

Designer's Risk Assessment



**CROUCH
WATERFALL**

Title of Scheme	St. Ishmaels Sea Wall defence			Document Ref	22166C/DRA-001	Revision	A01
Location	St. Ishmael, Ferryside, Wales, SA17 5UL			Date of Issue	22/06/2022		
ELR	SWM2	Mileage	237.033 m	O.S Grid Ref	SN 3614 0845	Structure No	237.0330

Ref	Residual risk	Activity / Element	Risk	Action at Design Stage	Risk Mitigation by Contractor	Initial	Date
1	Delays in work program due to lack of fit of components	Sizing of components	Lack of fit resulting in delays.	Work to information provided by Principal Contractor and site visit carried out 07/04/22.	Review Designer drawings prior to material order to ensure correct assumption of site conditions and distances. Fabricator/supplier to undertake their own measured survey.	CW	June 2022
2	Concrete leakage through the formwork or the supporting wall	Concrete pumping in the formwork / poor wall conditions	Localized subsidence due to concrete pouring works	Risk noted.	The concrete pumping works to be monitored. Implement appropriate measures. Containment wall to be inspected in detail and fill all gaps as necessary.	CW	June 2022
3	Brick wall collapse due to incorrect design assumptions / information provided	Brick wall stability during concrete pouring works	Brick wall instability during concrete pouring works	Concrete pouring works to be carried out as suggested construction sequence. Stainless steel ties to be installed to bond the concrete to the wall	Contractor to verify the design principles on site.	CW	June 2022
4	Failure of formwork during curing of the concrete	Temporary stability of formwork during curing of wet concrete	Risk of failure of formwork and wet concrete to be spilled out	Complete design of formwork has been carried out in a separate submission. Therefore, stability issues fully considered.	Contractor to follow design of concrete pour and suggested construction sequence and notify to the designer of any planned alterations. Contractor to ensure appropriate bond between wall and concrete sea wall defence.	CW	June 2022

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5	Personal injury resulting from contractor not implementing control measures.	Noise, dust and light pollution adjacent to roads and housing.	Disturbance to adjacent road, track and damage to local environment.	N/A	Acoustic barriers around the generators, all staff to be briefed to minimise unnecessary disruption.	CW	June 2022
6	Risk of injury from manual handling.	Manual handling	Worker injury	No design mitigation possible. Risk noted in the drawing.	Suitable measures to be detailed in WPP to mitigate risks.	CW	June 2022
7	Despite measures in place to ensure even ground, slip/trip/fall may still occur	Uneven or steep ground resulting in difficult access to site	Slip / trip / fall related injuries	Route to site will be de-vegged.	Contractor to produce action plan	CW	June 2022
8	Personal injury resulting from fall from height	Working at height	Death/injury due to falls from height	Temporary fencing and safety harnesses to be in place	Contractor to provide edge protection where required and to ensure control measures are implemented	CW	June 2022
9	Despite measures in place contamination of environment may still occur	Concrete pouring works to sea wall defence	Contamination to the environment. Minor Health Risks	Risk highlighted on the drawings.	Management plan required. Spray, cut and cover	CW	June 2022
10	Despite measures in place vandalism may still occur	Site Located in public area	Vandalism, and burglaries	Risk highlighted on the drawings.	CCTV to be used on site and compound locked	CW	June 2022

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11	Personal injury to workers	Ground excavations	Excavation/slope collapse	Conservative parameters have been employed during the design/check of excavations. Plant access/operation has been restricted when working close to the crest of the excavations.	Contractor to implement access/operation restrictions when plant is working close to the crest of the excavations. A clear demarcation line is to be sprayed on the top of the excavation to show the limits of the plant.	CW	June 2022
12	Insufficient ground bearing capacity.	Unforeseen ground conditions	Failure of existing abutment Failure of design. Risk of injury/death.	Design considers conservative parameters. No GI information has been provided due to presence of obstructions and boulders found underground. Ground parameters factored in line with BS EN 1997-1:2004.	If unexpected ground conditions are encountered, work is to cease, and designer is to be consulted at the earliest opportunity. Works must not proceed until approved by Designer.	CW	June 2022
13	Undermining the existing masonry wall foundation and excavation collapse.	Bed rock level	Unknown bedrock level due to Contractor being unable to carry out GI investigation	Inexistence of GI highlighted on design drawings. Sea wall defence to be founded on bedrock level with a minimum of 500mm embedment into sand.	Contractor to be prepared to provide appropriate TW in place depending of the depth of the rock level to contain the ground and to avoid undermining the existing masonry wall foundation.	CW	June 2022

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14	COVID-19	All works	Contractor coming into contact less than 2m – COVID-19.	Only essential building safety and critical workers are to be on site	Government and principal contractor guidelines to be always followed and all necessary PPE to be worn to minimise possible spread of virus.	CW	June 2022