ACCRETION PROFILING DURING 1997

Accretion profiling was conducted in a number of Eastern Area rivers in low flow periods during 1997 in an attempt to identify the baseflow contribution to rivers during drought years. A series of sites were chosen for repeated measurements during both wet and dry years. Table 1 shows the dates and locations of the accretion profiles.

An accretion profile, basically, shows how the river gains (or loses!) flow along its length. This is done by measuring the flow at various representative points along the river (usually close to where tributaries join the main channel) and then plotting the results on a graph. It is a particularly useful method for identifying and isolating flow anomalies in a river (e.g. a sudden drop in flow) that tend to occur during times of low flows; once identified, mitigation measures or other solutions can be attempted if required.

Agency staff who were involved in accretion profiling during 1997: Toff Andersen, Cath Tomlin, Claire Hammond, Chris Watson, John Waddingham, Nigel King (placement student) and Adam Nicholls. Students assisting were John Caesar and Cathy Block. In total, 19 accretion profiles were completed during 1997. All proposed sites listed may not have been chosen for actual measurements, circumstances sometimes dictating otherwise.

For 1998, it has been planned to extend the accretion profiling to allow for more comprehensive coverage of a greater number of Eastern Area rivers. Funding has been applied for to facilitate this.

TABLE 1

RIVER	CATCHMENT	ACCRETION PROFILES COMPLETED TO DATE
Bure	34/6	13/02/97
Wensum	34/11	23/06/97
Yare	34/13,15	08/08/97
Alde/Ore/Fromus	35/4	10/6/97, 17/6/97 x3
Deben	35/6	13/11/97
Brett	36/17	05/06/97
Colne	37/21,23	17/4/97, 4/6/97, 6/6/97, 29/7/97, 20/8/97
Brain	37/32	20/06/97
Chelmer	37/35,36	24/04/97
Mardyke	37/56	19/06/97

CATCHMENT:

STIFFKEY

HYDROMETRIC AREA:

34/3

ACCRETION PROFILES COMPLETED:

None

ACCRETION PROFILE SITES

NORFOLK

Stiffkey - Catchment 34/3

1. **TG 007 303**
2. Road at **TF 995 311**
3. A149 at **TF 976 330**
4. Great Snoring **TF 949 342**
5. East Barsham **TF 917 340**

Houghton boreholes:

6. *Either* North Barsham **TF 918 350** *or* Ford at **TF 926 356**
7. Road bridge at **TF 934 365** (provided wier is working)
8. Ford in Great Walshingham **TF 942 377**
9. Bridge on tributary **TF 945 383**
10. Stiffkey at Wighton **TF 942 397**

Binham stream - abstraction borehole affect on flow:

11. Binham village bridge **TF 983 399**
12. Ford at **TF 962 411**
13. Stiffkey village **TF 975 429**

CATCHMENT:

GLAVEN

HYDROMETRIC AREA:

34/4

ACCRETION PROFILES COMPLETED:

None

ACCRETION PROFILE SITES

NORFOLK

Glaven - Catchment 34/4

1. **TG 128 391**(winter storage reservoir application at top of catchment)
2. Upstream of Holt SSSI **TG 095 380**
3. Norwich - Holt Road **TG 086 363**
4. Hunworth **TG 071 351**
5. Tributary at **TG 050 360**
6. Footbridge downstream of fork in road - previous site **TG 057 377** or ford further downstream at **TG 060 383**
7. Tributary at **TG 063 392**
8. Glandford upstream of mill at **TG 045 413**

CATCHMENT:

BURE

HYDROMETRIC AREA:

34/6

ACCRETION PROFILES COMPLETED:

None

ACCRETION PROFILE SITES

NORFOLK

Bure - Catchment 34/6

Flow was measured at the following points by Biology during July 1993:

1. Upstream Blk. **TG 085 305**
2. Blk. Water **TG 089 302**
3. Edge. Trib. **TG 099 312**
4. Itteringham Stream **TG 146 307**
5. Scar Beck **TG 182 309**
6. Mermaid **TG 212 245**
7. Kings **TG 237 253**
8. Stake **TG 251 243**
9. Camping **TG 234 226**
10. Spixworth **TG 265 166**
11. Dobbs **TG 268 155**
12. Gunton Park SSSI (specifically requested point) **TG 223 355**

Additional points on Spixworth Beck (for licence renewals and proposals):

13. **TG 195 157**
14. **TG 220 155**
15. **TG 220 162**
16. **TG 214 182**
17. One point downstream of confluence at Spixworth Bridge **TG 239 164**
18. Crostwick SSSI **TG 260 165**

