

ST. BEES PROMENADE

EXECUTIVE MEMBER: Portfolio Holder - Councillor Allan Holliday
LEAD OFFICER: Acting Head of Leisure and Environmental Services -
Cath Coombs
REPORT AUTHOR: Flood and Coastal Defence Engineer - David Bechelli

Summary and Recommendation:

Coastal inspections have identified that the sheet piling along the north face of St. Bees promenade has deteriorated to an extent that it can now be considered life expired.

In order to extend the life of the promenade four options have been submitted, with the recommendation being the construction of new concrete facing to the sheet piling. The estimated cost of this work is up to £80,000 with additional project management costs of up to £10,000. Executive are asked to approve the allocation of capital reserves of £90,000 for the 2010/2011 financial year to allow the recommended solution (Option 3, as detailed in Section 3.4 below) to proceed. Once approval is granted the tender process can begin in order that the work can be programmed to take place during the summer of 2010.

Executive approval of the Ad Hoc list of tenderers and subsequently of the most economically advantageous tender is also required. In this instance to streamline the process Executive is asked to delegate these activities to the Acting Head of Leisure and Environmental Services in consultation with the Portfolio Holder, Head of Finance and MIS, and the Head of Legal and Democratic Services.

1. INTRODUCTION

1.1 BACKGROUND TO REPORT

This report has been prepared to inform Members that the annual coastal defence survey has identified the condition of the sheet piling on part of St. Bees promenade is deteriorating due to corrosion and that action is required to extend the life of the asset.

The sheet piling is located along the north face of St. Bees promenade where Rottington Beck discharges into the sea. It effectively acts as the southern bank of Rottington Beck at this point and also holds back fill material under part of the promenade. There is a surface water sewer that discharges into Rottington Beck in this section.

The promenade at St. Bees is a structure owned by Copeland Borough Council. Responsibility for coastal defence structures lie with the owner, consequently the action required to extend the life of the structure is the duty of Copeland Borough Council to undertake.

1.2 COASTAL INSPECTIONS

As a Maritime Local Authority, Copeland Borough Council has had annual coastal inspections undertaken to monitor the condition of the coastal defences. The inspections are funded by the Department of the Environment, Food & Rural Affairs (DEFRA) under Cell Eleven Regional Monitoring Strategy, (CERMS, where Cell 11 is the stretch of coast from Great Ormes Head to the Scottish border.)

Although St. Bees promenade is generally in good condition approximately 50 years after construction, inspection has highlighted a number of defects to the structure. The main defects identified have been the loss of concrete exposing steel reinforcement in the slipway used by RNLI, corrosion of the sheet piling and missing or damaged timber groyne.

1.3 ACTIONS TAKEN AS A RESULT OF THE INSPECTIONS

The reinforcement exposed within the lower section of the slipway was a danger to members of the public using it and could cause damage to RNLI boats and vehicles. Repairs have been undertaken using funds from the existing revenue budget. Due to the abrasive nature of the beach shingle on the concrete at this location, it is likely that repairs will continue to be required to the slipway.

The sheet piling was identified as being in need of more detailed investigations, to determine the extent of the corrosion. Subsequently a structural engineer's report was commissioned, which found that the sheet piling could fail in 2 to 10 years time.

A full copy of the structural engineer's report can be found in the Members Room. This includes four options, with order of magnitude costs included. These costs could vary by up to 40% either way, as no detailed design has been undertaken at this stage.

Repairs to the timber groynes will be considered, subject to available revenue budgets, once the remedial action to other coastal defences has been prioritised.

2. ARGUMENT

2.1 SHORELINE MANAGEMENT PLAN POLICY

The current Shoreline Management Plan (SMP), adopted by Copeland Borough Council in 1998, has a policy of “Hold the Line” for St. Bees Promenade, a policy which it states is appropriate for the next 50 years. The Second Generation Shoreline Management Plan (SMP2), which is due for adoption next year, is also likely to recommend a policy of “Hold the Line” for this location for the next 50 years.

In keeping with SMP policy, the whole of the promenade needs to have a working life of a further 50 years. This would require extending the life of the north face containing the sheet piling for 50 years.

2.2 MAINTAINING COPELAND BOROUGH COUNCIL ASSETS

As stated previously, St. Bees promenade is a structure owned by Copeland Borough Council. There is a need to do something about the sheet piling and extending the life of the promenade would allow continued use of the full promenade for recreational facilities.

2.3 HEALTH AND SAFETY CONSIDERATIONS

Although not considered to be in immediate danger of collapse, the annual coastal inspections advise the fencing off of the area from the public. Such work, if approved would be funded from existing revenue budgets.

3. OPTIONS TO BE CONSIDERED

3.1 STRUCTURAL ENGINEER'S OPTIONS

The structural engineer's report suggested four possible course of action and provided outline construction cost for each of these options.

