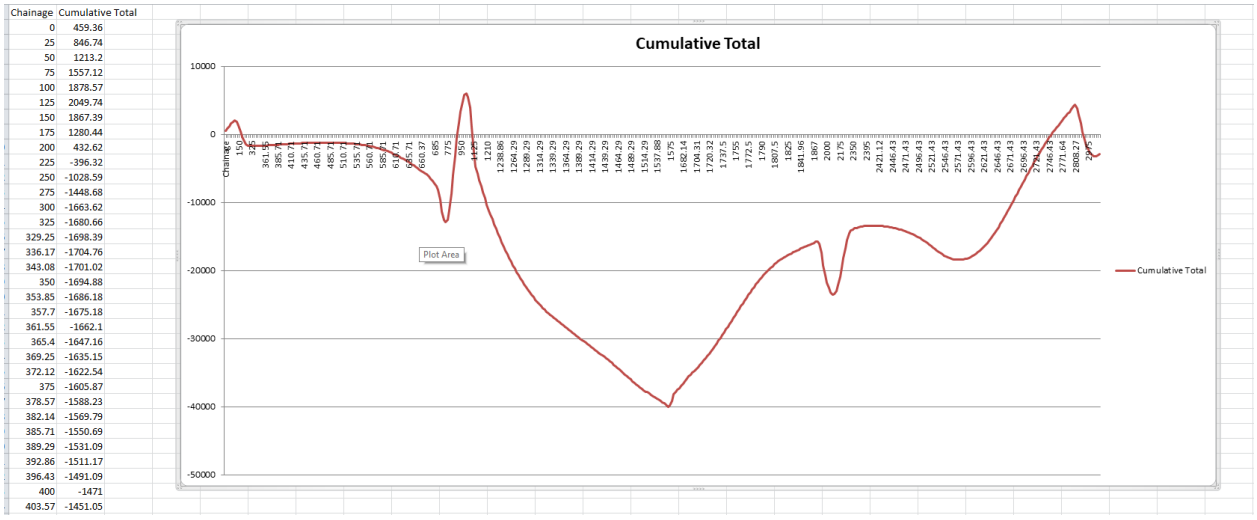
Visible	Name	Display Name	Decimal Places	Width
☑	Chainage	Chainage	2	60
☐	Exising Level	Existing Level	2	60
☐	Design Level	Design Level	2	60
☐	Strip Depth	Strip Depth	2	60
☐	Cut Factor	Cut Factor	2	60
☐	Fill Factor	Fill Factor	2	60

2. To create a Volume Report file, click on the **Export to File** button located top right.

3. Select a name and output location for the file and click **Save**.

4. Locate the file using Windows Explorer and double click on it to open it. Here is an example of the file output. ***Note: It may automatically open in Excel***



Chainage	Cut Area	Cut Volume	Fill Area	Fill Volume	Pavement Volum	Cumulative Total
0	20.85	459.39	0	-0.03	158	459.36
25	[illegible]	387.54	0	-0.16	[illegible]	846.74
50	[illegible]	366.9	-0.01	-0.45	[illegible]	1213.2
75	[illegible]	[illegible]	-0.03	-0.91	[illegible]	1557.12
100	[illegible]	[illegible]	-0.05	-0.87	[illegible]	1878.57
125	12.45	[illegible]	-0.02	-66.7	164.[illegible]	2049.74
150	6.58	[illegible]	[illegible]	[illegible]	166.[illegible]	1867.39
175	1.16	[illegible]	[illegible]	[illegible]	169.[illegible]	1280.44
200	0	[illegible]	[illegible]	[illegible]	171.[illegible]	432.62
225	0	[illegible]	[illegible]	[illegible]	171.[illegible]	-396.32
250	0	[illegible]	[illegible]	[illegible]	171.[illegible]	-1028.59
275	0	[illegible]	[illegible]	[illegible]	169.[illegible]	-1448.68
300	0.1	[illegible]	[illegible]	[illegible]	166.[illegible]	-1663.62
325	1.4	[illegible]	[illegible]	[illegible]	28.[illegible]	-1680.66
329.25	1.69	[illegible]	[illegible]	[illegible]	46.2	-1698.39
336.17	2.29	[illegible]	[illegible]	[illegible]	46.2	-1704.76
343.08	2.94	[illegible]	[illegible]	[illegible]	46.2	-1701.02
350	3.58	[illegible]	[illegible]	[illegible]	25.[illegible]	-1694.88
353.85	3.92	[illegible]	[illegible]	[illegible]	25.[illegible]	-1686.18
357.7	4.25	[illegible]	[illegible]	[illegible]	25.[illegible]	-1675.18
361.55	4.54	18.03	-1.4	-4.95	25.[illegible]	-1662.1
365.4	4.83	19.11	-1.17	-4.17	25.[illegible]	-1647.16

You can use the Graph options in Excel to create a table using any collection of the data.