

Vandløbsprojekt Gudenå & Tørring-Ølholm Bæk

December 2007

Bilag 9

Notat om Restaurering af Gudenåen, dateret 2007.12.01

Udarbejdet til brug for udarbejdelse af forslag til regulering af vandløb mv.

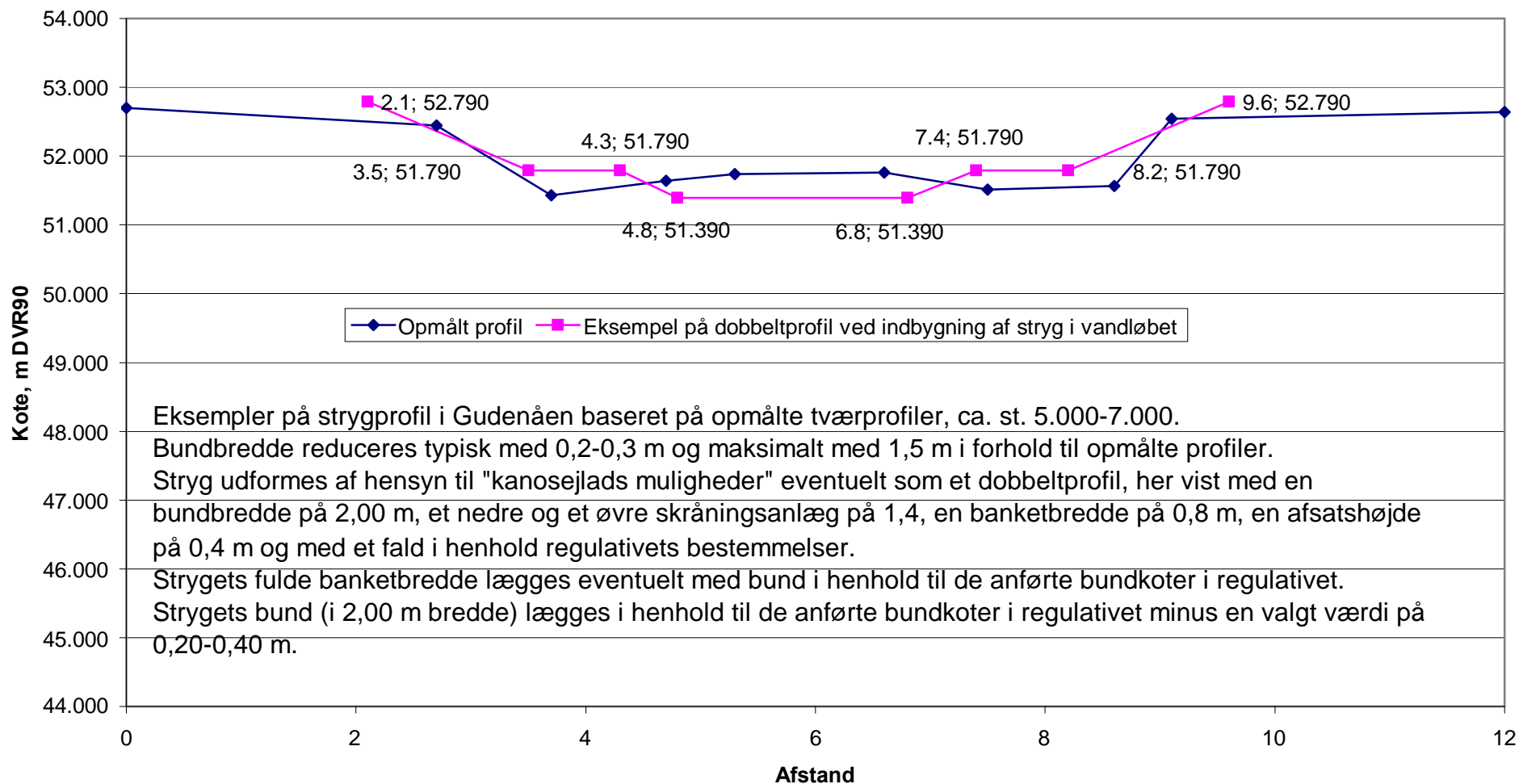
Gudenå restaureres på delstrækninger som anført i projektbeskrivelsen, rapportens afsnit 3.0. Ved restaureringen kan afhængigt af lokale vanddybdeforhold, som har betydning for en uhindret kanosejlads, vælges et vandløbsprofil tilnærmet en dobbeltprofil trapezform eller en enkelprofil trapezform, som vist på side 2-8. Dobbeltprofil trapezformen er i tværprofilerne vist med bund 40 cm under den oprindelige anførte regulativbund. Enkelprofil trapezformen er i tværprofilerne vist med bund svarende til den oprindelige anførte regulativbund. Vanddybde og vandføring ved samme vandstands niveau er derfor væsentlig forskellig for de 2 viste trapezformer (dobbelt- og enkelprofiler).

Restaurering kan gennemføres ved en kombination af genslyngning og andre tiltag som beskrevet. Mellemliggende vandløbsstrækninger kan eventuelt restaureres via en ændret grødeskæringspraksis, hvor der over en længere periode tilstræbes sedimentation i vandløbsbredzonen med en indsnævret vandløbsprofil til følge.

Ved detailplanlægning af et projekt efter alternativ scenarium 1, 2 eller en kombination af de 2 beskrevne alternativer vil restaureringens omfang definere omfanget af afstrømning i projektområdet uden for Gudenåens hovedløb (det restaurerede vandløbsprofil) og i hovedløbet. Konsekvens afstrømninger i Gudenåens hovedløb og udenfor hovedløbet vil indtræffe med øjeblikkelig virkning eller på sigt afhængigt af den valgte restaureringsmetode.

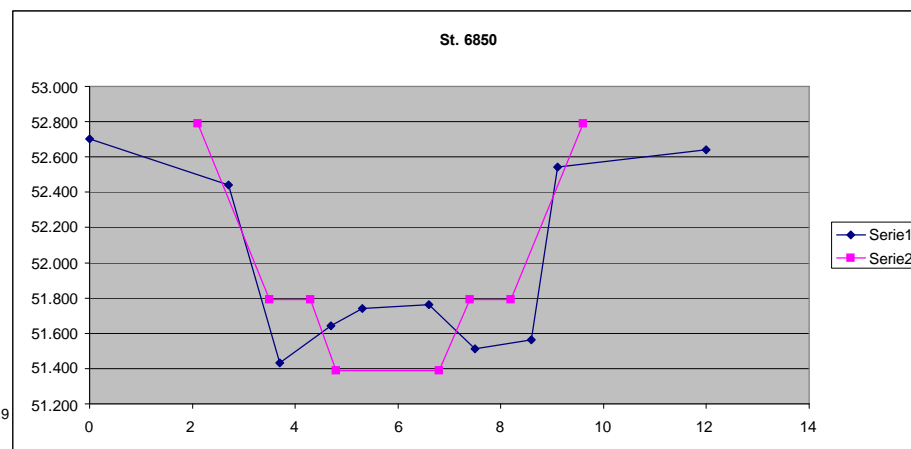
Til denne beskrivelse hører endvidere følgende tværprofiler, som medtages på side 2-8: Tværprofil i Gudenåen, st. 6.850 med indtegnet strygprofil, eksempel, s. 2. Dobbelt trapezprofil med bundbredde 5 m indtegnet ved samtlige opmålte profiler, st. 5200-6850, s. 3-5, Enkelt trapezprofil med bundbredde 5 m indtegnet ved samtlige opmålte profiler, st. 5200-6850, s. 6-8.