3.2 OPTION 1 – DO NOT EXTEND LIFE OF SHEET PILING – ESTIMATED COST OF £10,000 (RANGE £6,000 - £14,000)

Option 1 refers to not undertaking any life extension, but would still require fencing off the area for safety reasons. It would also require the surface water sewer outfall to be maintained to permit continued discharge. This has been included in estimated costs.

Advantages

- Minimal cost compared to extending life of sheet piling.

Disadvantages

- The sea wall may partially collapse, possibly in as little as 2 to 10 years time.
- This option does not tie in with current SMP policy, which has been adopted by Copeland Borough Council, or the preferred policy of the SMP2 currently under review.
- New surface water sewer outfall will be required.
- Area would require fencing off with loss of amenity space, possibly part of coastal footpath taken out use.
- Very poor perception of Copeland Borough Council allowing assets to deteriorate.
- Possibly health and safety implications as structural integrity diminishes.
- If there is a partial collapse of the sea wall, this could lead to accelerated deterioration of the adjacent section of the promenade.
- Costs of this could have a major impact on revenue budgets, if further remedial action would be required.

3.3 OPTION 2 – CONSTRUCT NEW CANTILEVER SHEET PILED WALL – ESTIMATED COST OF £67,000 (RANGE £40,000 - £94,000)

Option 2 would require a new sheet piled wall to be placed 1m in front of the existing sheet piling, with the gap back filled with stone. A new surface water sewer outfall would also need to be constructed, which is included in the estimate.

Advantages

- This should stabilise the north end of the promenade for around 50 years.
- This option fits in with current SMP policy, which has been adopted by Copeland Borough Council and the preferred policy of the SMP2 currently under review.
- This would extend the life of Copeland Borough Council assets allowing full use of the promenade and coastal path.

Disadvantages

- Vulnerability to scouring by Rottington Beck during floods.
- This method would require the use of a heavy piling rig, with associated access problems.
- This replicates the existing construction, which may lead to similar problems in the future.

- This is not a very sustainable solution, requiring the use of imported materials.
- This is estimated to be the most expensive solution.

3.4 OPTION 3 – CONSTRUCTION OF NEW REINFORCED CONCRETE FACING AND INTEGRAL CHANNEL – ESTIMATED COST OF £57,000 (RANGE £34,000 - £80,000)

Option 3 involves facing the existing sheet piling wall with concrete and constructing a new surface water sewer outfall, which is all included in the estimate.

Advantages

- This is a durable solution, which should stabilise the north end of the promenade for a minimum of 50 years.
- This option fits in with current SMP policy, which has been adopted by Copeland Borough Council and the preferred policy of the SMP2 currently under review.
- This would extend the life of Copeland Borough Council assets allowing full use of the promenade and coastal path.
- This method should direct Rottington Beck slightly to the north, preventing further erosion.

Disadvantages

- This is a less sustainable solution than option 4, as it requires the import of materials.

3.5 OPTION 4 – CONSTRUCTION OF GABION WALL AND CHANNEL – ESTIMATED COST OF £49,000 (RANGE £29,000 - £69,000)

Option 4 involves a stone or rubble filled gabion basket wall and channel built 2m from existing wall and repairing the existing surface water sewer outfall. The gabion baskets would be held together by PVC coated wire mesh.

Advantages

- Cheapest course of life extension.
- Most sustainable solution, using few imported materials.
- Should stabilise promenade and surface water sewer outfall for a minimum of 10 to 25 years.

Disadvantages

- Limited lifespan due to use of gabion baskets being vulnerable to corrosion of wire mesh and abrasion.
- This option does not tie in with current SMP policy, which has been adopted by Copeland Borough Council, or the preferred policy of the SMP2 currently under review.
- On going maintenance cost relating to gabions, make this a more expensive solution in the long run.

3.6 FENCING OFF AREA IN ADVANCE OF LIFE EXTENSION

As stated in section 2.3, based on the recommendations of the annual coastal defence inspection reports the area should be fenced off. This should be undertaken even if life extension is to take place. This would be funded from existing revenue budgets.

4. CONCLUSIONS

4.1 SUMMARY

The sheet piling on the north face of St. Bees promenade is suffering from corrosion and in places sections have been perforated. Investigations by structural engineers have found that the sea wall may partially collapse in perhaps as little as 2 to 10 years time.

4.2 RECOMMENDATION

It is recommended that the life of this section of the promenade be extended by constructing concrete facing and integral channel in front of the existing sheet piling, as detailed in Option 3 in Section 3.4 above. This should give life extension of at least 50 years, which would tie in with the adopted Shoreline management Plan.

5. FINANCIAL AND HUMAN RESOURCES IMPLICATIONS (INCLUDING SOURCES OF FINANCE)

5.1 TOTAL COST OF WORKS

The structural engineer's recommended option is estimated as costing £57,000, but this could range from £34,000 to £80,000.

