

based on threshold ranges set on Sheet 3 (Prioritisation)										based on threshold ranges set on Sheet 3 (Prioritisation)													
Probability			Cost			Time			Probability			Cost			Time								
V	L	M	0 to 10%	11 to 30%	31 to 50%	£76 to £117.4k	£118.4k to £253.5k	£294.5k to £587k	0 to 3 wks	3 to 8 wks	8 to 16 wks	V	L	M	0 to 10%	11 to 30%	31 to 50%	£58k to £117.4k	£118.4k to £253.5k	£294.5k to £587k	0 to 3 wks	3 to 8 wks	8 to 16 wks
H			51 to 70%			£588k to £1761k			16 to 47 wks			H			51 to 70%			£588k to £1761k			16 to 47 wks		
VH			71 to 100%			£1762k to £-k			47 to - wks			VH			71 to 100%			£1762k to £-k			47 to - wks		

Risk ID	Target completion	Risk description		Risk status	Risk owner (Customer, contractor, consultant, etc)	Lesson learnt	Qualitative ranking (before response action)				Response Action				Qualitative Ranking (After Response Action)				Data for Quantitative Analysis								Assumptions (for cost and time basis)	Risk Owners												
		Source of risk	Consequence on project				Probability scale	Cost impact	Time impact	Risk priority	Existing safeguards in place	Response strategy	Action	Cost of mitigation (£)	Action owner	Completion date	Residual probability (%)	Probability scale	Cost impact	Time impact	Priority	Least cost (£)	Most likely cost (£)	Max cost (£)	MEV (£)	Risk occurs (Yes=1, No=0)		PERT	Cost value (£)	Mean Risk	Rank	Customer	Consultant	Contractor	Others	Others 1	Others 2	All risks		
1	Post PAR	Total conditions result in delays to programme for works on the 100m length scour protection works on the bull-nose of the West Main Pier.	Increased costs and programme delays	Live	Contractor	East Pier Extension Emergency Works 2010/11 - ensure that suitable marine plant is used and that the methodology chosen provides the greatest range of tidal working. Ensure suitable standing time contingency allowance is built into cost consideration.	VH	VH	VH	H	Extent of works requiring Marine Plant is limited to Main Pier bull-noses only. Knowledge that downtime will occur and needs to be built into the cost estimates. Prices obtained for the works from 3 Contractors have been used to derive costs.	Ensure that Contractor's method statements consider ways in which the risk of downtime can be minimised - i.e timing of the works, method selected, plant selected. Ensure that Contractor's price includes an allowance for downtime and an agreed day-rate for additional standing time. Contingency SUM to be allowed for Marine Plant standing time.	SBC to ensure that ITT Scope and Brief are clear on all requirements to mitigate risks of Marine Plant standing time and to include a qualitative (and/or cost) score question on how the Contractor intends to manage this risk. Contractor's price to include contingency SUM for Marine Plant standing time.	£0	SBC Project Officer	Prior to appointment of Contractor	100%	VH	L	L	M	£118,400	£205,950	£293,500	£205,950	1.0	£198,534	£198,534	£206,061	3	Cost and programme estimates based on average of prices submitted by 3 Contractors.	£0	£0	£198,534	£0	£0	£0	£198,534		
2	Post PAR	Extent of voiding in Main Piers is greater than anticipated.	Increased costs and programme delays	Live	Customer		M	H	M	H	GPR and Microgravity Surveys have been carried out and the findings used to estimate the extent of voiding in the structure.	Design consideration and construction methodology to assess whether the amount of grouting required can be limited to only areas at risk of tidal ingress and surface water ingress to reduce the overall quantity required.	SBC to ensure that ITT Scope and Brief highlight the risks relating to potential for larger void quantities than anticipated and to consider how this risk will be dealt with contractually, dependent upon whether a fixed price, target cost or cost reimbursement contract. Designers to consider ways of reducing grout volume to key areas at risk only - without compromising anticipated residual life - thereby allowing prioritisation of grout placement.	£0	SBC Project Officer	Prior to appointment of Contractor & Prior to acceptance of Design.	50%	M	H	M	H	£588,000	£1,174,500	£1,761,000	£587,250	0	£1,687,762	£0	£581,087	1	Cost and programme estimates based on average of prices submitted by 3 Contractors.	£0	£0	£0	£0	£0	£0	£0		