ACCRETION PROFILES FOR R. BURE 13/2/97

CATCHMENT:

WENSUM

HYDROMETRIC AREA:

34/11

ACCRETION PROFILES COMPLETED:

23-24/6/97
06/09/92

ACCRETION PROFILE SITES

NORFOLK

Wensum - Catchment 34/11

Flow was measured at the following points by Mott MacDonald during August 1990:

Main stream:

1. Pear Tree Corner **TF 899 238**
2. South Raynham **TF 884 242**
3. Helhoughton **TF 873 267**
4. Doughton **TF 882 290**
5. Fakenham **TF 919 294** (Gauging Station)
6. Great Ryburgh **TF 964 270**
7. Guist **TF 997 250**
8. Billingford **TG 004 203**
9. Swanton Morley **TG 020 184** (Gauging Station)
10. Mill Street **TG 051 178**
11. Lyng **TG 072 177**
12. Lenwade **TG 103 183**
13. Attlebridge **TG 128 167**
14. Ringland **TG 142 137**
15. Costessy Mill **TG 177 128** (Gauging Station)

Tributaries:

16. East Rudham **TF 833 284**
17. Tatterford **TF 867 280**
18. Worthing **TF 999 201**
19. Penny Spot Beck **TG 035 169**

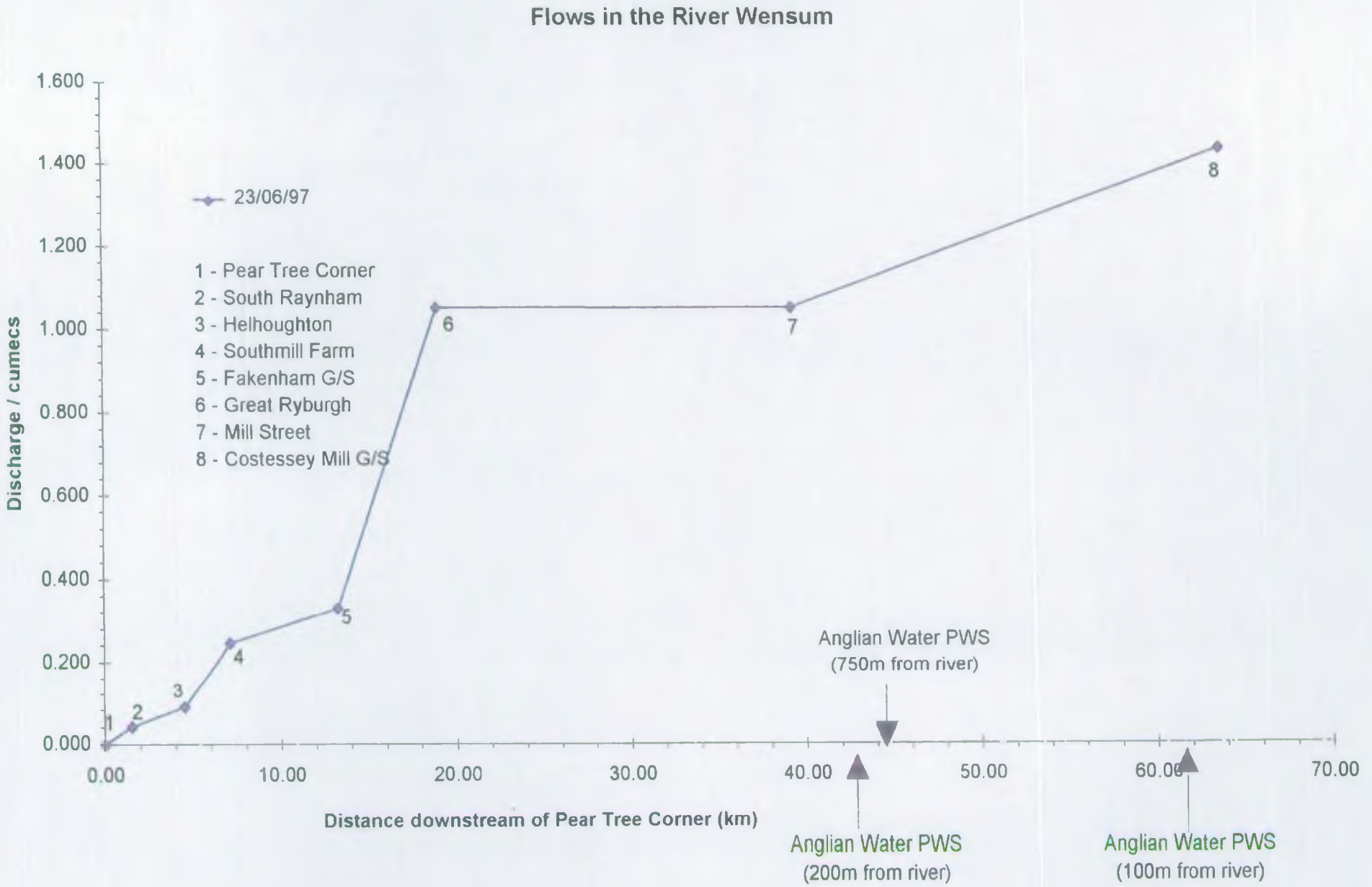
20. Blackwater Farm **TG 082·202**

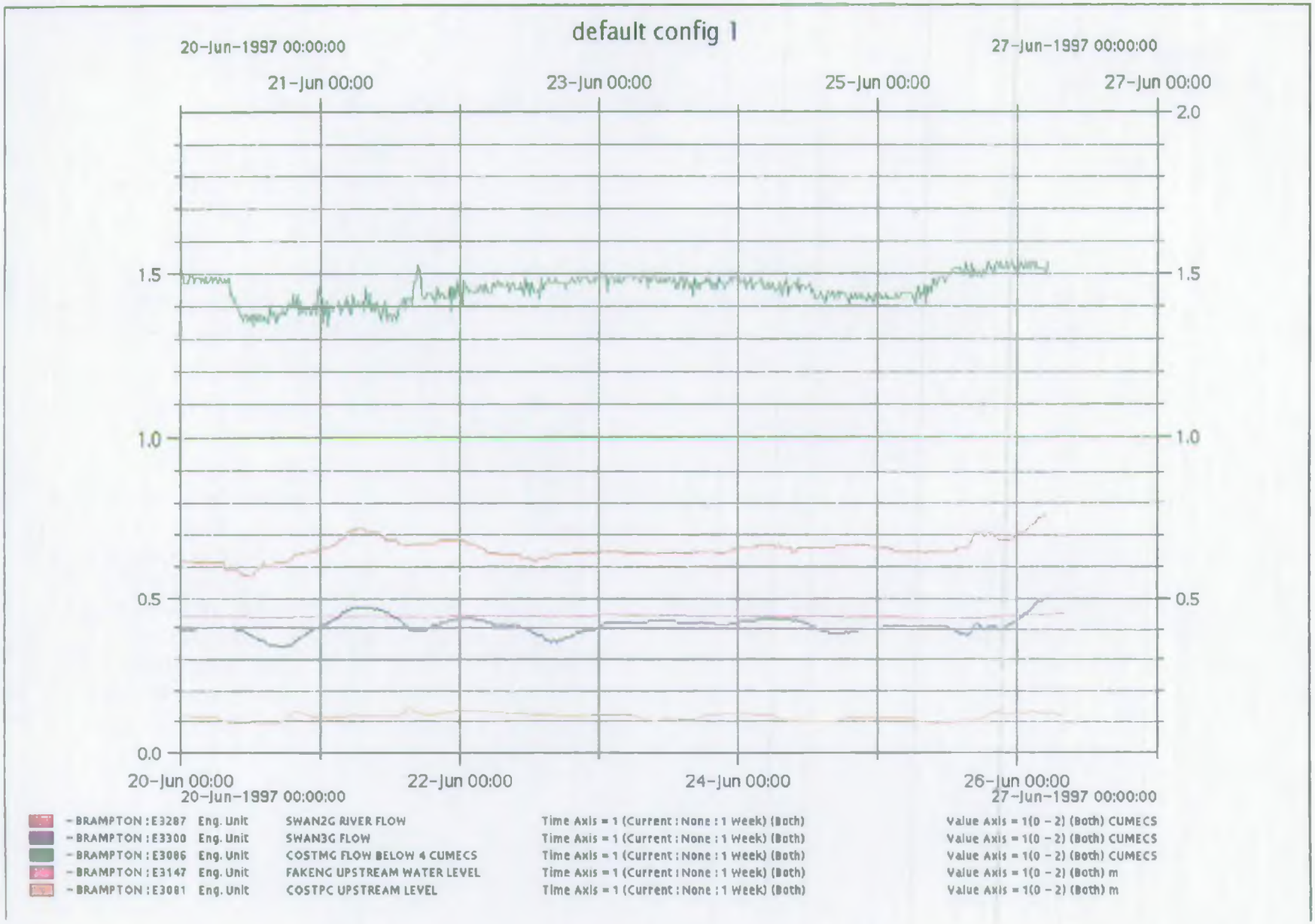
21. Whitewater Farm **TG 086 203**

22. Foxford **TG 098 189**

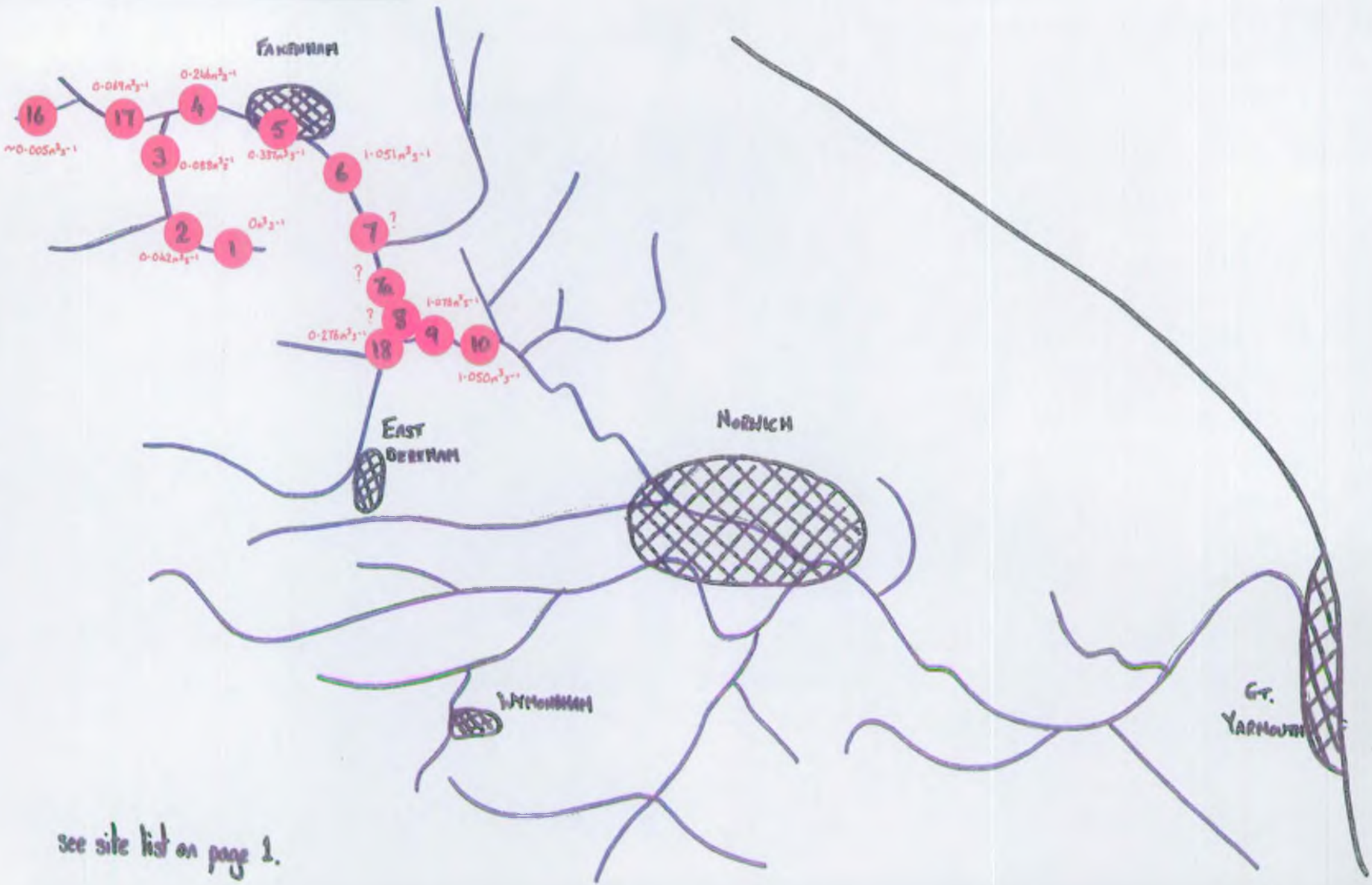
23. Alderford **TG 127 186**

24. River Tud **TG 170 113** (Gauging Station)


Flows in the River Wensum
Discharge / cumecs
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
23/06/97
1 - Pear Tree Corner
2 - South Raynham
3 - Helhoughton
4 - Southmill Farm
5 - Fakenham G/S
6 - Great Ryburgh
7 - Mill Street
8 - Costessey Mill G/S
1
2
3
4
5
6
7
8
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
Distance downstream of Pear Tree Corner (km)
Anglian Water PWS
(750m from river)
Anglian Water PWS
(200m from river)
Anglian Water PWS
(100m from river)


