

Coast Protection Works at Overstrand	
Executive Summary	Some parts of the sea wall at Overstrand have reached the end of their useful life and now these need to be replaced with new sections to improve the overall protection to the cliffs. This report sets out the works that are needed to improve the sea wall defences and protection of the cliffs. It outlines the expected costs of doing this, outlining the options considered and the likely implementation timescales.
Options considered	1.1 Option 1. Continue with regular repair and maintenance, utilising NNDC's coastal repair and maintenance budget. <i>Not recommended.</i> 1.2 Option 2. Extensive refurbishment along the Overstrand frontage, with sheet pile and concrete for the full 600m length of the existing seawall. <i>Not recommended.</i> 1.3 Option 3. Do nothing except manage public health and safety obligations. <i>Not recommended.</i> 1.4 Option 4 More limited, targeted works at the specific locations of the greatest immediate known structural concern on the Overstrand sea wall. <i>Recommended.</i>
Consultation(s)	Portfolio Holder for Coast
Recommendations	That Cabinet recommend to full Council that it approves the required works to the Overstrand sea wall (option 4 of this report at paragraph 3.9) and that £1.280m be added to the Capital Programme for 2025/26 for this scheme and that this be funded by £0.245m of capital receipts, £0.386m of grant funding if able to obtain grant funding and the balance from borrowing. That Cabinet agree an option (from options 1 to 4 as outlined in the table at paragraph 1.5 of Appendix A) to reallocate existing scheme budgets to reduce the level of overall borrowing if it is minded to do so. That Cabinet recommend to full Council that the scheme be funded by up to a maximum of £1.035m of borrowing depending on which option it would like to agree. It should be noted that the Council may be able to access grant funding (c. £0.386m) for this scheme and if successful it is proposed that the level of borrowing be reduced to £0.649m.

	That Cabinet approve that delegated authority be given to the Assistant Director for Sustainable Growth, in consultation with the portfolio holder for Coast, to procure, design and deliver the scheme, together with the development of any applications for external funding or necessary consents.
Reasons for recommendations	To ensure appropriate measures are taken in a timely manner to maintain the integrity of the sea wall at Overstrand for as long as is feasible in the circumstances and in accordance with the Shoreline Management Plan.

Wards affected	Poppyland
Cabinet member(s)	Cabinet Member for Coast
Contact Officer	Robert Young, Assistant Director for Sustainable Growth

Links to key documents:	
Corporate Plan:	Protect and transition our coastal environments - Realising opportunities of external funding to secure a sustainable future for our coastal communities through transition and adaptation responses - Continuing our programme of investment in coastal and resort infrastructure and amenities, building on the progress made in recent years
Medium Term Financial Strategy (MTFS)	The proposed scheme will require funding, which will be largely through borrowing, which will result in a cost to the council tax payer of interest charges and a minimum revenue provision. This will not have been accounted for in the MTFS
Council Policies & Strategies	Kelling to Lowestoft Hard Shoreline Management Plan (adopted August 2012) Overstrand 6.06 Shoreline Management Plans

Corporate Governance:	
Is this a key decision	Yes
Has the public interest test been applied	Yes.
Details of any previous decision(s) on this matter	N/A

1. Purpose of the report

- 1.1 This report sets out the case for a scheme to improve the sea wall in Overstrand. The sea wall plays an important role in defending the toe of the cliff from erosion by the sea in this locality; it is vital also to maintaining access to the beach. The condition of the sea wall has deteriorated and needs investment to improve sections of it so that it is fit for purpose and this

report sets out the case for providing the necessary budget to enable this to progress.

2. Introduction & Background

2.1 Overstrand's soft cliffs are protected at their toe by a sea wall, which also acts as a walkway (promenade), on which the England Coast Path passes. This sea wall comprises a series of integrated concrete defences which, as beach levels have dropped, have become significantly undermined in several places. As a result of the undermining, they have sustained at least two major (reflective) fractures from top to bottom. The steel sheet piles which form the base of the seawall have become severely degraded, and in places the sea has penetrated through the corroded sheets undermining the structure above.

2.2 The Shoreline Management Plan (SMP) adopted in 2012 ([Overstrand 6.06 | Shoreline Management Plans](#)) states that:

"The long term plan for this frontage is to allow the coast to develop naturally. The eroding cliffs provide sediment inputs to the wider area and are therefore strategically important to wider Shoreline Management Plan objectives. The approach will support continued natural functioning of the cliff ecology, which is internationally important and protected. Whilst there is insufficient justification for new defences, a gradual and managed approach will allow time for longer term adaptation of the built environment and community assets."
(report author's underlining)

2.3 The SMP policy has been to 'hold the line' up until 2025, however, in recognition that the failure of the defences at Overstrand would have a significantly detrimental impact (on individual properties, on the wider community and the local economy on which it is reliant) the policy from 2025 allows for 'managed realignment', stating:

"Where protection is currently provided by coastal defence structures that might be maintained or repaired if funding allows but not replaced if they fail or reach the end of their design life." [sic]

2.4 The SMP includes an action for this unit, to:

"Develop a longer term adaptive transition approach with timescale informed by strategic studies and assessments".