3	Post PAR	Extent of scour at toe of Main Piers and/or bull noses has increased resulting in the need for additional lengths of sheet pile and concrete backfill. CH include a Planning Requirement for removing concrete repairs on East Pier deck surface and replacing with Sandstone Blocks.	Increased costs and possible programme delay.	Live	Customer		VL	M	H	M	Visual Inspections and Diving Surveys from Further Investigations Report 2009 and Visual Inspections carried out in 2012.	Final inspection and review to be carried out during the Design phase to confirm the condition and to inform the detailed design and proposed construction methodology.	Designer and Contractor to ensure that design phase includes confirmation of condition to inform design and construction methodology.	£0	Design Team and ECI Contractor	Prior to approval of design	10%	VL	M	H	M	£294,500	£440,750	£587,000	£44,075	0	£472,300	£0	£42,733	6	Cost and programme estimates based on average of prices submitted by 3 Contractors.	£0	£0	£0	£0	£0	£0	£0		
4	Post PAR	Requirement for removing concrete repairs on East Pier deck surface and replacing with Sandstone Blocks.	Increased costs and programme delays	Live	Customer		M	M	H	H	Consultation with EH has taken place during the S&AR and PAR process.	Further consultation with EH will be taken place during the submission of Planning Application.	SBC to ensure that this issue is resolved with EH as part of the Design and Planning Application activities.		SBC Project Officer	Prior to submission of Planning Application	25%	L	M	H	M	£294,500	£440,750	£587,000	£110,188	1	£526,990	£526,990	£110,297	4		£526,990	£0	£0	£0	£0	£0	£526,990		
5	Post PAR	Extent of concrete repairs required for West Pier is greater than anticipated as a result of damage due to contractor's plant.	Increased costs and possible programme delay.	Live	Customer		H	VL	L	M	It is known that there are voids beneath the upper deck slab.		Contractor to ensure that appropriate plant is selected to reduce the risk of damaging the concrete deck surface of the West Pier. Contractor to consider programme sequence in terms of prioritising infilling of voids beneath deck slabs prior to tracking plant on the surface.		Contractor		5%	M	VL	L	L	£0	£58,700	£117,400	£2,935	0	£50,941	£0	£2,868	10		£0	£0	£0	£0	£0	£0			
6	Post PAR	Proportion of sandstone blocks requiring replacement is greater than anticipated.	Increased costs and programme delays	Live	Customer		H	H	H	H	Visual Inspections from Further Investigations Report 2009 and Visual Inspections carried out in 2012 have identified that most of the blocks are in reasonable condition.	Final inspection and review to be carried out during the Design phase to confirm the condition and to inform the requirements for the contract.	Designer and Contractor to ensure that design phase includes assessment of the number of blocks to be replaced.		Designer and Contractor	Prior to acceptance of design.	50%	H	M	M	M	£294,500	£440,750	£587,000	£220,375	1	£427,772	£427,772	£221,583	2		£427,772	£0	£0	£0	£0	£0	£427,772		
7	Post PAR	Unanticipated Services uncovered in the Main Piers.	Additional costs and programme delays.	Live	Customer		M	VL	L	L	Design stage to obtain service information for power and lighting and to assess whether any other historic services may have existed (e.g Victorian gas lighting supply).	SBC or Designer to carry out services searches and review historic records.		£1	SBC Project Officer	Prior to acceptance of design.	5%	L	VL	VL	L	£0	£58,700	£117,400	£2,935	0	£55,869	£0	£3,176	9		£0	£0	£0	£0	£0	£0			
8	Post PAR	Unanticipated changes in principal material costs: concrete, steel, rock.	Additional costs over and above inflation allowance.	Live	Customer		L	L	VL	L	Risk of change in material prices over and above inflation will depend on programme duration and contractual arrangements.	SBC to consider ownership of this risk within contract arrangements.		£1	SBC Project Officer	Prior to issue of ITT.	5%	L	VL	VL	L	£0	£58,700	£117,400	£2,935	0	£32,154	£0	£2,727	11		£0	£0	£0	£0	£0	£0			