default config 1
20-Jun-1997 00:00:00
27-Jun-1997 00:00:00
21-Jun 00:00
23-Jun 00:00
25-Jun 00:00
27-Jun 00:00
2.0
1.5
1.0
0.5
0.0
20-Jun 00:00
22-Jun 00:00
24-Jun 00:00
26-Jun 00:00
20-Jun-1997 00:00:00
27-Jun-1997 00:00:00
- BRAMPTON : E3287 Eng. Unit SWAN2G RIVER FLOW
- BRAMPTON : E3300 Eng. Unit SWAN3G FLOW
- BRAMPTON : E3086 Eng. Unit COSTMG FLOW BELOW 4 CUMECS
- BRAMPTON : E3147 Eng. Unit FAKENG UPSTREAM WATER LEVEL
- BRAMPTON : E3081 Eng. Unit COSTPC UPSTREAM LEVEL
Time Axis = 1 (Current : None : 1 Week) (Both)
Time Axis = 1 (Current : None : 1 Week) (Both)
Time Axis = 1 (Current : None : 1 Week) (Both)
Time Axis = 1 (Current : None : 1 Week) (Both)
Time Axis = 1 (Current : None : 1 Week) (Both)
Value Axis = 1(0 - 2) (Both) CUMECS
Value Axis = 1(0 - 2) (Both) CUMECS
Value Axis = 1(0 - 2) (Both) CUMECS
Value Axis = 1(0 - 2) (Both) m
Value Axis = 1(0 - 2) (Both) m

River Wensum



see site list on page 1.

Pear Tree Corner, River Hersham ①

TF 879 238

23/6/97

South Raynham, River Wensum ②

TF 884 242

23/6/97

Park House, Helhaughton River Wensum ③

TF 873 267

23/6/97

Southmill Farm, River Wensum

TF 881 282

23/6/97

Great Ryburgh, River Wensum ⑥

TF 963 273

24/6/97

County School, River Wensum

TF 992 228

24/6/97

Billingford, River Wensum (8)

TG 004 203

24/6/97

Mill Street, River Wensum (10)

TG 052 178

24/6/97

East Rudham, Trib. of River Wensum (16)

TF 833 284

23/6/97

Tatterford, Trib. of River Wensum (17)

TF 867 280

23/6/97

Warthing Mill, Wendling Beck (18)

TF 999 201

24/6/97

Wathing Mill, Wendling Beck (18)

TF 999 201

24/6/94

Miscallaneous Current Metering Sheet

River: *Wensum* **Date** 23/06/97

Location: *South Raynham* **Site No.** *2*

NGR: *TF 884 242* **Start** *10:50* **Hrs**

Observer *CW, CB & JC* **Finish** *11:05* **Hrs**

Remarks: u/s of bridge. silt/gravel bed

Counter Time *60* *Secs* *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 0.042 m³/s or 42 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	0.3	0	0				0.000	0.000			0
				0.600	0.050	0.030			0.045	0.0013	
2	0.9	0.1	18				0.300	0.089			1
				0.300	0.100	0.030			0.089	0.0027	
3	1.2	0.1	18				0.300	0.089			1
				0.300	0.120	0.036			0.118	0.0042	
4	1.5	0.14	32				0.533	0.147			1
				0.300	0.140	0.042			0.155	0.0065	
5	1.8	0.14	36				0.600	0.163			1
				0.300	0.145	0.044			0.161	0.0070	
6	2.1	0.15	35				0.583	0.159			1
				0.300	0.150	0.045			0.159	0.0071	
7	2.4	0.15	35				0.583	0.159			1
				0.300	0.150	0.045			0.149	0.0067	
8	2.7	0.15	30				0.500	0.138			1
				0.300	0.135	0.041			0.112	0.0045	
9	3	0.12	17				0.283	0.085			1
				0.700	0.060	0.042			0.043	0.0018	
10	3.7	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
11	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
12	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.129 m/s