Tværsprofil i Gudenåen, st 6.850 med indtegnet strygprofil, eksempel



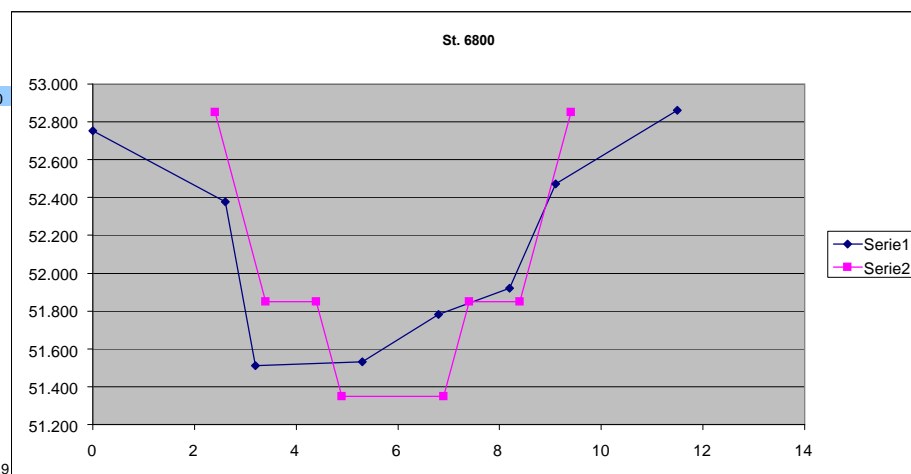
Nedenfor er lagt et dobbelt trapezprofil med bundbredde 5 m ind ved samtlige opmålte tværprofiler, Banketbredde = 0,8 m, øvre anlæg A=1, nedre anlæg A=1,25, strækningen st. 5.200-6.850 i Guden A Stryg opbygget som nævnte dobbeltprofil vist for nedenstående st. 6850, se endvidere diagrammet på foregående side

RS3150	st 6850	BundDNN	DVR90
		51.86	51.79
-90	52.35		
-70	52.65		
-45	52.6		
-10	52.72		
0	52.702		
2.1		52.790	
2.7	52.442		
3.5		51.790	
3.7	51.432		
4.3		51.790	
4.7	51.642		
4.8		51.390	
5.3	51.742		
6.6	51.762		
6.8		51.390	
7.4		51.790	
7.5	51.512		
8.2		51.790	
8.6	51.562		
9.1	52.542		
9.6		52.790	
12	52.642		
22	52.65		
52	52.29		
77	52.58		
107	52.28		

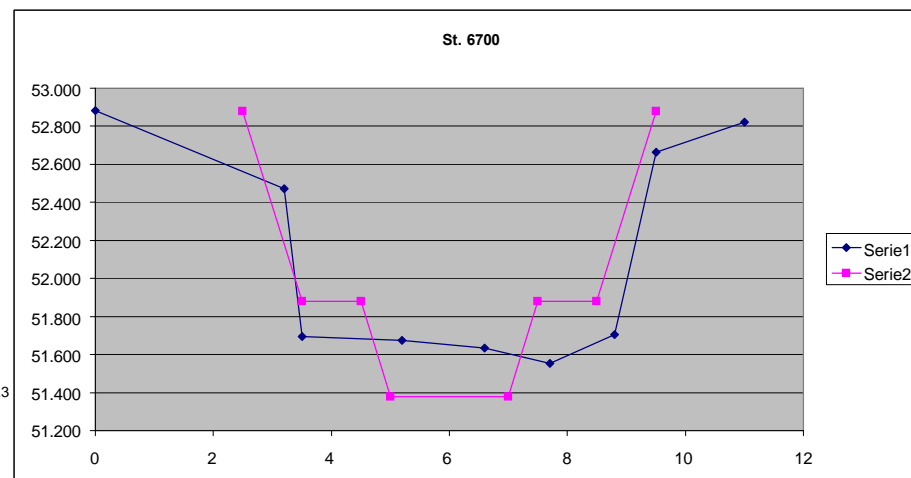


Stenstryg, 110 m ca. st. 6.800 eller i Gudenå st. 6785-6860

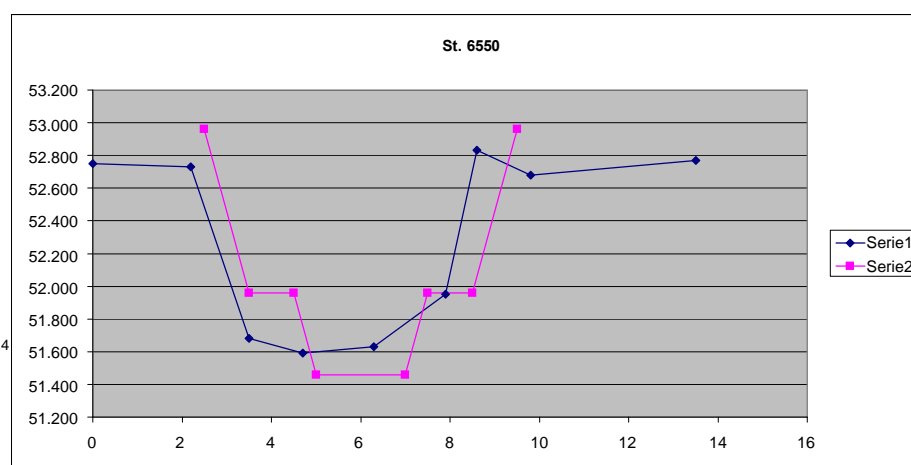
RS3250	St 6750	BundDNN	DVR90
		51.92	51.85
-95	53		
-70	52.61		
-10	52.84		
0	52.752		
2.4		52850.00	
2.6	52.377		
3.2	51.512		
3.4		51850.00	
4.4		51850.00	
4.9		51350.00	
5.3	51.532		
6.8	51.782		
6.9		51350.00	
7.4		51850.00	
8.2	51.922		
8.4		51850.00	
9.1	52.472		
9.4		52850.00	
11.5	52.862		
16.5	52.62		
56.5	52.54		
96.5	52.3		
111.5	52.37		



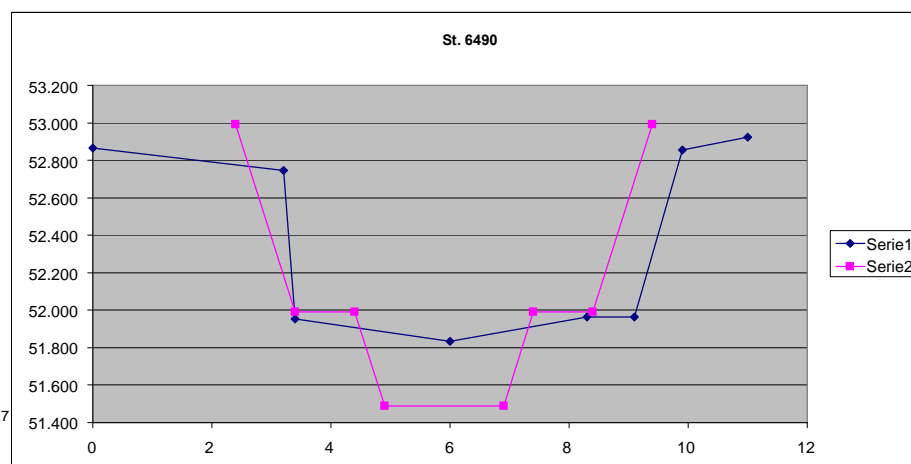
RS3300	St 6700	BundDNN	DVR90
		51.95	51.88
-100	52.95		
-35	52.65		
-20	52.81		
-5	52.6		
0	52.883		
2.5		52880.00	
3.2	52.473		
3.5	51.693	51880.00	
4.5		51880.00	
5		51380.00	
5.2	51.673		
6.6	51.633		
7		51380.00	
7.5		51880.00	
7.7	51.553		
8.5		51880.00	
8.8	51.703		
9.5	52.663	52880.00	
11	52.823		
16	52.6		
31	52.4		
41	52.6		
71	52.55		
86	52.27		
111	52.43		



