Particle size (USED ON CHI2)

Atwick

Cliff											Sea
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant	LP	LP	MP	MP	CS	CS	MP	MS	MS	MS	FS
Random (mm)	54	28	15	16	<1	<1	13	<1	<1	<1	<1

Hornsea Main

Wall											Sea
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant	MP	CS	MS	MS	MS	CS	CS	MS	MS	MS	MS
Random (mm)	21	2	<1	<1	<1	<1	<1	<1	<1	<1	14

Hornsea South

Cliff											Sea
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant	MS	MP	MS	MS	MS	MS	FS	MS	FS	MS	CS
Random (mm)	<1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1

Beach Profile (USED THESE FOR DRAWN PROFILES)

Atwick

Cliff											Sea
Section no.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)	-9	-5	-6	-4	-5	-6	1	-1			
Length (m)	4.2	5	5.7	7.15	7.6	6.7	6.9	30			

Hornsea Main

Wall											Sea
Section no.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)	-8	-6	-5	-1	4	1	0	-3	-2	-2	-3
Length (m)	2.3	3.9	5.2	7.5	0.9	4.6	3.95	7.4	15.1	7.6	15.9

Hornsea South

Cliff											Sea
Section no.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)	4	0.5	1								
Length (m)	11.9	67.2	30								

Atwick Repeat 'Class Data'

Transect 1:

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		2	7	5.5	7	6	5.5	2.5	1	1.5		
Length (m)		1.47	4.95	3.7	3.82	11.14	7.04	8.27	19.95	12.0		
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		VLP	MS	MS	SP	SP	FS	MS	FS	MS	MS	FS
Random Particle Size (mm)	1	53	<1	<1	2	6.5	<1	<1	<1	<1	<1	<1
	2	13	<1	<1	4	8	<1	6	<1	<1	<1	<1
	3	42	<1	12	10	13	120	2	<1	<1	<1	<1
Average (mm)		80	1	4.7	5.3	9.2	40.7	3	1	1	1	1

Transect 2:

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	0.5	8	5.5	2	1	1.5				
Length (m)		4.96	1.31	2.33	18.21	11.9	16.11	15.9				
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MP	SP	FS	FS	FS	MS	MS	MS	FS	FS
Random Particle Size (mm)	1	<1	44	13	12	78	<1	2	<1	<1	<1	<1
	2	<1	26	15	8	15	<1	2	<1	<1	<1	<1
	3	<1	12	18	<1	8	<1	<1	<1	<1	<1	<1
Average (mm)		1	27.3	15.3	7	33.7	1	1.7	1	1	1	1

Transect 3:

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	9	8.5	4.5	5	3	1	1.5			
Length (m)		3.63	1.38	3.4	8.6	9.67	6.68	18.13	9			
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MP	G	SP	MS	FS	MS	MS	MS	FS
Random Particle Size (mm)	1	<1	<1	20	5.2	10	<1	<1	6	<1	<1	<1
	2	<1	<1	33	4	9	<1	<1	<1	<1	<1	<1
	3	<1	<1	4	9	3	<1	<1	<1	<1	<1	<1
Average (mm)		1	1	19	6.1	7.3	1	1	2.7	1	1	1

Transect 4:

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		8.5	-0.5	11	6.5	5.5	4.5	2	1	1.5		
Length (m)		3.76	1.45	1.56	11.27	7.21	5.64	10.45	16.33	11.34		
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	CS	SP	MP	FS	FS	FS	FS	FS	MS	FS
Random Particle Size (mm)	1	<1	4	18	9	3	4	2	<1	<1	<1	1.5
	2	<1	24	2	8	8	1	<1	<1	<1	<1	<1
	3	<1	16	15	9	13	<1	<1	<1	<1	<1	<1
Average (mm)		1	14.7	11.7	26	8	2	1.3	1	1	1	1.2

Transect 5:

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	6	5.5	3	1.5	1	1.5	1	0.5	0	1.5
Length (m)		8.27	7.15	10.48	7.43	18.49	13.62	5.5	19.41	22.73	3.66	4.42
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MP	SP	G	FS	MS	MS	FS	FS	FS
Random Particle Size (mm)	1	1	1.5	11	11	11.5	<1	<1	<1	<1	<1	6
	2	0.5	0.5	25	4	7	3	<1	<1	<1	<1	<1
	3	1	1	18.5	7	18	<1	<1	<1	<1	<1	<1
Average (mm)		0.8	1	18.2	7.3	12.2	1.7	1	1	1	1	2.7