Accretion Profile Summary for the River Wensum

Date: 23/24-06-1997 **Observers:** CW, CB and JC

Site No.	Site Name	Watercourse	NGR	Discharge (cumecs)	Photo No(s)	Notes
1	Peartree Corner	Wensum	TF 899 238	0.000	1 d/s	No water u/s of the bridge at all and the river bed was completely grassed over. Puddles of water d/s
2	South Raynham	Wensum	TF 884 242	0.042	2	C/M u/s of bridge. Silt and gravel bed.
3	Park House, Helhoughton	Wensum	TF 873 267	0.088	3	C/M performed 5m u/s of road bridge within the garden of Park House. ~5cm of silt on the river bed, wind gusting upstream.
4	Southmill Farm	Wensum	TF 881 282	0.246	4	Not a very good stretch for metering. C/M d/s side of footing to roadbridge.
5	Fakenham G/S	Wensum	TF 919 294	0.337		
6	Great Ryburgh	Wensum	TF 963 273	1.051	7	C/M under u/s side of roadbridge.
7	Guist	Wensum	TF 997 250	?		At least 1m deep by 10m wide. Completely full of ribbon weed and therefore unable to current meter. Flow hard to estimate, but greater than site 6.
	County School		TF 992 228	?	8	River bed clear around bridge, weedy d/s. Approximately 1m deep in centre by 8m wide.
8	Billingford	Wensum	TG 004 203	?	9	1m deep in the centre by 8m wide. Completely full of ribbon weed, therefore unable to current meter.
9	Swanton Morley G/S	Wensum	TG 020 184	1.076		
10	Mill Street	Wensum	TG 052 178	1.050	12	Quite a lot of ribbon weed, which may have effected the results. C/M performed on the u/s side of roadbridge.
16	East Rudham	Wensum	TF 833 284	~0.005	6 d/s	

17	Tatterford	Trib of Wensum	TF 867 280	0.069	5	C/M 2m d/s from roadbridge.
18	Worthing	Wendling Beck	TF 999 201	0.276	10 & 11	LH side of river bed silty up to ~1.5m, also slightly weedy. Fence under bridge to prevent cattle escaping up river, not obstructing the flow too much.

Miscallaneous Current Metering Sheet

River: *Wensum* **Date** *23.06.97*

Location: *Park Ho., Helhoughton* **Site No.** *3*

NGR: *TF 873 267* **Start** *11:45* **Hrs**

Observer *CW, CB & JC* **Finish** *12:05* **Hrs**

Remarks: u/s of road bridge in garden. Wind gusting u/s.

Counter Time 60 Secs *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 0.088 m³/s or 88 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	0.5	0	0				0.000	0.000			0
				0.250	0.080	0.020			0.000	0.0000	
2	0.75	0.16	0				0.000	0.000			1
				0.250	0.200	0.050			0.028	0.0014	
3	1	0.24	10				0.167	0.057			1
				0.500	0.310	0.155			0.069	0.0107	
4	1.5	0.38	16				0.267	0.081			1
				0.500	0.390	0.195			0.083	0.0162	
5	2	0.4	17				0.283	0.085			1
				0.500	0.365	0.183			0.085	0.0156	
6	2.5	0.33	17				0.283	0.085			1
				0.500	0.315	0.158			0.087	0.0138	
7	3	0.3	18				0.300	0.089			1
				0.500	0.295	0.148			0.085	0.0126	
8	3.5	0.29	16				0.267	0.081			1
				0.500	0.265	0.133			0.077	0.0102	
9	4	0.24	14				0.233	0.073			1
				0.500	0.195	0.098			0.059	0.0057	
10	4.5	0.15	7				0.117	0.045			1
				0.500	0.115	0.058			0.022	0.0013	
11	5	0.08	0				0.000	0.000			1
				0.400	0.040	0.016			0.000	0.0000	
12	5.4	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.060 m/s

Miscallaneous Current Metering Sheet

River: *Wensum* **Date** *23.06.9*

Location: *Southmill Farm* **Site No.**

NGR: *TF 881 282* **Start** *13:00* **Hrs**

Observer *CW, CB & JC* **Finish** *13:25* **Hrs**

Remarks: c/m at base of footbridge, d/s side

Counter Time *60* *Secs* *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 0.246 m³/s or 246 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	0.4	0	0				0.000	0.000			0
				0.800	0.075	0.060			0.164	0.0099	
2	1.2	0.15	76				1.267	0.329			1
				0.400	0.180	0.072			0.326	0.0235	
3	1.6	0.21	75				1.250	0.324			1
				0.400	0.230	0.092			0.348	0.0320	
4	2	0.25	86				1.433	0.371			1
				0.400	0.255	0.102			0.413	0.0421	
5	2.4	0.26	106				1.767	0.455			1
				0.400	0.270	0.108			0.402	0.0435	
6	2.8	0.28	81				1.350	0.350			1
				0.400	0.260	0.104			0.419	0.0436	
7	3.2	0.24	114				1.900	0.489			1
				0.400	0.210	0.084			0.400	0.0336	
8	3.6	0.18	72				1.200	0.312			1
				0.400	0.140	0.056			0.268	0.0150	
9	4	0.1	51				0.850	0.224			1
				0.500	0.050	0.025			0.112	0.0028	
10	4.5	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
11	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
12	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.357 m/s