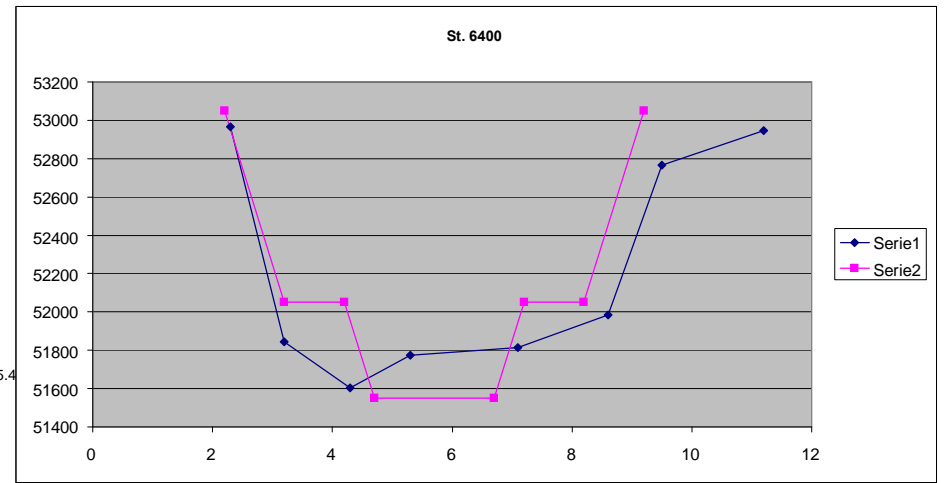
RS 3450	St 6550	BundDNN	DVR90
		52.03	51.96
-100	53.17		
-80	52.95		
-25	52.69		
-5	52.8		
0	52.751		
2.5		52960.00	
2.2	52.731		
3.5	51.681	51960.00	
4.5		51960.00	
4.7	51.591		
5		51460.00	
6.3	51.631		
7		51460.00	
7.5		51960.00	
7.9	51.951		
8.5		51960.00	
8.6	52.831		
9.5		52960.00	
9.8	52.681		
13.5	52.771		
18.5	52.8		
83.5	52.3		
93.5	52.75		
113.5	52.35		



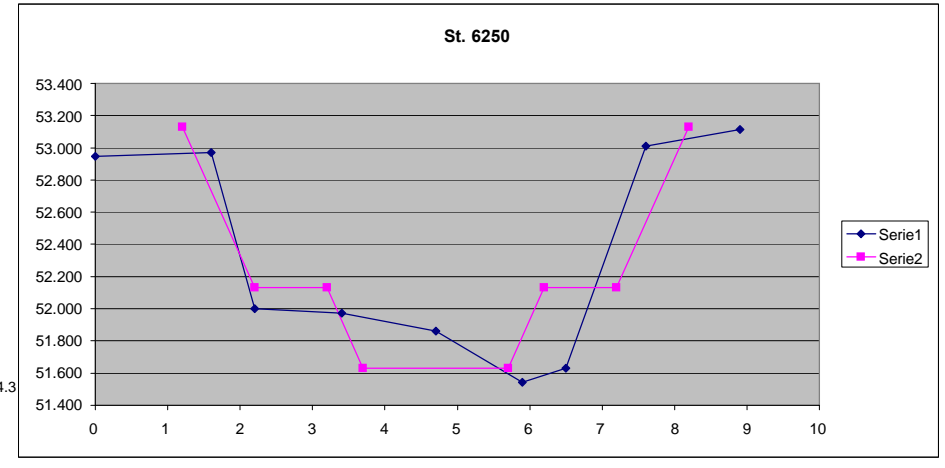
RS 3510	St 6490	BundDNN	DVR90
		52066.00	51.99
-100	53.05		
-80	52.85		
-55	52.76		
-25	52.92		
-5	52.75		
0	52.865		
2.4		52990.00	
3.2	52.745		
3.4	51.955	51990.00	
4.4		51990.00	
4.9		51490.00	
6	51.835		
6.9		51490.00	
7.4		51990.00	
8.3	51.965		
8.4		51990.00	
9.1	51.965		
9.4		52990.00	
9.9	52.855		
11	52.925		
21	52.8		
86	52.1		
111	52.4		



RS 3600	St 6400	52.12	52.05
-100	53.05		
-65	53		
-15	52.76		
-5	53		
0	53.02		k
2.2		53050.00	
2.3	52.965		
3.2	51.845	52050.00	
4.2		52050.00	
4.3	51.605		
4.7		51550.00	
5.3	51.775		
6.7		51550.00	
7.1	51.815		
7.2		52050.00	
8.2		52050.00	
8.6	51.985		
9.2		53050.00	
9.5	52.765		
11.2	52.945		k
20	53		
45	52.9		
95	52.3		
110	52.5		

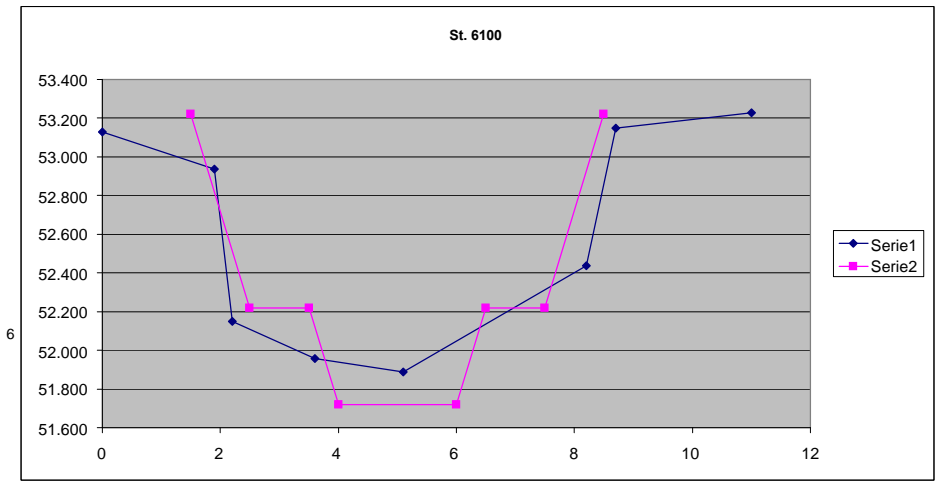


RS 3750	St. 6250	52.20	52.13
-100	53.18		
-75	53.13		
-60	52.71		
-45	53.05		
-5	53.03		
0	52.947		k
1.2		53130.00	
1.6	52.972		
2.2	52.002	52130.00	
3.2		52130.00	
3.4	51.972		
3.7		51630.00	
4.7	51.862		
5.7		51630.00	
5.9	51.542		
6.2		52130.00	
6.5	51.632		
7.2		52130.00	
7.6	53.012		
8.2		53130.00	
8.9	53.112		k
14	53		
34	53.25		
54	52.86		
109	52.85		

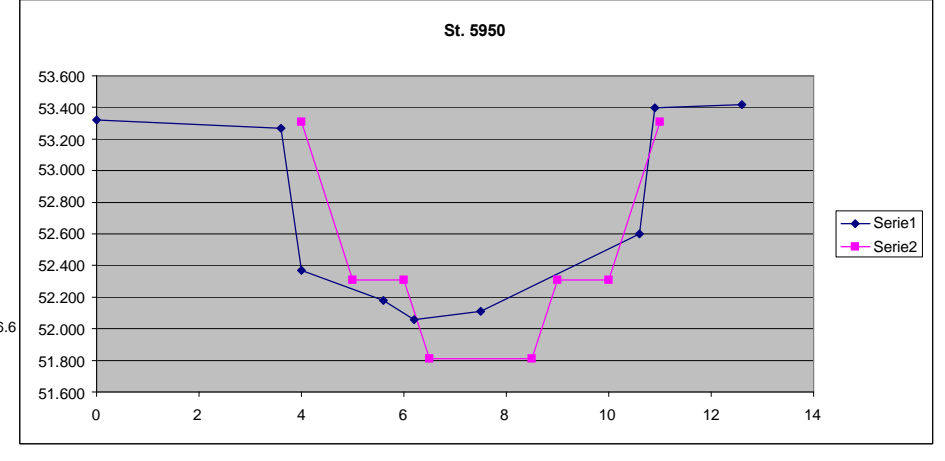


Stenstryg, 120 m ca. st. 6.230 eller i Gudenå st. 6275-6350

RS 3900	St. 6100	52.29	52.22
-100	53.4		
-60	53.23		
-25	53.14		
-5	53.1		
0	53.128		k
1.5		53220.00	
1.9	52.938		
2.2	52.148		
2.5		52220.00	
3.5		52220.00	
3.6	51.958		
4		51720.00	
5.1	51.888		
6		51720.00	
6.5		52220.00	
7.5		52220.00	
8.2	52.438		
8.5		53220.00	
8.7	53.148		
11	53.228		k
16	53.2		
26	53.29		
96	52.85		
111	52.95		

