



## **Repairs to Clarence Cove Landing Stage**

Bermuda

### **Annex D Reference Documents**

Date: July 17, 2017

Project No. 61-57-50



**Figure 1: South East edge of landing located at Clarence Cove. View from top of landing.**



**Figure 2: South Face view of South East edge of the landing showing erosion of the concrete from the bottom of landing above the footing to be repaired.**



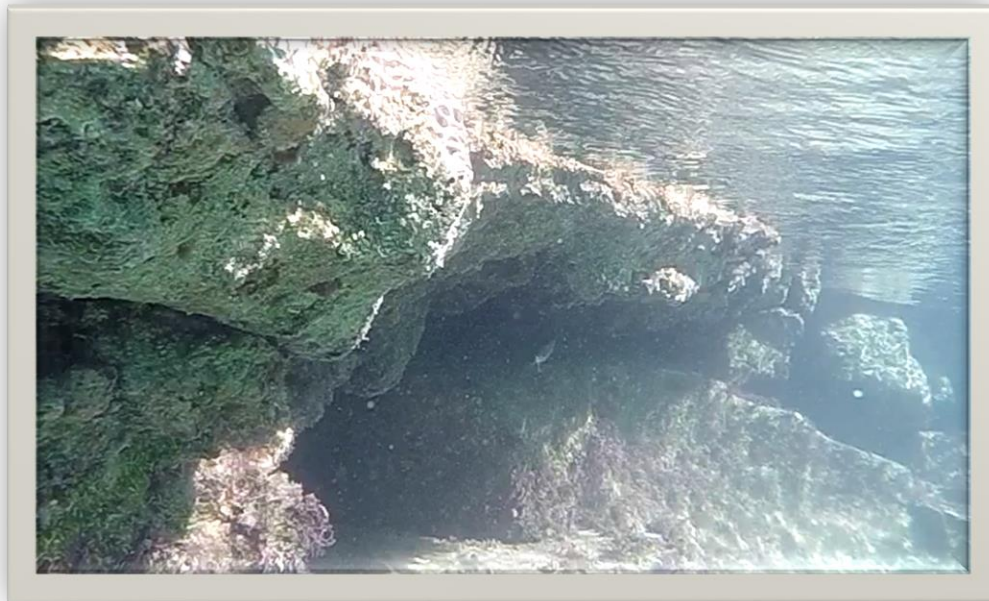
**Figure 3: Boulder and rubble in water to be removed from East end of landing.**



**Figure 4: Eastern Face showing erosion of concrete below front edge of landing.**



**Figure 5: View from beneath water from Eastern Face of landing.**



**Figure 6: Eastern Face view of a cavity formed beneath the water.**



**Figure 7: South Face showing undermining of the concrete slab.**



**Figure 8: South Face enhanced view of undermining.**



Figure 9: South Face showing a horizontal crack in the concrete slab and exposed aggregate.



Figure 10: South Face showing exposed base of landing with horizontal cracking and undermining.



Figure 11: Arched pass though from South Face.



Figure 12: Structural detail of the arch beneath the landing from South Face.



