

CH2MHILL®					
Calculation title:	Runswick Bay PAR	Created by:	SMJ	Project code:	473342
		Date:	23/06/15	Serial no:	
Subject:	Option Base Costs for PAR	Verified by:	MC	Sheet no:	1
		Date:	27/07/15	Revision:	1

Notes

1. The 2013 rates and quantities are taken from "Runswick Bay Costs v6 (use for YW contribution calc).xls" . Note there is no automatic link.
2. The Rates for PAR are current best estimates based upon Aug. 2013 rate indexed to March 2015, or more recent data if available.

Changing these values updates the spreadsheet



Rock rate primary armour £

110.66 (Contractor rate May 2015 £105.59)

Rock Rate underlayer £

97.00 (Contractor rate May 2015 £92.55)

Factor for reduction in armour length at southern end Ops. 3 & 6 (210/230)

0.913

Factor for reduction in armour length at southern end Ops. 7&8 only (170/190)

0.895

Cost index Aug 2013 to March 2015

4.0%

Item	2013 Rate	Rate for PAR	Unit	Option 3		Option 6		Option 7&8	
				Qty.	Cost £k	Qty.	Cost £k	Qty.	Cost £k
CAPITAL WORKS									
<i>Excavation for toe protection</i>									
Excavation for toe protection	4.70	4.89	m3	498	2,432	264	1,290	223	1,089
Disposal of excavated beach	48.85	50.80	m3	498	25,281	264	13,406	223	11,319
Excavation for toe protection - groyne	4.70	4.89	m3					360	1,760
Disposal of excavated beach - groyne	48.85	50.80	m3					360	18,289
<i>Primary rock armour</i>									
Primary rock material and placement	110.66	110.66	m3	3,953	437,391	2,655	293,817	2,048	226,638
Primary rock material and placement - groyne	110.66	110.66	m3					2,719	300,885
Placement recovered core material	19.74	20.53	m3					2,908	59,700
<i>Rock underlayer</i>									
Rock underlayer material and placement	86.03	97.00	m3	2,253	218,579				
Compaction of fill material	0.72	0.75	m3	2,253	1,680				
Access steps thro' rock to beach	n/a	30,000	nr.	1	30,000	1	30,000	1	30,000
Subtotal					715,362		338,512		649,679
Preliminaries	20	25	%	715,362	178,841	338,512	84,628	649,679	162,420
Insurances	3.5	3.5	%	715,362	25,038	338,512	11,848	649,679	22,739
Subtotal					919,241		434,988		834,837
Contractor's Fee	7.5	7.5	%	919,241	68,943	434,988	32,624	834,837	62,613
Contractor's Risk budget	3	7.5	%	919,241	68,943	434,988	32,624	834,837	62,613
Licences	2351	2351	nr.	1	2,351	1	2,351	1	2,351
Total Capital					1,059,478		502,587		962,414
Item	2013 Rate	Rate for PAR	Unit	Option 3		Option 6		Option 7&8	
				Qty.	Cost £k	Qty.	Cost £k	Qty.	Cost £k
MAINTENANCE WORKS									
Annual survey	800.00	832.00	nr	1	832	1	832	1	832
<i>Patch repairs</i>									
Concrete Patch repair	12.70	13.21	m	210	2,774			179	2,364
Concrete Patch repair	38.10	39.62	m			210	8,321		
Rock armour reprofiling	8,142	10,500	nr	1	10,500	1	10,500	1	10,500
Rock armour reprofiling - groyne	32,567	33,870	nr					1	33,870
Preliminaries	30.00	30.00	%	13,274	3,982	18,821	5,646	46,733	14,020
Insurance	3.50	3.50	nr	13,274	465	18,821	659	46,733	1,636
Subtotal					17,720		25,126		62,389
Contractor's Fee	7.50	7.50	%	17,720	1,329	25,126	1,884	62,389	4,679
Contractor's Risk budget	3.00	3.00	%	17,720	532	25,126	754	62,389	1,872
Licence	536.00	536.00	nr	1	536	1	536	1	536
Total Maintenance					20,117		28,300		69,476

Southern Defences

Item description	Rate	Unit	Quantity	Cost	Frequency	
Annual survey	800	832	nr	1	832	1
Rock armour reprofiling	32567	nr	1	32,567		
Drainage works	25000	nr	1	25,000		
Shear key piling	50000	nr	1	50,000		
Concrete Patch repair	25.40	m	75	1,905		
Preliminaries	25.00	%	109,472	27,368		
Insurance	3.50	%	109,472	3,832		
Subtotal				140,672		
Contractor's Fee	7.50	%	140,672	10,550		
Contractor's Risk budget	3.00	%	140,672	4,220		
Licence	741.00	nr	1	741		
Total				156,183	20	
Total including cost indexing				162,430	20	

Other Items

	%age constr. cost	Cash Disc. factor	Yr 0 1.000	Yr 1 0.966	Yr 2 0.934
PAR Preparation Fees Year 0 - estimate		22,000	22,000		
Yorkshire Water Diversion costs		200,000		193,200	
SBC staff costs £50,000 total)		50,000	25,000	24,150	
Consultants fees £55,000 total)			35,000	19,320	
Early Contractor Involvement (ECI)	Nil				
Cost consultant fees	Nil				
Site investigation & survey	10%				
Environmental mitigation	7.5%				
Environmental enhancement	incl. above				
Site supervision	7.5%				
Compensation	Nil				
Contributions (incl. 30% uplift on YW costs)		360,000		347,760	