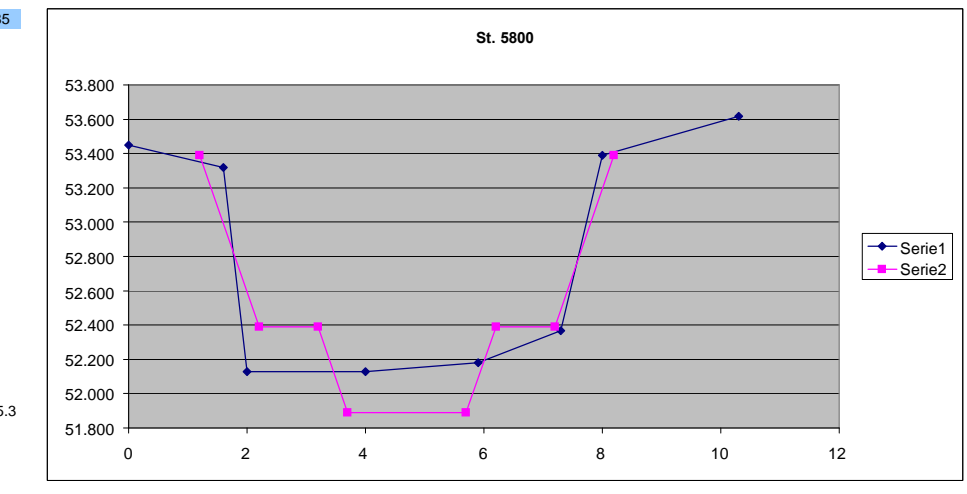


RS 4050	St. 5950	52.38	52.31
-100	53.2		
-35	53.34		
-10	53.31		
0	53.319		k
3			
3.6	53.269		
4	52.369	53310.00	
5		52310.00	
5.6	52.179		
6		52310.00	
6.2	52.059		
6.5		51810.00	
7.5	52.109		
8.5		51810.00	
9		52310.00	
10		52310.00	
10.6	52.599		
10.9	53.399		
11		53310.00	
12.6	53.419		k
17.6	53.25		
47.6	53.1		
87.6	53.26		
112.6	53.2		

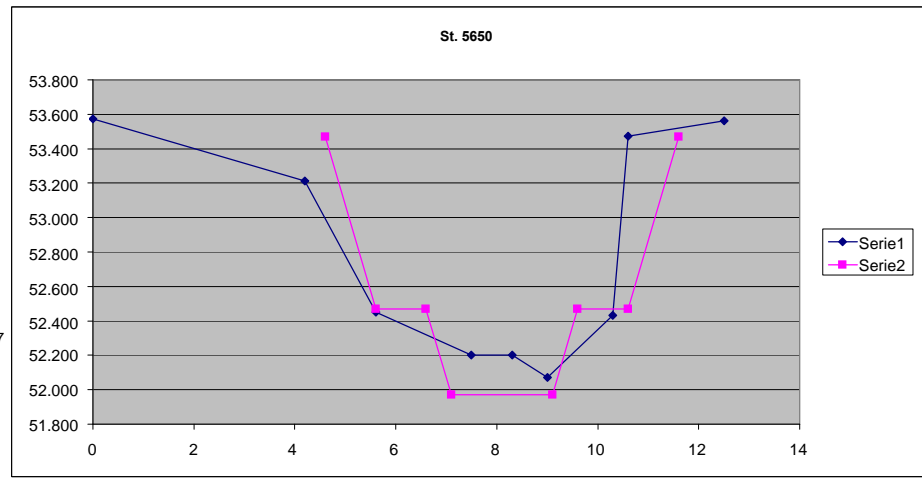


Stenstryg, 125 m ca. st. 5.920 eller i Gudenå st. 5910-5985

RS 4200	St. 5800	52.46	52.39
-95	53.45		
-85	53.63		
-45	53.35		
-20	53.48		
-5	53.3		
0	53.449		k
1.2		53390.00	
1.6	53.319		
2	52.129		
2.2		52390.00	
3.2		52390.00	
3.7		51890.00	
4	52.129		
5.7		51890.00	
5.9	52.179		
6.2		52390.00	
7.2		52390.00	
7.3	52.369		
8	53.389		
8.2		53390.00	
10.3	53.619		k
15.3	53.58		
75.3	53.16		
110.3	53.9		

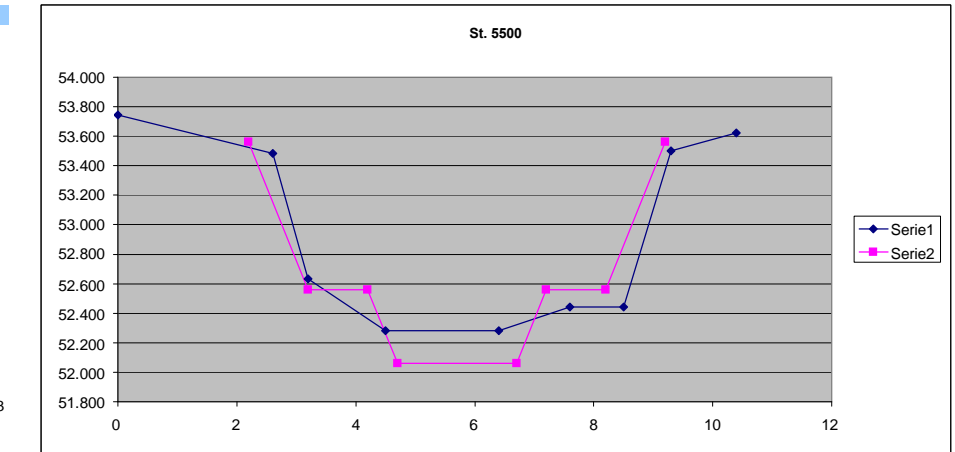


Rs 4350	St. 5650	52.54	52.47
-100	53.46		
-85	53.56		
-50	53.35		
-5	53.63		
0	53.572		k
4.6		53470.00	
4.2	53.212		
5.6	52.452	52470.00	
6.6		52470.00	
7.1		51970.00	
7.5	52.202		
8.3	52.202		
9	52.072		
9.1		51970.00	
9.6		52470.00	
10.3	52.432		
10.6	53.472	52470.00	
11.6		53470.00	
12.5	53.562		k
17.5	53.5		
37.5	53.75		
52.5	53.5		
87.5	54.76		