9	Post PAR	Compensation claims for loss of earnings or for damage due to plant movement from local residents and businesses.	Additional costs.	Live	Customer		H	L	VL	M	Carry out pre-condition surveys of properties and businesses along plant access routes and adjacent to the works. Communicate with local businesses and assess ways in which to minimise the disruption to businesses through programme timings.	SBC to ensure that communications with affected residents and businesses is an integral activity through the design, planning and pre-construction phases.		£5	SBC Project Officer	Post PAR	35%	M	L	VL	L	£118,400	£205,950	£293,500	£72,083	1	£255,914	£255,914	£73,162	5		£255,914	£0	£0	£0	£0	£0	£255,914		
10	Post PAR	Preferred Option Approval Processes within SBC result in delay in Design programme.	Additional costs and programme delays.	Live	Customer	Scarborough Spa Project	M	VL	M	M	Programme for Design approval to Target Cost agreement is to include sufficient time for SBC Cabinet/Council approvals as required.	SBC to ensure that ITT includes information on approval process, durations required and any specific target dates for planned Cabinet meetings.			SBC Project Officer	Prior to issue of ITT.	10%	L	VL	VL	L	£0	£58,700	£117,400	£5,870	0	£53,935	£0	£5,888	7		£0	£0	£0	£0	£0	£0			
11	Post PAR	Public objections to options proposed result in Planning Permission rejection or significant Conditions being applied.	Additional costs and programme delays.	Live	Customer		H	L	M	M	Public consultation has been integrated into all previous project stages; Strategy & S&AR. Public consultation meetings have been held and public consultation feedback integrated into the documents.	SBC to continue to inform public of design developments post PAR.		£2	SBC Project Officer	Prior to issue of Planning Application	10%	M	VL	M	M	£0	£58,700	£117,400	£5,870	0	£53,677	£0	£5,739	8		£0	£0	£0	£0	£0	£0			
12		Variations in Environment Agency staff inputs									Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0									£0					
13		Variation in Inflation (Consultant)									Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0									£0					
14		Variation in Inflation (Client)									Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0									£0					
15		Variability in programme costs (if not already covered in individual risk costs)	Cost implication based on assessment of critical path risks to programme (time)		Consultant						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0									Cost element derived from 5th, 50th and 95th/tile of consultant time risks	£0				
16		Variability in programme costs (if not already covered in individual risk costs)	Cost implication based on assessment of critical path risks to programme (time)		Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0									Cost element derived from 5th, 50th and 95th/tile of project time risks	£0				£0
B7-1	-	Employer's Risks as set down in Clause 80.1 of the NEC ECC Contract as amended by Clause 22.3			Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0										£0				
B7-2	-	Major flooding event			Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			
B7-3	-	Major scope change	Example may include change in panel engineer resulting in major changes to requirements		Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			
B7-4	-	Legislative change not anticipated			Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			
B7-5	-	Costs associated with major legal process / CPO or public enquiry	Potential pandemic outbreaks e.g. foot and mouth, avian flu etc.		Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			
B7-6	-	Programme budgetary changes introduced by Customer after agreement of PAR			Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			
B7-7	-	Other Exceptional Risks	Reservoir fails during the works, full upgrade of existing pathways to current standards		Customer						Data missing										Data missing	£0	Data missing	Data missing	Data missing	£0											£0			

MEV		£1,260,465	@RiskSum (ignore these cells)		£1,210,676	£0	£198,534	£0	£0	£0	£1,409,210
			50%tile (for individual supplier Incentivisation - Form A)		£1,024,091	£0	£205,853	£0	£0	£0	
			50%tile (for Joint Supplier Incentivisation - Construction)								£1,230,007

Client Approval for Form A and Construction Phases		@Risk Sum cell (ignore this cell) 50%tile Client Approval Risk Budget		£1,409,210
		95%tile Client Approval Risk Budget		£2,378,177