In addition to this project management costs for the work could be up to £10,000.

5.2 SOURCES OF FUNDING

A number of source of funding have been considered, which are detailed below.

EXISTING COASTAL DEFENCE BUDGET

The existing Environmental Health budget for grounds maintenance, which includes works to coastal defence structures, is approximately £12,000 per annum. This budget is committed to undertake any minor maintenance work required, which is normally identified during the annual coastal defence inspections. This budget is insufficient to undertake the life extension work required.

ENVIRONMENT AGENCY GRANT FUNDING

The Environment Agency has grant aid funding available for capital scheme to undertake coastal protection works. Having previously consulted with the Environment Agency about making a capital bid to fund the life extension work to St. Bees promenade, in the 2010/2011 financial year, the indication was that scheme would not be eligible for consideration. The allocated budget for the 2010/2011 financial year has been heavily oversubscribed.

COPELAND BOROUGH COUNCIL CAPITAL FUNDED PROJECTS

A viable source of funding to undertake the recommended options for life extension is from Copeland Borough Council capital funds.

5.3 HUMAN RESOURCING IMPLICATIONS

Copeland Borough Council Environmental Health does not have the resources to undertake the design, the construction or project management of the scheme.

The work would need to be put out to tender to a contractor, who has the capability to undertake the project on a design and build basis. An independent professional should be appointed to oversee the project. It is expected that the work would be undertaken during the summer of 2010 and construction should take around two months to complete.

5.4 PROCUREMENT CONSIDERATIONS

The Council Contract Standing Orders require for contracts estimated to cost between £50,000 and £139,893 advertisement for expressions of interest and invitation of a minimum of four tenders, or use of a framework contract.

Executive approval of the Ad Hoc list of tenderers and subsequently of the most economically advantageous tender is also required. In this instance to streamline the process Executive is asked to delegate these activities to the Acting Head of Leisure and Environmental Services in consultation with the Portfolio Holder, Head of Finance and MIS, and the Head of Legal and Democratic Services.

6. PROJECT AND RISK MANAGEMENT

6.1 PROJECT MANAGEMENT

The work required would be undertaken by an appropriate contractor with a design and build capability. Project management would be required to ensure that the project is running smoothly, particularly when the construction work is being undertaken and unforeseen problems are dealt with swiftly.

The Environmental Health department do not currently have the resources to project manage the scheme. If this has to be undertaken externally, it could increase the costs of the scheme by up to £10,000. It is possible that the project management of the scheme could be resourced within Copeland Borough Council from another section. This should significantly reduce the cost of project management. Resources requirements and availability can be reviewed closer to the expected construction stage, which is summer 2010.

6.2 RISK MANAGEMENT

There is always the risk that schemes can encounter a number of problems that will delay the completion and increase the cost. However, project management of the work should reduce this risk.

7. IMPACT ON CORPORATE PLAN

7.1 HIGH QUALITY ENVIRONMENT

The life extension of St. Bees promenade would continue to provide a high quality environment, satisfying objective 2.1 in the Corporate Improvement Plan.

7.2 ECONOMIC SUSTAINABILITY

The continued use of the full promenade at St. Bees for local people and tourists for recreation and leisure meets objective 3.6, economic sustainability of the Corporate Improvement Plan.

List of Background Documents:

Photographs of Sheet Piling

Rottington Beck Sea Outfall, St. Bees: Condition Assessment of the Existing Sheet Piling – February 2009 – WYG Engineering

St. Bees Head to Earnse Point, Isle of Walney Shoreline Management Plan – November 1998 – Bullen Consultants

Annual Coastal Defence Monitoring Inspection Reports – Coastal Engineering UK Ltd

List of Consultees:

Councillor Allan Holliday

Keith Parker

Cath Coombs

Janice Carrol

Jackie O'Reilly

Pat Graham

Chris Lloyd

Julie Crellin

Martin Jepson

Julie Betteridge

Ann Treble

Dave Mullen

CHECKLIST FOR DEALING WITH KEY ISSUES

Please confirm against the issue if the key issues below have been addressed. This can be by either a short narrative or quoting the paragraph number in the report in which it has been covered.

Impact on Crime and Disorder	No
Impact on Sustainability	No
Impact on Rural Proofing	No
Health and Safety Implications	Sections 2.3 & 3.6
Project and Risk Management	Sections 6.1 & 6.2
Impact on Equality and Diversity Issues	No
Children and Young Persons Implications	No
Human Rights Act Implications	No
Monitoring Officer Comments	Subject to compliance with Contract Standing Orders in letting a contract there are no legal issues.
Section 151 Officer Comments	Received and included in relevant sections.

Please say if this report will require the making of a Key Decision YES.