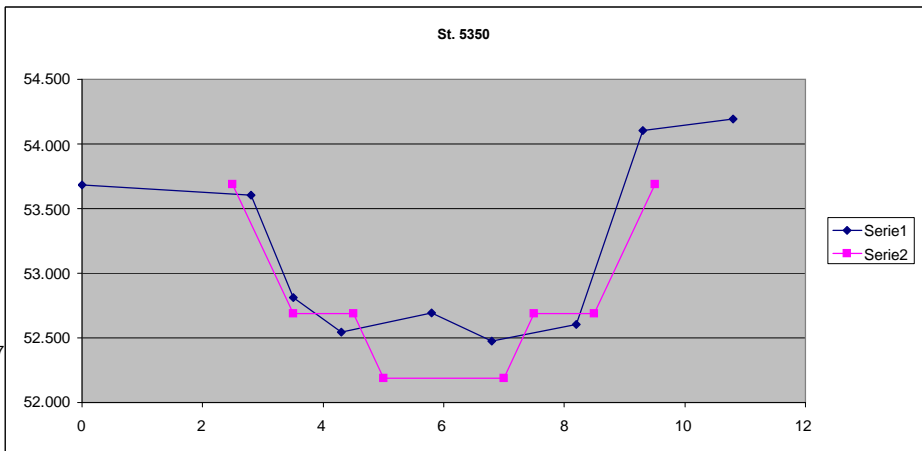


Stenstryg, 125 m ca. st. 5.700 eller i Gudenå st. 5535-5610

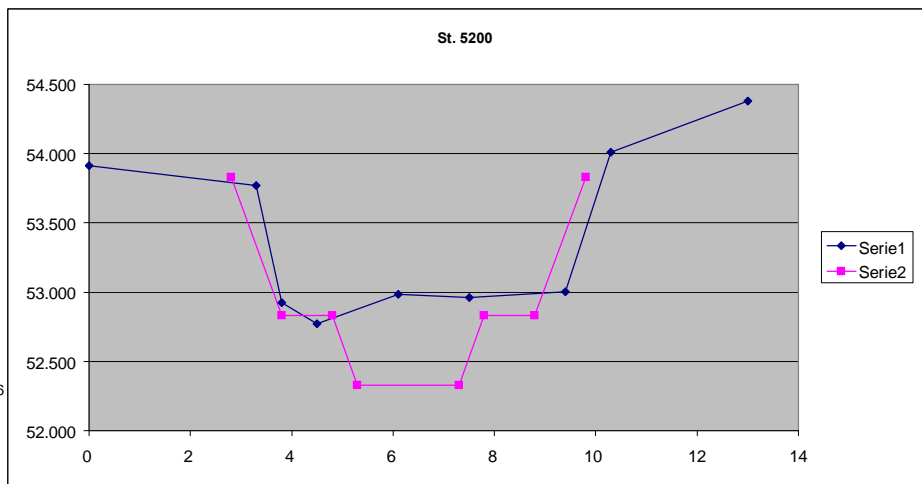
RS 4500	St. 5500	52.63	52.56
0.6 promille			
-95	53.5		
-55	53.6		
-20	53.95		
-5	53.7		
0	53.743		k
2.2		53560.00	
2.6	53.483		
3.2	52.633	52560.00	
4.2		52560.00	
4.5	52.283		
4.7		52060.00	
6.4	52.283		
6.7		52060.00	
7.2		52560.00	
7.6	52.443		
8.2		52560.00	
8.5	52.443		
9.2		53560.00	
9.3	53.503		
10.4	53.623		k
15.4	54.04		
25.4	54.08		
65.4	53.5		
95.4	53.76		
110.4	53.73		



RS 4650	St. 5350	52.765.00	52.69
-100	55.35		
-70	54.13		
-40	54		
-5	54.2		
0	53.683		k
2.5		53690.00	
2.8	53.603		
3.5	52.813	52690.00	
4.3	52.543		
4.5		52690.00	
5		52190.00	
5.8	52.693		
6.8	52.473		
7		52190.00	
7.5		52690.00	
8.2	52.603		
8.5		52690.00	
9.3	54.103		
9.5		53690.00	
10.8	54.193		k
15.8	53.9		
35.8	54.2		
55.8	53.94		
70.8	54.3		
110.8	54.02		

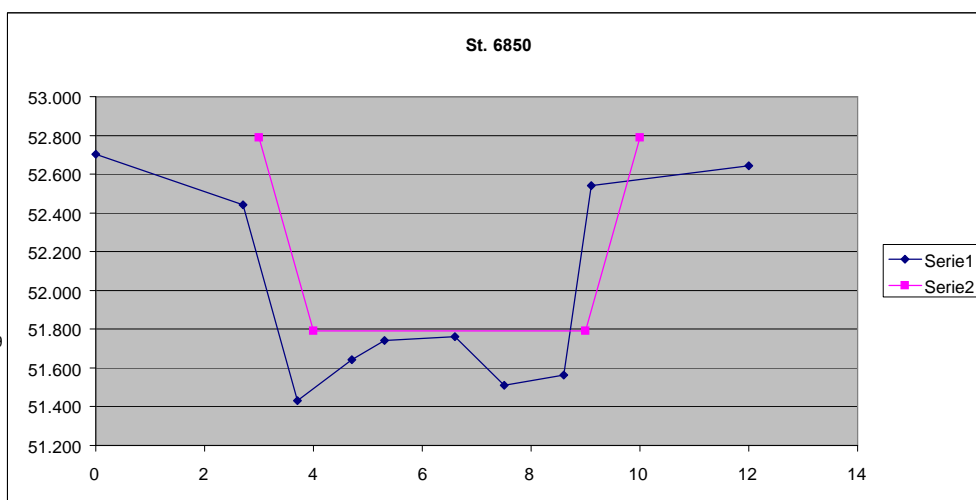


RS 4800	St. 5200	52.90	52.83
-100	53.98		
-80	54.16		
-60	53.86		
-15	54.37		
-5	53.9		
0	53.912		k
2.8		53830.00	
3.3	53.772		
3.8	52.922	52830.00	
4.5	52.772		
4.8		52830.00	
5.3		52330.00	
6.1	52.982		
7.3		52330.00	
7.5	52.962		
7.8		52830.00	
8.8		52830.00	
9.4	53.002		
9.8		53830.00	
10.3	54.012		
13	54.382		k
18	54.6		
98	53.9		
113	53.9		

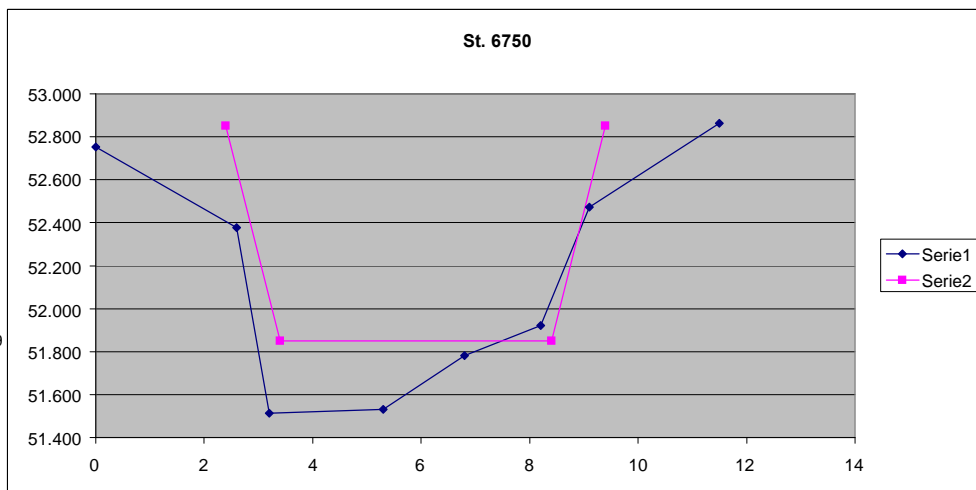


Nedenfor er lagt et trapezprofil med bundbredde 5 m ind ved samtlige opmålte tværprofiler, Anlæg A=1, strækningen st. 5.200-6.850 i Guden Å