Transect 6:

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		9	7	6.5	6	4	2	1	1.5			
Length (m)		5.05	7.29	3.82	12.34	5.35	9.04	18.33	13.84			
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		VLP	CS	MS	MP	MS	MS	FS	FS	FS	MS	FS
Random Particle Size (mm)	1	34	36	<1	13	17	6	<1	<1	<1	<1	<1
	2	35	<1	3	19	24	<1	3	<1	<1	<1	<1
	3	48	27	<1	9	<1	30	<1	<1	<1	<1	<1
Average (mm)		39	21	1.7	13.7	14	12.3	1.7	1	1	1	1

Transect 7:

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	8	0	6	7	5.5	5	2	1	1.5	
Length (m)		3.31	3.57	1.88	1.53	5.07	12.03	5.86	8.6	19.05	13.74	
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		CS	CS	MP	SP	SP	FS	MS	MS	FS	FS	MS
Random Particle Size (mm)	1	34	9	15	11	6	9	<1	<1	<1	<1	<1
	2	<1	10	12	9	16	4	<1	<1	<1	<1	<1
	3	31	<1	14	21	18	<1	<1	<1	<1	<1	<1
Average (mm)		22	6.7	13.7	13.7	13.3	4.7	1	1	1	1	1

Hornsea Main Repeat 'Class Data'

Transect 1

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	6.5	6	5	3						
Length (m)		8.25	7.8	9.3	5.2	9.5						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		CS	MS	FS	FS	FS	FS	FS	FS	FS	FS	FS
Random Particle Size (mm)	1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		1.33	1	1	1	1	1	1	1	1	1	1

Transect 2

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		11	18	9	8	13	10	12	7			
Length (m)		4.40	1.10	4.40	4.90	1.50	3.90	3.70	5.40			
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MS	MS	MS	MP	MS	MP	MP	MS	MS
Random Particle Size (mm)	1	<1	<1	<1	<1	<1	12	<1	45	20	2	<1
	2	<1	6	<1	<1	<1	12	5	5	7	7	<1
	3	<1	<1	25	<1	4	25	<1	10	20	3	<1
Average (mm)		1	2.7	9	1	2	16.3	2.3	20	15.7	4	1

Transect 3

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		5	6	5.5	4.5	5						
Length (m)		5.63	7.8	11.95	8.65	7.2						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		CS	CS	MS	MS	MS	FS	MS	MS	MS	MS	FS
Random Particle Size (mm)	1	1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	4	3	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		2.33	2.33	1	1	1	1	1	1	1	1	1

Transect 4

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		5.5	6	5	4	3.5						
Length (m)		7.9	7.35	8.6	9.0	9.44						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		CS	CS	MS	CS	MS	FS	MS	FS	MS	MS	MS
Random Particle Size (mm)	1	2	2	<1	3	2	<1	<1	62	<1	21	<1
	2	2	2	<1	1	4	<1	<1	4	<1	19	<1
	3	3	2	<1	<1	24	<1	<1	43	<1	<1	<1
Average (mm)		2.33	2	1	1.67	10	1	1	36.3	1	13.67	1

Transect 5

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		6.5	7	5.5	4.5	4	3.5					
Length (m)		6.4	4.4	6.1	7.4	8.2	9.4					
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		CS	MS	MS	CS	SP	CS	LP	FS	MS	SP	FS
Random Particle Size (mm)	1	2	<1	<1	41	4	24	9	<1	2	3	<1
	2	3	<1	<1	2	6	20	16	<1	<1	27	82
	3	4	<1	<1	1	19	27	27	2.5	<1	23	<1
Average (mm)		3	1	1	14.67	9.67	23.67	17.33	1.5	1.33	17.67	28

Transect 6

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	6	5	3	3.5						
Length (m)		10.1	7.9	8.2	7.9	7.8						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	CS	MS	CS	G	MP	MP	SP	MS	G	MS
Random Particle Size (mm)	1	<1	3	<1	2	7	<1	23	<1	<1	<1	4
	2	<1	4	<1	2	23	3	21	2	15	<1	<1
	3	<1	3	<1	<1	10	26	11	<1	22	16	7
Average (mm)		1	3.33	1	1.67	13.33	10	18.33	1.33	12.67	6	4