**Figure 13: Exposed rebar above archway.**



**Figure 14: South Face view of exposed reinforcement bars and cracking in the wall.**

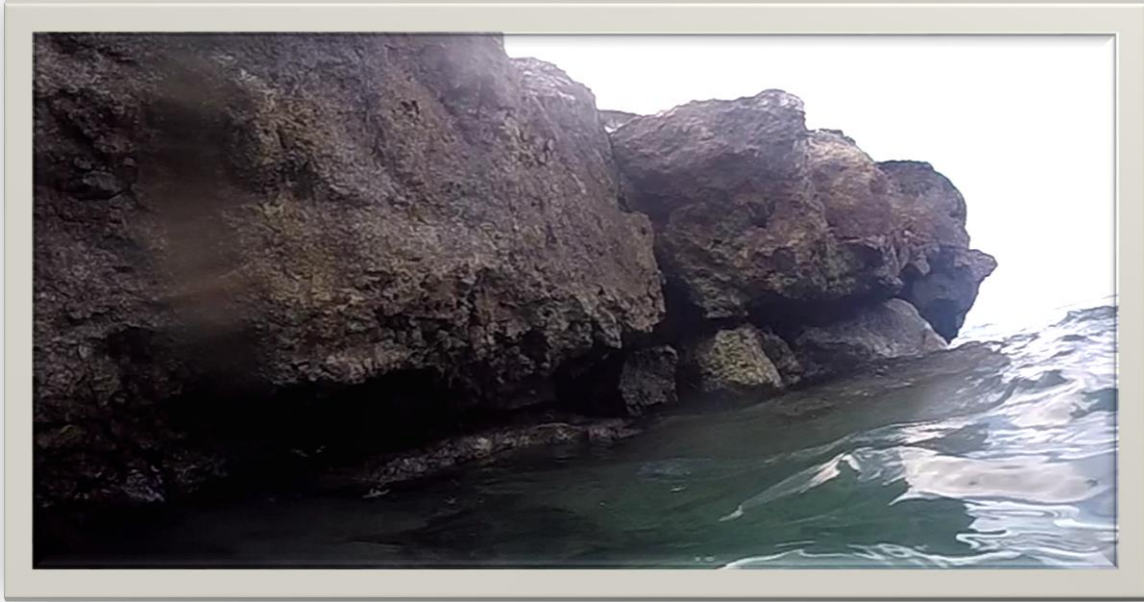




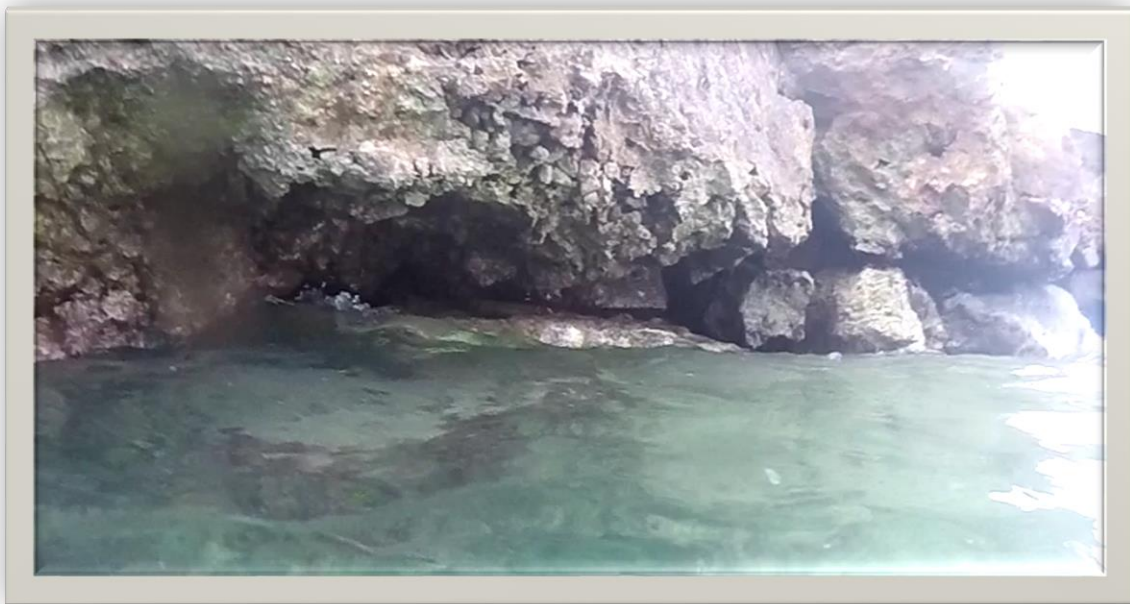
Figure 13: South Face view of crack on the East wall of archway.



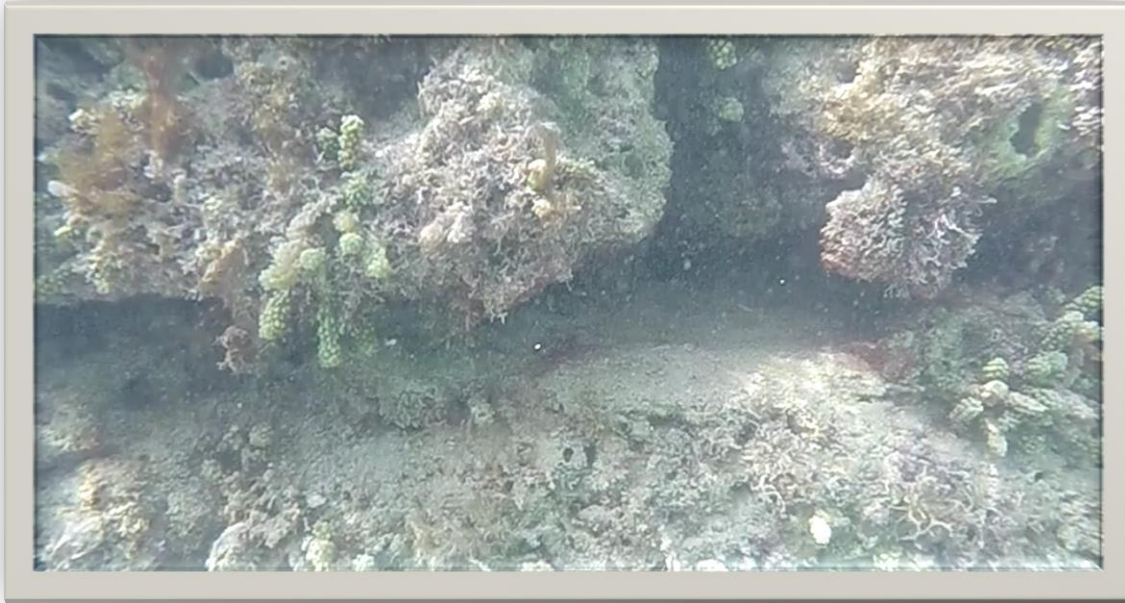
Figure 14: South Face showing crack below the top concrete slab.