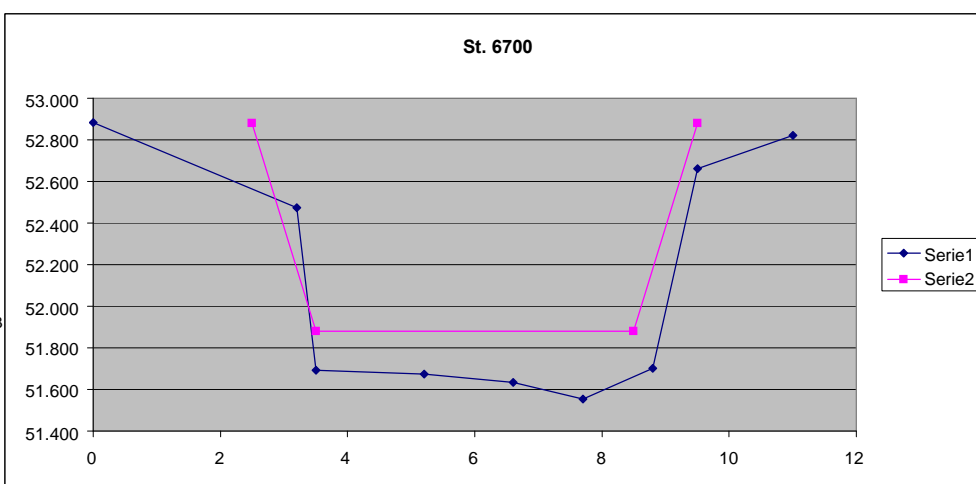
RS3150	st 6850	BundDNN	DVR90
		51.86	51.79
-90	52.35		
-70	52.65		
-45	52.6		
-10	52.72		
0	52.702		
2.7	52.442		
3		52.790	
3.7	51.432		
4		51.790	
4.7	51.642		
5.3	51.742		
6.6	51.762		
7.5	51.512		
8.6	51.562		
9		51.790	
9.1	52.542		
10		52.790	
12	52.642		
22	52.65		
52	52.29		
77	52.58		
107	52.28		



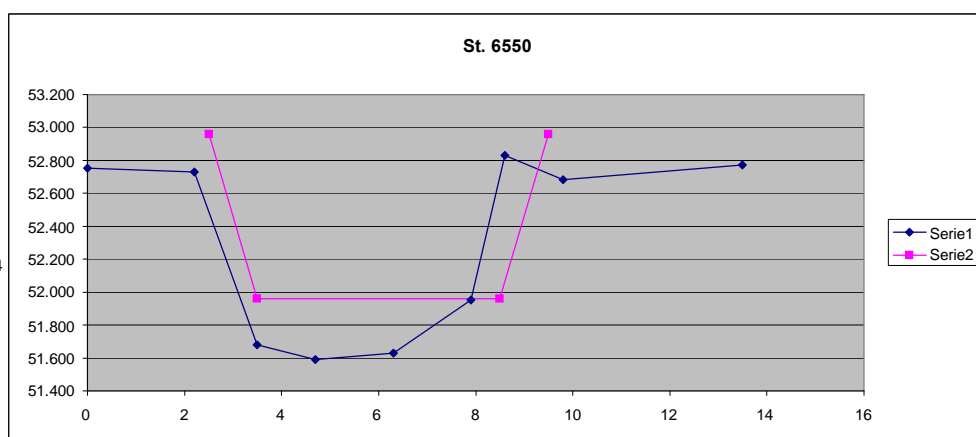
RS3250	St 6750	BundDNN	DVR90
		51.92	51.85
-95	53		
-70	52.61		
-10	52.84		
0	52.752		
2.4		52850.00	
2.6	52.377		
3.2	51.512		
3.4		51850.00	
5.3	51.532		
6.8	51.782		
8.2	51.922		
8.4		51850.00	
9.1	52.472		
9.4		52850.00	
11.5	52.862		
16.5	52.62		
56.5	52.54		
96.5	52.3		
111.5	52.37		



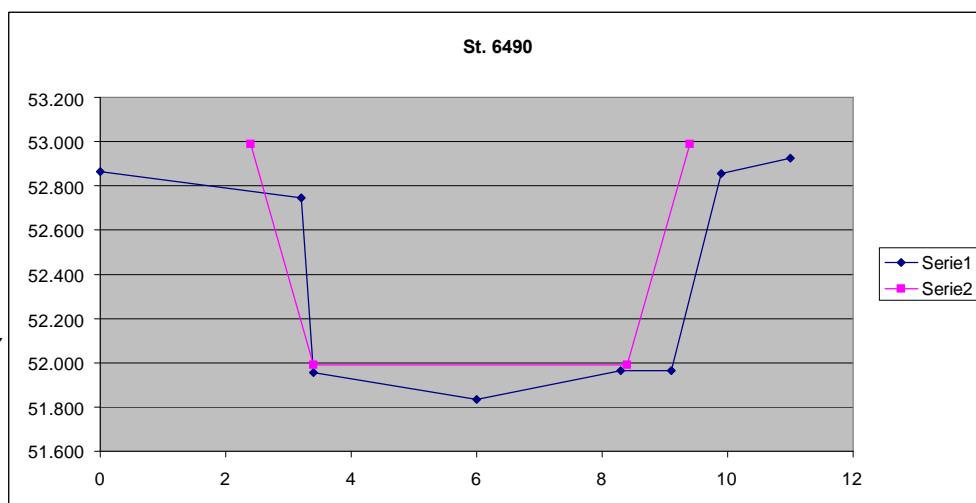
RS3300	St 6700	BundDNN	DVR90
		51.95	51.88
-100	52.95		
-35	52.65		
-20	52.81		
-5	52.6		
0	52.883		
2.5		52880.00	
3.2	52.473		
3.5	51.693		
5.2	51.673		
6.6	51.633		
7.7	51.553		
8.5		51880.00	
8.8	51.703		
9.5	52.663		
11	52.823		
16	52.6		
31	52.4		
41	52.6		
71	52.55		
86	52.27		
111	52.43		



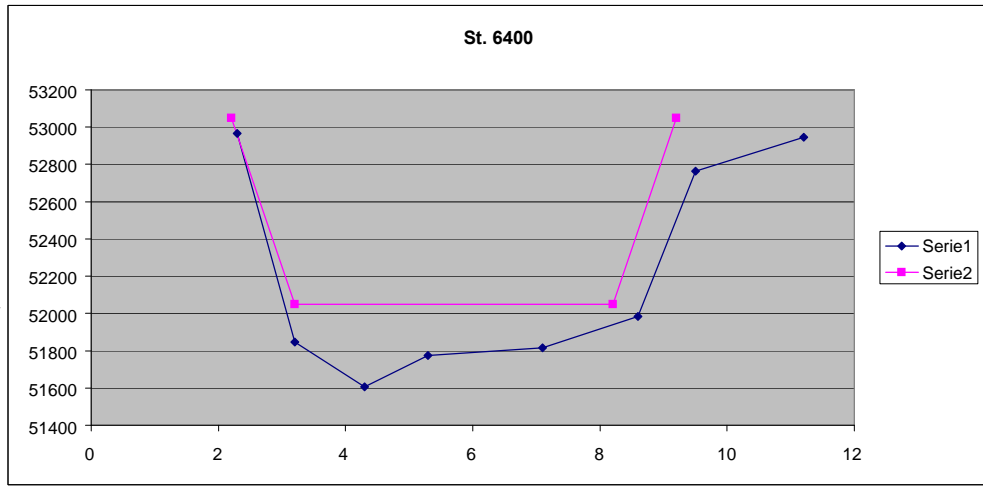
RS 3450	St 6550	BundDNN	DVR90
		52.03	51.96
-100	53.17		
-80	52.95		
-25	52.69		
-5	52.8		
0	52.751		
2.5		52960.00	
2.2	52.731		
3.5	51.681		
4.7	51.591		
6.3	51.631		
7.9	51.951		
8.5		51960.00	
8.6	52.831		
9.5		52960.00	
9.8	52.681		
13.5	52.771		
18.5	52.8		
83.5	52.3		
93.5	52.75		
113.5	52.35		