Transect 7

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		5	8.5	3	2.5	2						
Length (m)		10.65	10.5	9.3	7.6	6.45						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MS	MP	MS	CS	CS	CS	MS	MS	MS
Random Particle Size (mm)	1	<1	<1	<1	31	<1	<1	<1	9	<1	<1	<1
	2	<1	<1	<1	47	<1	<1	<1	18	<1	<1	<1
	3	<1	<1	<1	8	<1	7	<1	12	23	<1	<1
Average (mm)		1	1	1	28.67	1	3	1	13	8.33	1	1

Transect 8

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		6	4	3.5	3	2.5						
Length (m)		10.1	6.9	8.4	7.4	11.1						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MS	MP	MP	MP	MS	SP	MS	MS	MS
Random Particle Size (mm)	1	<1	<1	<1	24	16	21	7	2	<1	<1	<1
	2	<1	32	<1	16	24	16	<1	3	<1	<1	<1
	3	<1	<1	<1	29	19	27	<1	13	<1	<1	<1
Average (mm)		1	11.33	1	23	59	21.33	3	6	1	1	1

Transect 9

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		5	5.5	4	3	2						
Length (m)		9.55	7.3	7.25	8.1	12.8						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MS	MS	MS	LP	MP	MP	MS	SP	MS	MS	MS
Random Particle Size (mm)	1	<1	<1	<1	87	12	26	<1	6	4	<1	<1
	2	<1	11	<1	131	17	21	<1	4	<1	<1	<1
	3	<1	<1	<1	31	42	32	<1	12	<1	<1	<1
Average (mm)		1	4.33	1	83	23.67	29.67	11	7.33	2	1	1

Hornsea South Repeat 'Class Data'

Transect 1

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		4	-2	1.5	0.5	1.5	1					
Length (m)		4.37	3.46	22.23	8.23	12.5	6.25					
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MP	FS	MS	MS	M	MS	MS	MS	MS	MS	MS
Random Particle Size (mm)	1	11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	27	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		13.33	1.33	1	1	1	1	1	1	1	1	1

Transect 2

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		2.5	2	2	1.5	1						
Length (m)		5.69	3.3	22.5	9	19.5						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		LP	FS	FS	MS	MS	FS	MS	MS	MS	MS	MS
Random Particle Size (mm)	1	12	<1	6	<1	<1	<1	<1	<1	<1	<1	<1
	2	29	15	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	21	3	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		20.67	6.33	2.7	1	1	1	1	1	1	1	1

Transect 3

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		3	-1.5	1.5	1							
Length (m)		4.9	4	20.7	30							
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MP	FS	MS	CS	MS	MS	MS	MS	MS	MS	MS
Random Particle Size (mm)	1	16	17	2	<1	<1	12	<1	<1	<1	<1	<1
	2	14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	31	27	<1	3	<1	<1	<1	<1	<1	<1	<1
Average (mm)		20.33	15	1.33	1.67	1	4.67	1	1	1	1	1

Transect 4

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		5	-1	1.5								
Length (m)		6.1	6.5	52.4								
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MP	FS	MS	MS	FS	FS	MS	MS	MS	MS	MS
Random Particle Size (mm)	1	14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	16	<1	<1	<1	41	<1	<1	<1	<1	<1	<1
Average (mm)		12.67	1	1	1	14.33	1	1	1	1	1	1

Transect 5

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		6	-1	0	1	1.5	1					
Length (m)		6.1	3.9	5.3	13.4	11.4	19.1					
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		LP	FS	CS	MS	FS	FS	FS	MS	MS	MS	MS
Random Particle Size (mm)	1	26	<1	2	<1	<1	<1	<1	<1	<1	<1	<1
	2	47	<1	3	<1	<1	<1	<1	<1	<1	<1	<1
	3	63	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		45.33	1	2	1	1	1	1	1	1	1	1

Transect 6

Cliff											Sea
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		7	-1	0	1	1.5						
Length (m)		7.9	4.1	3.2	8.4	36.1						
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		LP	MS	FS	MS	CS	MS	MS	MS	MS	MS	MS
Random Particle Size (mm)	1	13	<1	<1	<1	7	<1	<1	<1	17	<1	<1
	2	20	16	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		16.67	6	1	1	3	1	1	1	6.33	1	1