The narrative of the main document for this frontage (up to 2025), states:

"The policy option for the next twenty years is to continue to protect the village frontage through initially undertaking regular maintenance of the existing defences and repairing them when areas are damaged, where it is economical to do so. This is a hold the line policy option.

In parallel, however, investigations will be undertaken to identify technical options and establish an appropriate package of social mitigation measures, in preparation for the transition to the medium to long term policy option of managed realignment. Only when such adequate mitigating social measures are identified to limit the impact on the lives of individuals and the community, would the change to a managed realignment policy option be implemented. (report author's underlining)

- 2.5 Therefore the proposed action is now to undertake works to improve the overall sea defences by replacing parts of the sea defences. These improvement works if done now will 'buy time' for the 'package of social mitigation measures' to be developed. The SMP does not bring with it any assurance of funding for either the engineering works or the social mitigation, however, the opportunity for the latter, to some extent, is now available via the Coastal Transition Accelerator Programme (CTAP, branded locally as Coastwise) and any future consequential changes in government policy and approach this might influence.
- 2.6 The CTAP is intended to begin to develop coastal adaptation solutions in scenarios such as this, where in the medium to long term, coastal change will have inevitable consequences. Such approaches are however not yet locally or nationally developed and, in order to do so, it is important to ensure there is sufficient time for community adaptation to take place. Whilst it is technically feasible to do so, maintaining the defence structures in a timely manner is therefore important; although this is clearly expensive and the CTAP funding cannot be used to fund coast protection measures. Important lessons from the former NNDC Coastal Pathfinder programme (2010 – 2012) demonstrated that for meaningful conversations about longer-term adaptation to take place with those whose properties are at risk, it is vitally important to provide reassurance that short term measures are being taken to safeguard their interests.

3. Proposals and Options

- 3.1 Various options, aimed at ensuring the seawall remains effective in protecting the toe of the cliff from erosion, have been evaluated and a project group of officers from all relevant departments has been created to develop and implement suitable solutions to the multiple issues this coastal frontage faces, which include coast protection works; cliff stability; access issues; public safety; and coastal adaptation.
- 3.2 The costs of the possible engineering works have been estimated, and opportunities for external funding have been assessed. External expert technical advice has been provided around the opportunities for such a scheme to attract government Flood and Coastal Erosion Risk Management Grant in Aid (FCERM GiA) from the Environment Agency. In devising the recommended scheme, a balance has had to be struck between what is likely to be permissible under the SMP policy, what is likely to be achievable within the budget constraints of the Council, and what is likely to be forthcoming through GiA.
- 3.3 The poor condition of part of the sea defences means the timing of the works is critical. The works should be considered urgent and a suitable programme developed, ideally securing the sea wall before the next winter storm season because of the harsh environmental conditions for such work, and also because winter working will add significantly to the cost.
- 3.4 The Council currently holds a marine licence (with discharge conditions) within the relevant area, to undertake works such as set out in this report. This licence expires on 3 July 2028. It is not anticipated that planning permission or other consents will be needed.