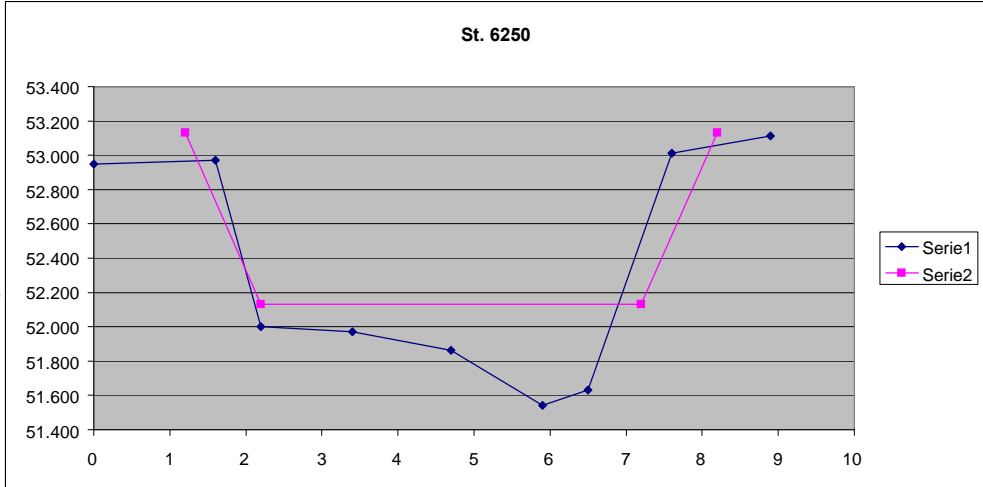
RS 3510	St 6490	BundDNN	DVR90
		52066.00	51.99
-100	53.05		
-80	52.85		
-55	52.76		
-25	52.92		
-5	52.75		
0	52.865		
2.4		52990.00	
3.2	52.745		
3.4	51.955		
6	51.835		
8.3	51.965		
8.4		51990.00	
9.1	51.965		
9.4		52990.00	
9.9	52.855		
11	52.925		
21	52.8		
86	52.1		
111	52.4		



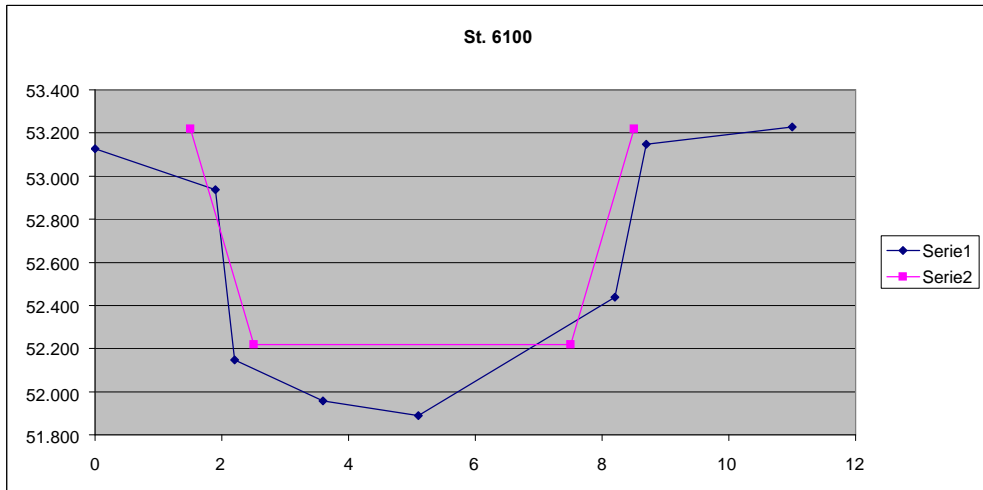
RS 3600	St 6400	52.12	52.05
-100	53.05		
-65	53		
-15	52.76		
-5	53		
0	53.02		k
2.2		53050.00	
2.3	52.965		
3.2	51.845	52050.00	
4.3	51.605		
5.3	51.775		
7.1	51.815		
8.2		52050.00	
8.6	51.985		
9.2		53050.00	
9.5	52.765		
11.2	52.945		k
20	53		
45	52.9		
95	52.3		
110	52.5		



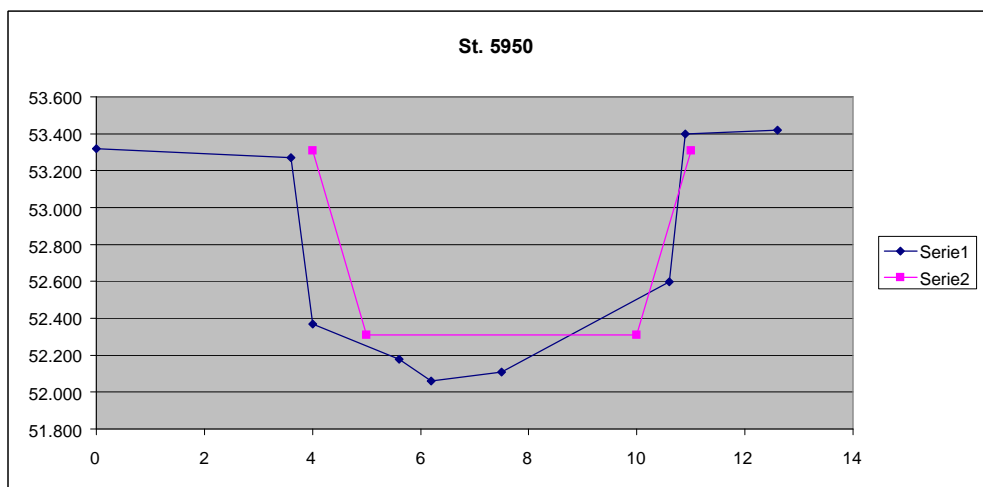
RS 3750	St 6250	52.20	52.13
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-75	53.13		
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-5	53.03		
0	52.947		k
1.2		53130.00	
1.6	52.972		
2.2	52.002	52130.00	
3.4	51.972		
4.7	51.862		
5.9	51.542		
6.5	51.632		
7.2		52130.00	
7.6	53.012		
8.2		53130.00	
8.9	53.112		k
14	53		
34	53.25		
54	52.86		
109	52.85		



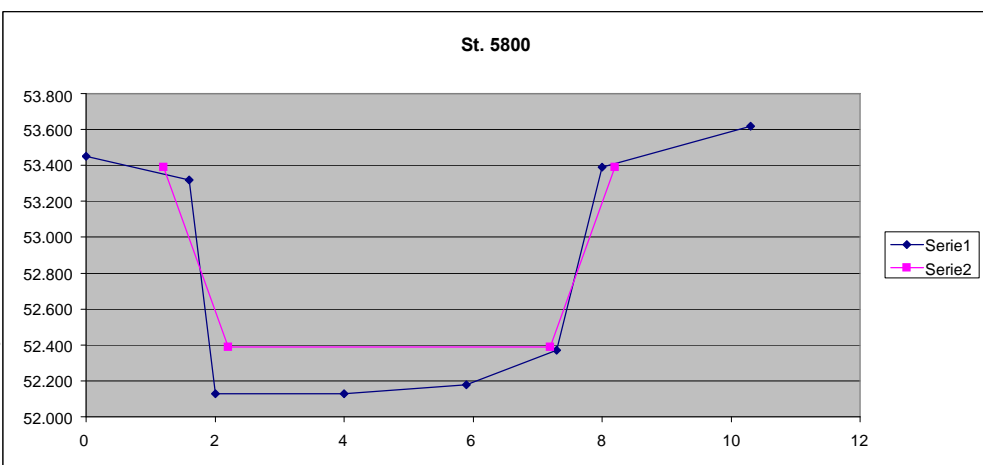
RS 3900	St 6100	52.29	52.22
-100	53.4		
-60	53.23		
-25	53.14		
-5	53.1		
0	53.128		k
1.5		53220.00	
1.9	52.938		
2.2	52.148		
2.5		52220.00	
3.6	51.958		
5.1	51.888		
7.5		52220.00	
8.2	52.438		
8.5		53220.00	
8.7	53.148		
11	53.228		k
16	53.2		
26	53.29		
96	52.85		
111	52.95		