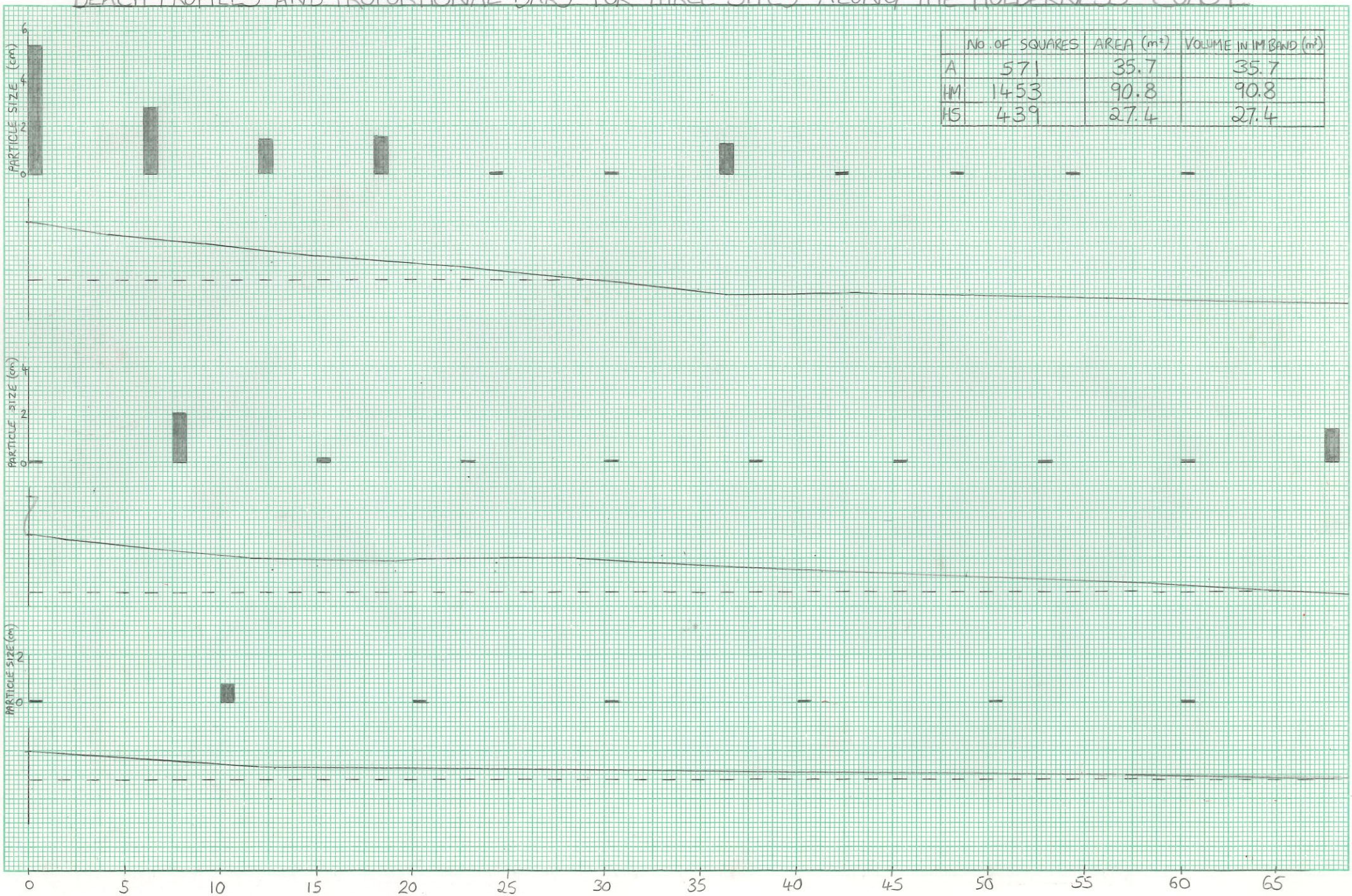
Transect 7

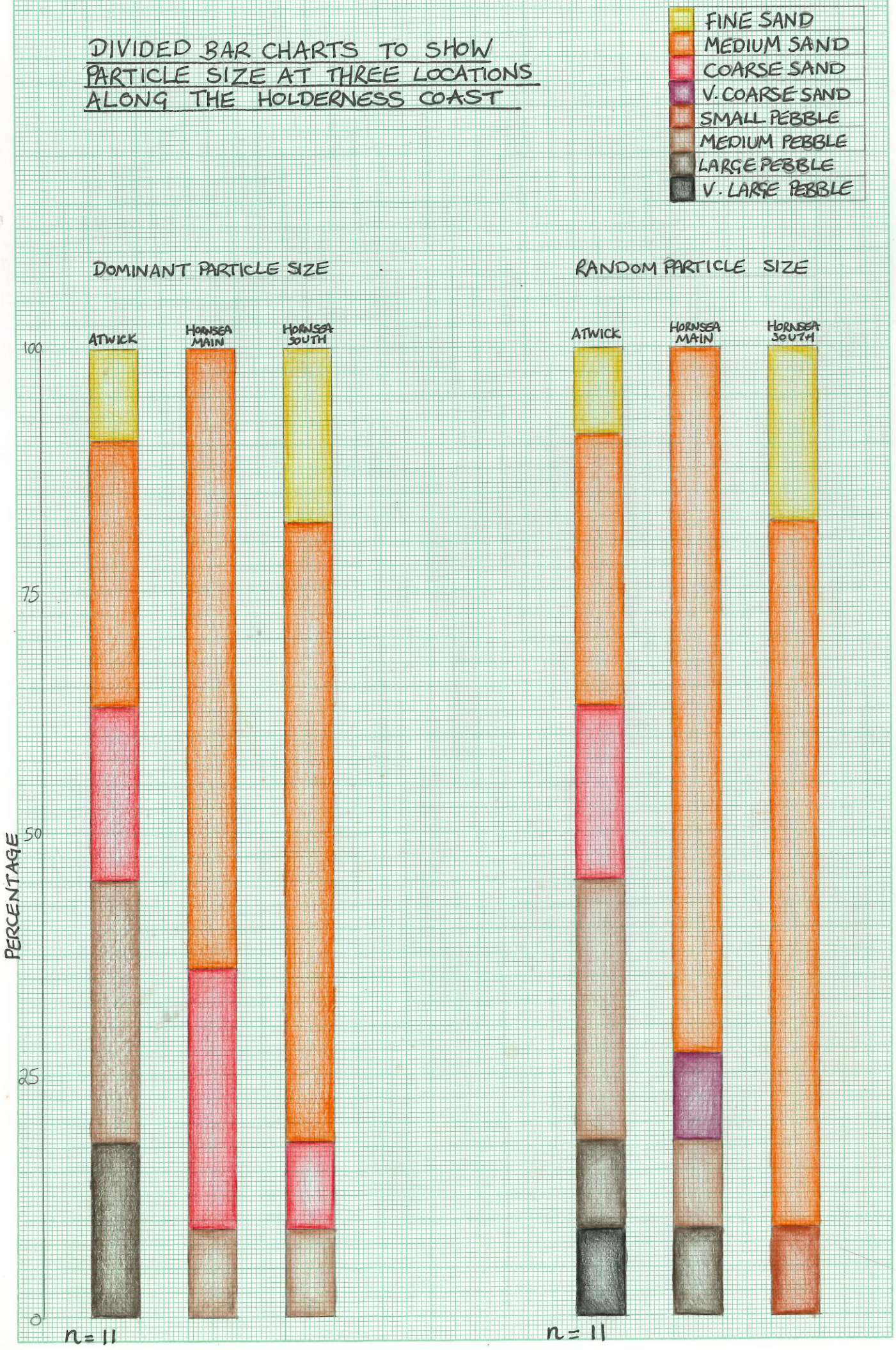
Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		4	-1	0	0.5	1	1.5					
Length (m)		7.9	4.7	3.0	5.5	17.3	20.1					
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		LP	MP	FS	FS	FS	FS	FS	FS	MS	MS	MS
Random Particle Size (mm)	1	16	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	21	14	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	64	18	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		33.67	13	1	1	1	1	1	1	1	1	1

Transect 8

Cliff											**Sea**
Section no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Angle (°)		3.0	1	-1	0.5	1	2					
Length (m)		4.1	2.7	3.0	7.2	10.1	25.7					
Station no.		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Dominant Particle Size		MP	MP	FS	FS	FS	FS	FS	FS	FS	MS	MS
Random Particle Size (mm)	1	22	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
	2	12	18	<1	<1	<1	<1	<1	<1	<1	<1	<1
	3	41	61	<1	<1	<1	<1	<1	<1	<1	<1	<1
Average (mm)		25	28.67	1	1	1	1	1	1	1	1	1

BEACH PROFILES AND PROPORTIONAL BARS FOR THREE SITES ALONG THE HOLDERNESS COAST.



	NO. OF SQUARES	AREA (m^2)	VOLUME IN 1M BAND (m^3)
A	571	35.7	35.7
HM	1453	90.8	90.8
HS	439	27.4	27.4

DIVIDED BAR CHARTS TO SHOW PARTICLE SIZE AT THREE LOCATIONS ALONG THE HOLDERNESS COAST