6 CONCLUSIONS

6.1 General

The condition of the original underlying masonry wave wall section remains unknown due to a lack of documentation, whilst the inspection and testing work undertaken identifying the condition of the improvement works conducted in 1993.

The condition of the reinforced concrete works are heavily cracked and potentially delaminated from the existing masonry leading to the probability that the reinforcement within the section is either corroding or likely to commence corroding in the near future. These findings are substantiated from large areas of hollow sounding concrete and crack measurements from hammer sounding surveys and visual inspections respectively together with evidence of spalled concrete.

Chloride tests have shown that chloride content is significantly higher than the maximum recommended in BS EN 206-1, chloride ingress arising as a result of airborne salts. This is a further indicator that the reinforcement is at a high risk of corrosion.

6.2 Recommendations

The condition of the wave wall has been found to be in a poor condition and repair work is not recommended given the extent of cracking and the high levels of corrosion throughout the full tested depth of the concrete. Although repairs could be undertaken, it is anticipated that they would offer little benefit in extending the longevity of the structure.

Although the wall would currently appear to be adequate to resist general wave loading, further deterioration is to be expected until its replacement becomes necessary.

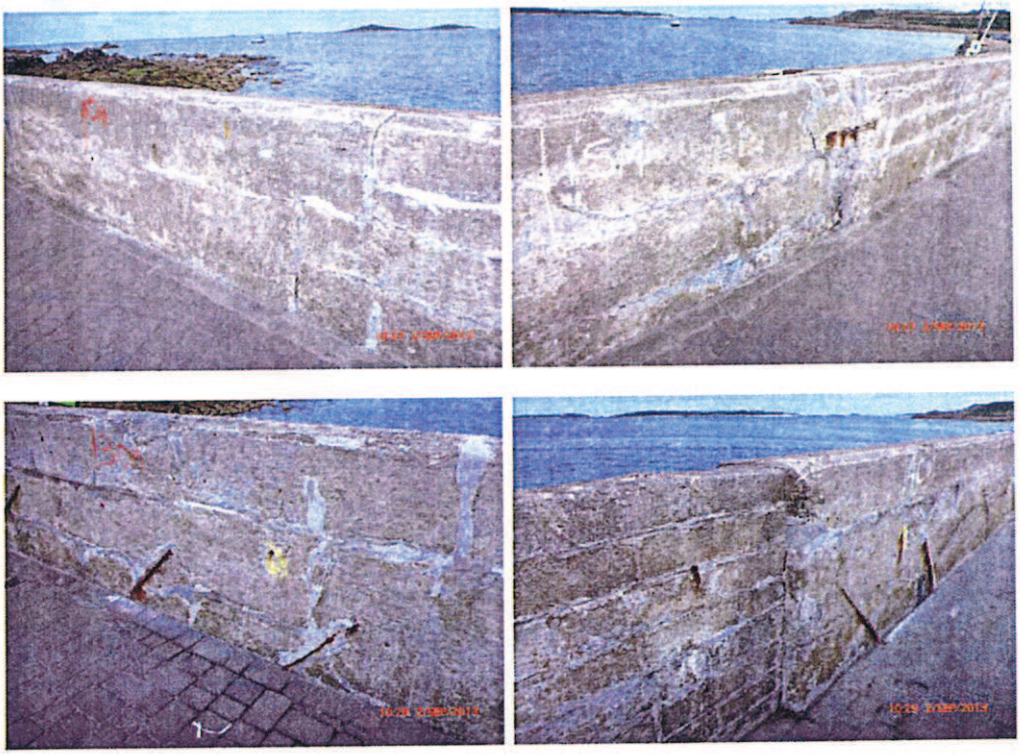
It is understood that a higher wave wall is proposed by the Duchy to improve overtopping resistance and, if this to be implemented, it is recommended that the existing wall is removed and a complete new wave wall is constructed.

REFERENCES

Ref	Doc	Issue	Date	Title	Reference Category
1	Beckett Rankine Drawing 90/017/53	-	May 1993	St. Mary's Quay Improvement – Sheet Piling and Anchor Walls	Primary
2	Beckett Rankine Drawing 90/017/59	-	Oct 1993	St. Mary's Quay Improvement – Pile Painting	Primary
3	Beckett Rankine Drawing 90/017/55	-	June 1993	St. Mary's Quay Improvement – Panel Details	Primary
4	Beckett Rankine Drawing 90/017/54	A	May 1993	St. Mary's Quay Improvement – Fenders and Bollards	Primary
5	Beckett Rankine Drawing 90/017/15	-	Mar 1993	St. Mary's Quay Improvement – Land Requirements	Primary
6	BS EN 206-1:2000	-	2000	Concrete - Part 1: Specification, performance, production and conformity	Primary
7	BS1181-124 11	-	1998	Testing Concrete – Methods for Analysis of Hardened Concrete	Primary

APPENDIX 1: LEEWARD AND SEAWARD SIDE WAVE WALL PHOTOS

Leeward Side



Seeward Side