Miscallaneous Current Metering Sheet

River: *Wensum* **Date** *24.06.97*

Location: *Great Ryburgh* **Site No.** *6*

NGR: *TF 963 273* **Start** *09:35* **Hrs**

Observer *CW, CB & JC* **Finish** *10:10* **Hrs**

Remarks: Under u/s side of bridge

Counter Time 60 Secs *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 1.051 m³/s or 1051 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	0	0	0				0.000	0.000			0
				0.300	0.225	0.068			0.083	0.0056	
2	0.3	0.45	37				0.617	0.167			1
				0.300	0.450	0.135			0.177	0.0239	
3	0.6	0.45	42				0.700	0.187			1
				0.600	0.440	0.264			0.179	0.0473	
4	1.2	0.43	38				0.633	0.171			1
				0.600	0.455	0.273			0.179	0.0489	
5	1.8	0.48	42				0.700	0.187			1
				0.600	0.490	0.294			0.183	0.0539	
6	2.4	0.5	40				0.667	0.179			1
				0.600	0.515	0.309			1.093	0.3378	
7	3	0.53	475				7.917	2.007			1
				0.600	0.515	0.309			1.104	0.3410	
8	3.6	0.5	45				0.750	0.200			1
				0.600	0.500	0.300			0.193	0.0580	
9	4.2	0.5	42				0.700	0.187			1
				0.600	0.460	0.276			0.173	0.0478	
10	4.8	0.42	35				0.583	0.159			1
				0.600	0.410	0.246			0.171	0.0421	
11	5.4	0.4	41				0.683	0.183			1
				0.600	0.400	0.240			0.163	0.0391	
12	6	0.4	31				0.517	0.142			1
				0.400	0.200	0.080			0.071	0.0057	
13	6.4	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.343 m/s

Miscallaneous Current Metering Sheet

River: *Wensum* **Date** *24.06.97*

Location: *Mill Street* **Site No.** *10*

NGR: *TG 052 178* **Start** *13:00* **Hrs**

Observer *CW, CB & JC* **Finish** *13:20* **Hrs**

Remarks: Quite a lot of ribbon weed, partic. RH side of stream

Counter Time *60* *Secs* *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 1.050 **m³/s** or 1050 **l/s**

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	2.8	0	0				0.000	0.000			0
				0.350	0.210	0.074			0.177	0.0130	
2	3.15	0.42	82				1.367	0.354			1
				0.350	0.435	0.152			0.320	0.0487	
3	3.5	0.45	66				1.100	0.286			1
				0.700	0.500	0.350			0.310	0.1084	
4	4.2	0.55	77				1.283	0.333			1
				0.700	0.565	0.396			0.316	0.1250	
5	4.9	0.58	69				1.150	0.299			1
				0.700	0.590	0.413			0.322	0.1331	
6	5.6	0.6	80				1.333	0.345			1
				0.700	0.600	0.420			0.352	0.1478	
7	6.3	0.6	83				1.383	0.358			1
				0.700	0.600	0.420			0.301	0.1265	
8	7	0.6	56				0.933	0.244			1
				0.700	0.610	0.427			0.232	0.0992	
9	7.7	0.62	50				0.833	0.220			1
				0.700	0.580	0.406			0.238	0.0968	
10	8.4	0.54	59				0.983	0.257			1
				0.700	0.535	0.375			0.322	0.1207	
11	9.1	0.53	90				1.500	0.388			1
				0.600	0.265	0.159			0.194	0.0308	
12	9.7	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.308 **m/s**