**Figure 15: Eastern Face view of concrete overhang.**



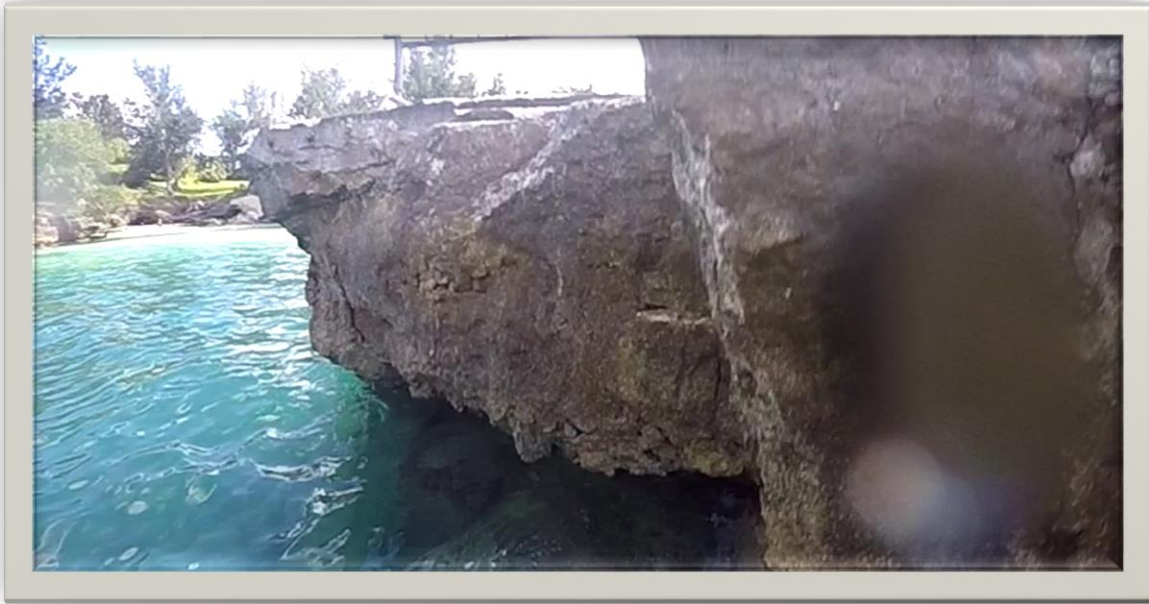
**Figure 18: Eastern Face showing concrete overhang above a cavity below sea level.**



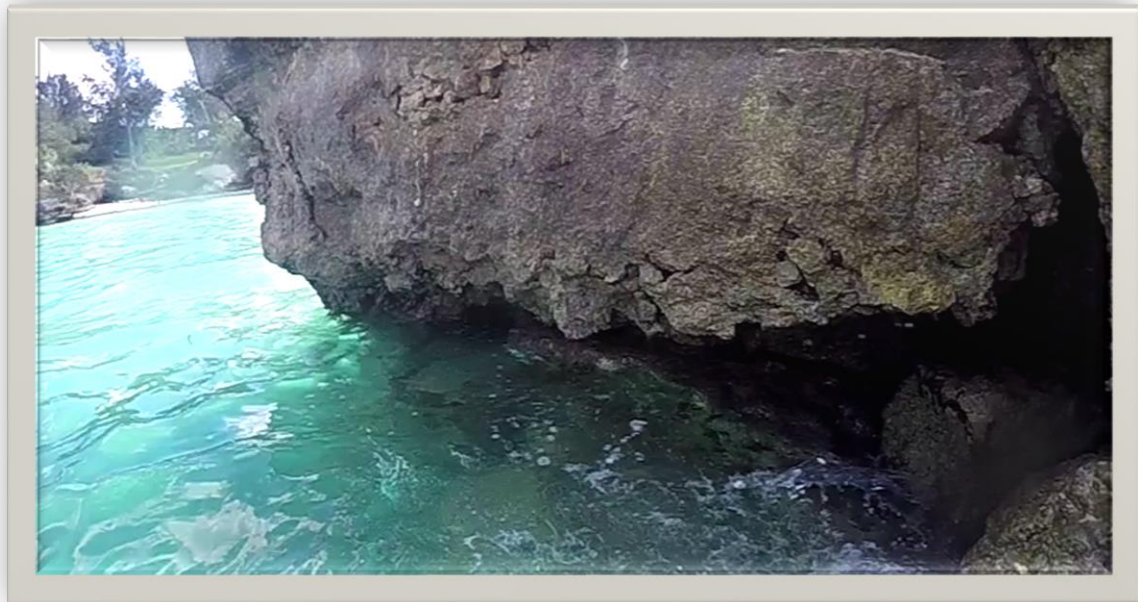
**Figure 19: Typical undermining of landing at Clarence Cove.**



**Figure 16: Cavity below sea level. Above visual shown in Figure 18.**



**Figure 21: Eastern Face of landing at Clarence Cove.**



**Figure 22: Eastern Face showing erosion of concrete due to wave action.**



Figure 17: Typical erosion of concrete.



Figure 24: Cavity on Eastern Face of Landing.