

ANGUS COUNCIL**ROADS COMMITTEE****24 APRIL 1997****COASTAL EROSION - CARNOUSTIE**
SITUATION SUMMARY REPORT**REPORT BY THE DIRECTOR OF ROADS****ABSTRACT**

This report provides an update on the coast erosion problems at Carnoustie Beach, North of Barry Buddon Camp to South of Barry Burn.

1 RECOMMENDATIONS

The Committee is asked to:-

- (i) note the continuing erosion at Carnoustie Beach, North of Barry Buddon Camp to South of Barry Burn,
- (ii) instruct the Director of Roads in consultation with the Director of Finance to research the availability of possible sources of funding to meet the full cost of upgrading the existing coastal protection works.
- (iii) note that a contribution in respect of the cost of any upgrading works has been offered from the MOD. in the form of material supply.

2 INTRODUCTION

The Committee was apprised of the overall situation with respect to coastal erosion including the stretch immediately North of the Barry Buddon firing ranges in Report No 696/96. This current report updates the Committee on the present situation at this location.

3 DETAILS

- (i) This section of coastline is situated at the North Eastern corner of Barry Buddon Peninsula which comprises an extensive development of sand dunes and links on which is the Buddon Golf Course. (shown on the attached location plan)
- (ii) This section of coastline was suffering severe erosion during the latter part of the 1970's which led to the construction of large scale defences in 1978/79. The gabion revetment which extended to the top of the dune face, began to exhibit signs of deterioration by 1984, and was severely damaged by storms in early 1985.
- (iii) Following the failure of the defences, immediately North of Barry Buddon Camp, during the winter of 1985 a design for replacement defences, based on an armoured rubblestone revetment, (stone clad slope, which in this case is the dune face at the back of the beach protected with a rock armour facing), was submitted by Caledonian Geotech in April 1985. The present revetment was constructed in the summer of 1987.
- (iv) There is a section of approximately 70 metres in length just North of the army camp where the revetment consists of a lower slope of approximately 1 in 6 backed by a steeper slope of approximately 1 in 2. It is difficult to determine

how much of this configuration is due to slumping of material or from the way the revetment was added on to the previous "off shore" bund.

- (vi) When Report 696/96 was prepared active erosion was taking place at the east end of the revetment in front of the Council caravan site in Monifieth and an upgrade was allowed for at this location. Carnoustie was left until future years but though this last winter has not been particularly severe it is now apparent that the area would be prone to much more severe damage if the revetment was further broken down and it is therefore recommended that the scheme is carried out at this time.
- (vii) The revetment on the Northern half of the embayment (a minor indentation on the line of the coast formed by natural processes) immediately North of the ranges has also a steep upper face with a higher proportion of smaller units combined disconcertingly with a lower crest height.
- (vi) Overtopping has taken place to the North of the first embayment and there is serious erosion over the central/northern part of the rip rap embankment at this point where a track extends landward.
- (viii) The MOD has offered Angus Council free use of rock stockpiled as part of their major revetment works in 1990. This stockpile consists of approximately 4000 tonnes of rock. However as it is the surplus stockpile, for different rock sizes only approximately 1000 tonnes is suitable for primary armour purposes. The estimated saving to the project is of the order of £5,000 - £7,500.
- (ix) Measures required to upgrade the existing revetment include the heightening of the existing revetment from the middle of the first embayment Northwards, with reinforcement of the old rip rap revetment just South of Barry Burn.

In addition material would be required to redress the slope immediately North of the ranges where there may have been some slumping of material.

- (x) The proposed revenue programme to be carried out within the current financial year is:-

	£(000)
Repairs to Groynes at West End Park, Monifieth	15.0
Rock armour and ramp repairs, Marine Drive Monifieth	8.0
Repair to Groynes in front of Council Caravan Park, Monifieth	3.0
Carnoustie north of Lochty Burn and at Ballisters Park	10.0
Montrose Seawall Rock Armour adjustments	5.0
Montrose Maintenance of Rock Armour Mounds	10.0
Monitoring and Statutory Duties	15.0
Contingency Allowance for Winter Emergency Works	<u>14.0</u>
	<u>£80K</u>

4 FINANCIAL IMPLICATIONS

- (i) The cost of heightening the existing defences with localised strengthening would be approximately £60,000 using the maximum amount of rock available from MOD sources together with additional quarry material.
- (ii) An allocation of £50,000 was allowed against Carnoustie in future years in Report No 696/96 but as the Capital works scheme at Milton Mill is not likely to start before 1998/99 the £50,000 for this project could be brought forward against this present scheme.
- (iii) A possible funding option for the remainder of the costs (i.e. £10,000) could be an allocation from the Council's 'match funding' scheme if the 'real' value of the rock to be supplied by MOD is taken into account.

- (iv) The Carnoustie Golf Links Management Committee have been asked if they are able to contribute to the cost of the works but have indicated that they are unable to do so at this time.

5 CONSULTATION

The Chief Executive, the Director of Law and Administration, the Director of Finance and the Director of Recreation Services have been consulted in the preparation of this Report.

Dr Bob McLellan
DIRECTOR OF ROADS

NOTE

No background papers as defined by Section 50D of the Local Government (Scotland) Act 1973 (other than any containing confidential or exempt information) were relied on to any material extent in preparing the above Report.

WW/JSG
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