Miscallaneous Current Metering Sheet

River: *Trib of Wensum* **Date** *23.06.97*

Location: *Tatterford* **Site No.** *17*

NGR: *TF 867 280* **Start** *13:40* **Hrs**

Observer *CW, CB & JC* **Finish** *14:00* **Hrs**

Remarks: 2m d/s of bridge

Counter Time 60 Secs *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 0.069 m³/s or 69 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	0.5	0	0				0.000	0.000			0
				0.150	0.055	0.008			0.041	0.0003	
2	0.65	0.11	16				0.267	0.081			1
				0.150	0.110	0.017			0.110	0.0018	
3	0.8	0.11	30				0.500	0.138			1
				0.300	0.130	0.039			0.149	0.0058	
4	1.1	0.15	35				0.583	0.159			1
				0.300	0.150	0.045			0.181	0.0082	
5	1.4	0.15	46				0.767	0.204			1
				0.300	0.160	0.048			0.204	0.0098	
6	1.7	0.17	46				0.767	0.204			1
				0.300	0.160	0.048			0.200	0.0096	
7	2	0.15	44				0.733	0.196			1
				0.300	0.150	0.045			0.191	0.0086	
8	2.3	0.15	42				0.700	0.187			1
				0.300	0.150	0.045			0.181	0.0082	
9	2.6	0.15	39				0.650	0.175			1
				0.300	0.160	0.048			0.163	0.0078	
10	2.9	0.17	33				0.550	0.151			1
				0.300	0.165	0.050			0.142	0.0071	
11	3.2	0.16	29				0.483	0.134			1
				0.300	0.080	0.024			0.067	0.0016	
12	3.5	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.163 m/s

Miscallaneous Current Metering Sheet

River: *Wendling Beck* **Date** *24.06.9-*

Location: *Worthing Mill* **Site No.** *18*

NGR: *TF 999 201* **Start** *11:20* **Hrs**

Observer *CW, CB & JC* **Finish** *11:45* **Hrs**

Remarks: Weedy and silty on LH side of river

Counter Time *60* *Secs* *Meter No 115263* *Prop No 3-111168*

TOTAL DISCHARGE 0.276 m³/s or 276 l/s

Reading Number	Distance m	Depth (m)	Revs	Section Width (m)	Average Depth (m)	Area (m²)	Revs/ sec	Velocity (m/s)	Average Velocity (m/s)	Discharge (m³/s)	
1	1.5	0	0				0.000	0.000			0
				1.500	0.130	0.195			0.028	0.0055	
2	3	0.26	10				0.167	0.057			1
				1.000	0.310	0.310			0.057	0.0176	
3	4	0.36	10				0.167	0.057			1
				1.000	0.420	0.420			0.061	0.0256	
4	5	0.48	12				0.200	0.065			1
				1.000	0.515	0.515			0.081	0.0419	
5	6	0.55	20				0.333	0.098			1
				1.000	0.550	0.550			0.102	0.0559	
6	7	0.55	22				0.367	0.106			1
				1.000	0.515	0.515			0.106	0.0545	
7	8	0.48	22				0.367	0.106			1
				1.000	0.415	0.415			0.100	0.0414	
8	9	0.35	19				0.317	0.094			1
				1.000	0.315	0.315			0.081	0.0256	
9	10	0.28	13				0.217	0.069			1
				1.700	0.140	0.238			0.035	0.0082	
10	11.7	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
11	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.071	0.0000	
12	0	0	31				0.517	0.142			0
				0.000	0.000	0.000			0.071	0.0000	
13	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
14	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
15	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
16	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
17	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
18	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
19	0	0	0				0.000	0.000			0
				0.000	0.000	0.000			0.000	0.0000	
20	0	0	0				0.000	0.000			0

VERAGE VELOCIT 0.099 m/s

CATCHMENT

YARE

HYDROMETRIC AREA:

34/13,15

ACCRETION PROFILES COMPLETED:

8/8/97

ACCRETION PROFILE SITES

NORFOLK

Yare - Catchment 34/13; 15

Flow was measured at the following points during November 1991 by Simon Hydrotechnica:

River Yare (upstream of Tiffey):

1. Bridge at Shipdham **TF 950 067**
2. Bridge near Southburgh **TF 997 044**
3. Railway Bridge at Thuxton **TG 029 075**
4. Bridge North of Hardingham **TG 044 058**
5. Bridge at Barnham Broom **TG 076 076**

River Tiffey:

6. Railway Bridge at Crownthorpe (tributary) **TG 084 034**
7. Chapel Bridge, Nr Wyndmonham **TG 095 030**
8. A11 (T) Bridge at Wyndmonham **TG111 011**

River Yare (downstream of Tiffey):

9. Bridge at Marlingford Hall **TG 129 083**
10. Bridge near Hethersett (tributary) **TG 141 077**
11. Bridge at Bow Hill (tributary) **TG 140 055**
12. Bridge at Bawburgh **TG 157 087**
13. Downstream of Gravel abstraction **TG 175 085**
14. Colney Gauging Station
15. Bridge at Earlham **TG 190 082**

COLNEY, PROFILE -TG193 085
08-08-97

COLNEY u/s -TMTG193 085

MARLINGFORD, PROFILE - TG130 083
08-08-97

MARLINGFORD D/S - TG130 083
08-08-97

R. YARE

MARLINGFORD HALL, PROFILE - TG124 085
08-08-97

LOW STREET, D/s -TG044 059
08-08-97

LOW STREET, -TG044 059
08-08-97

Flows on the River Yare 8/8/97