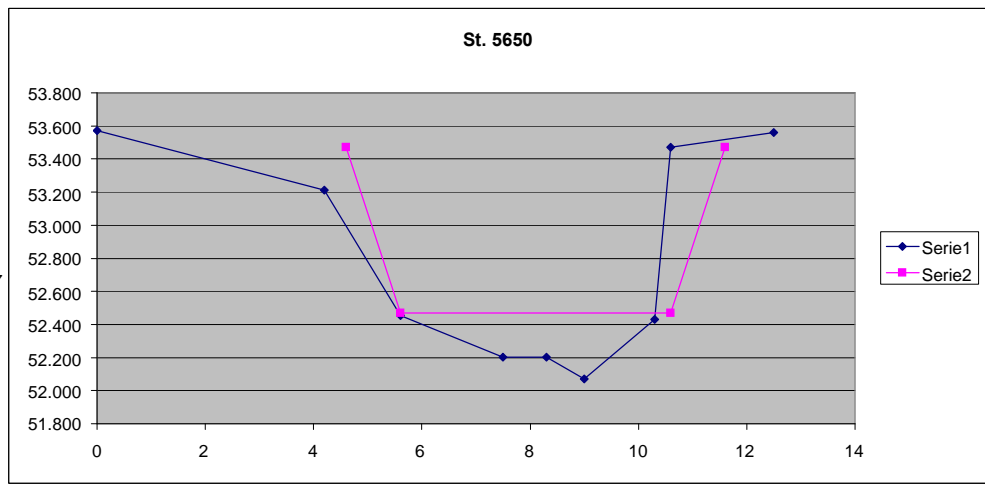
RS 4050	St 5950	52.38	52.31
-100	53.2		
-35	53.34		
-10	53.31		
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3			
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4	52.369	53310.00	
5		52310.00	
5.6	52.179		
6.2	52.059		
7.5	52.109		
9			
10		52310.00	
10.6	52.599		
10.9	53.399		
11		53310.00	
12.6	53.419		k
17.6	53.25		
47.6	53.1		
87.6	53.26		
112.6	53.2		



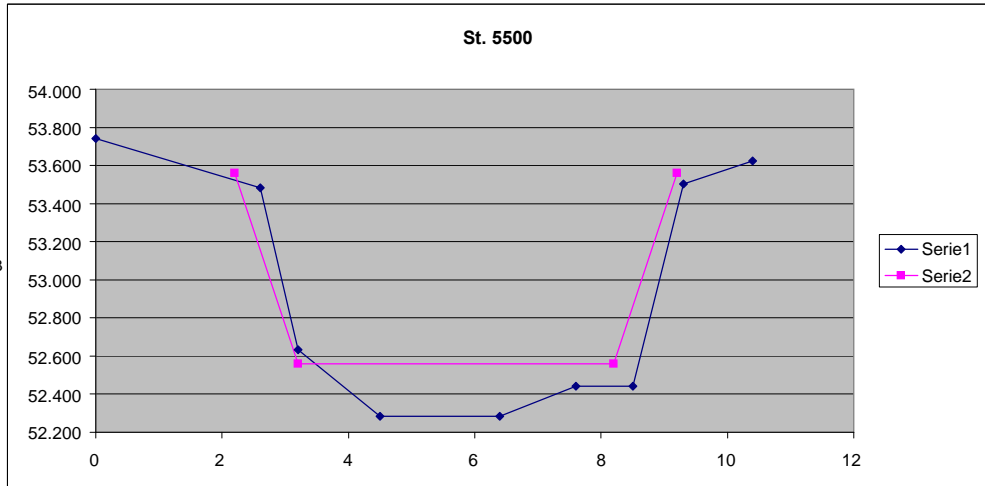
RS 4200	St 5800	52.46	52.39
-95	53.45		
-85	53.63		
-45	53.35		
-20	53.48		
-5	53.3		
0	53.449		k
1.2		53390.00	
1.6	53.319		
2	52.129		
2.2		52390.00	
4	52.129		
5.9	52.179		
7.2		52390.00	
7.3	52.369		
8	53.389		
8.2		53390.00	
10.3	53.619		k
15.3	53.58		
75.3	53.16		
110.3	53.9		



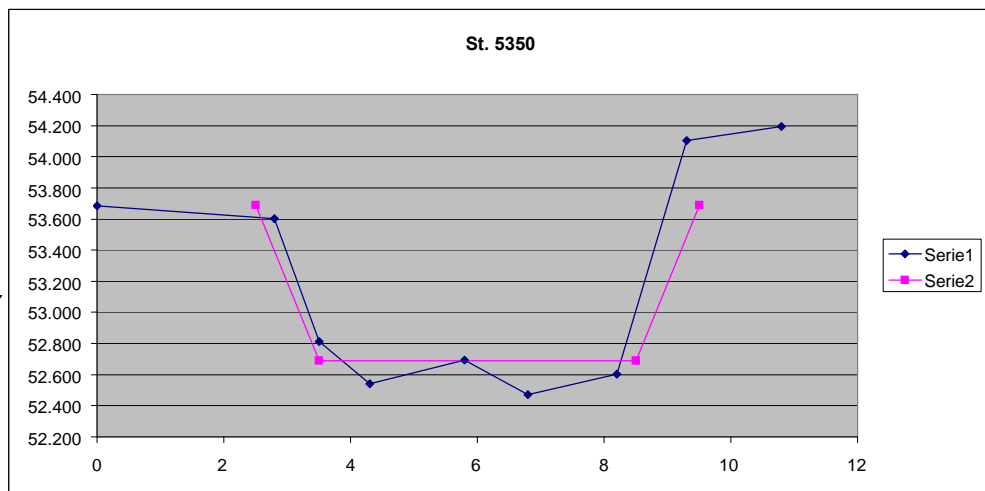
Rs 4350	St. 5650	52.54	52.47
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-5	53.63		
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4.6		53470.00	
4.2	53.212		
5.6	52.452	52470.00	
7.5	52.202		
8.3	52.202		
9	52.072		
10.3	52.432		
10.6	53.472	52470.00	
11.6		53470.00	
12.5	53.562		k
17.5	53.5		
37.5	53.75		
52.5	53.5		
87.5	54.76		



0.6 promille	St. 5500	52.63	52.56
RS 4500			
0.9 promille			
-95	53.5		
-55	53.6		
-20	53.95		
-5	53.7		
0	53.743		k
2.2		53560.00	
2.6	53.483		
3.2	52.633	52560.00	
4.5	52.283		
6.4	52.283		
7.6	52.443		
8.2		52560.00	
8.5	52.443		
9.2		53560.00	
9.3	53.503		k
10.4	53.623		
15.4	54.04		
25.4	54.08		
65.4	53.5		
95.4	53.76		
110.4	53.73		



RS 4650	St. 5350	52765.00	52.69
-100	55.35		
-70	54.13		
-40	54		
-5	54.2		
0	53.683		k
2.5		53690.00	
2.8	53.603		
3.5	52.813	52690.00	
4.3	52.543		
5.8	52.693		
6.8	52.473		
8.2	52.603		
8.5		52690.00	
9.3	54.103		k
9.5		53690.00	
10.8	54.193		
15.8	53.9		
35.8	54.2		
55.8	53.94		
70.8	54.3		
110.8	54.02		



RS 4800	St. 5200	52.90	52.83
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-80	54.16		
-60	53.86		
-15	54.37		
-5	53.9		
0	53.912		k
2.8		53830.00	
3.3	53.772		
3.8	52.922	52830.00	
4.5	52.772		
6.1	52.982		
7.5	52.962		
8.8		52830.00	
9.4	53.002		
9.8		53830.00	
10.3	54.012		k
13	54.382		
18	54.6		
98	53.9		
113	53.9		