- 3.5 The options listed below provide an outline of varying levels of interventions considered; within each, the likelihood of meeting the objectives is outlined.
- 3.6 Option 1.
Continue with regular repair and maintenance, utilising NNDC's coastal repair and maintenance budget. This financial year, £116,094 has been spent on coastal works in Overstrand, out of a total budget of £300,000, for which there is huge demand across the whole NNDC coastal management frontage. This value of spend at Overstrand is likely to double before the end of this financial year. This budget is barely sufficient for routine works and using it in one location would jeopardise deteriorating coastal assets elsewhere. Such a small level of investment would mean the risk of failure at Overstrand will remain. This option is not therefore recommended.
- 3.7 Option 2.
Extensive major refurbishment along the Overstrand frontage, with sheet pile and concrete for the full 600m length of the existing sea wall. The indicative cost of this is £6 million, including 20% design cost and 60% optimum bias. A potential reduction in repair and maintenance demand for 5-10 years would result, subject to weather, it would be likely to comprehensively fulfil the project objectives. This is clearly a relatively major scheme, the implementation of which would incur significant delays (during which the frontage would be at risk). It is a high-cost option which would most likely attract a relatively small amount of external funding (GiA). This option is not therefore recommended.
- 3.8 Option 3.
Do nothing except manage public health and safety obligations. This would lead to a high risk of failure of the sea wall, affecting beach access in the short term, with gradual further deterioration of the wider coast protection assets locally, exposing the cliff to damaging erosive processes. This would rapidly impact on the recreational and other benefits of the village, property and the local economy. This option is not therefore recommended.
- 3.9 Option 4
Carry out targeted works at the specific locations of the greatest immediate known structural concern on the Overstrand sea wall. These limited works would entail steel sheet piling and concreting at the sea wall toe, undertaken over 2 x 150 metre frontages at the north-western and south-eastern beach accesses. The estimated cost of this option is £1.280m (details can be found in Appendix 1 to this report). It should be noted that they include 20% fee and 60% optimism bias (OB). At this stage, with costs being estimated, this level of OB is considered prudent (and indeed necessary for making a case for GiA). This option provides the benefits of extending the life of the sea wall defences in the most cost effective way and will allow time to develop a package of social mitigation measures. This scheme is within the realms of affordability and will most likely attract a reasonable Grant in Aid sum. This option is therefore recommended.
- 3.10 Option 4 is the **recommended approach**, the rationale for which can be summarised as follows.
- It would be able to be delivered relatively expeditiously.
 - To delay the impacts that would result from the further failure and inevitable premature loss of a major coastal defence asset at Overstrand, by extending its effective life.

- To implement the SMP policy for the Overstrand village frontage.
- To maintain coastal erosion protection at Overstrand, to provide more time to facilitate adaptation measures in response to the predicted impacts of coastal and climate change.
- Preserve the recreation, leisure and economic value (tourism) of the Overstrand frontage, including beach access and beach huts.
- Maintain the historic and visual amenity and character of the Overstrand frontage.

3.11 **Partnership Funding (PF) calculator/GiA for option 4**

A review of the funding potential for the preferred option was commissioned by RPA (consultants), following their prior consideration of the whole range of options, in January 2025. This indicated there was considerable potential Flood and Coastal Erosion Risk Management Grant in Aid (FCERM GiA) funding, through application of a Partnership Funding (PF) calculator. This was based upon the estimated cost of works set out in Appendix 1 and included an allowance for fees and a 60% optimism bias. The percentage of potential FCERM GiA funding is higher, at 30% of the scheme cost for this option, in comparison to 18-19% for Option 2.

- 3.12 It is recommended that any application for grant is made under an urgent works procedure, immediately following full Council approval. This will inform the EA that urgent works are needed, following which the Council will be expected to submit a short form Outline Business Case (OBC) (which can most likely be completed in-house). It is suggested that procurement for design works commence in parallel with the OBC. Assuming the grant application is successful, it should be noted that it is probable that there will be considerable delay before payment is made.

3.13 **Programme**

Were the scheme to be approved, the cautiously estimated, implementation timescale will be as follows.

- Consultant tendering process can start as soon as approval has been given and once the scope is agreed. Depending on the procurement route (see below) and the scope of the approved approach, the instructions to tenderers etc. could be drafted by the end of March.
- Request responses from tenderers within **6-8 weeks**
- Tender evaluation – around **one week** from receipt of the tender submissions.
- Tendering stand still period – minimum **eight working days** (if above the threshold)
- Contract award – dependent on legal support but this could be done within **two weeks**.
- Contract start – within **two weeks** of award
- Consultant Contract duration – will depend on the tender returns. Could be up to **six months** bearing in mind ground investigations will most likely need to be undertaken, followed by detailed design and production of construction tender documents (although efforts will be made to ensure this is kept to a minimum).
- Once the outputs are reviewed, the procurement process will need to be repeated to procure a contractor to undertake the works.

- 3.14 Clearly such works are more easily (and quickly/efficiently) undertaken outside the main (winter) storm season. In all likelihood, it will not be possible to commence works on site until at least autumn 2025, so considerable risk has to be recognised, which might be managed/mitigated by phasing the works.

3.15 **Procurement**

It is highly probable that work of this nature could be undertaken by local contractors so many procurement options exist. Consultancy services to undertake any site survey/investigation, followed by designing solutions and drafting the contract brief (and potentially managing the works) would be openly procured, but a procurement framework or 'direct purchasing system', could be utilised. The cost differential for the various procurement options will be assessed and the most advantageous approach adopted; however, the overall cost estimates for the proposed scheme do include professional fees. The recommendation seeks to delegate authority for procuring the works to ensure any delays are minimised.

3.16 **Finance**

- 3.17 A Summary of indicative potential funding sources for option 4 capital works is given in the Appendix A to this report. This shows the anticipated level of grant funding and the projected budget shortfall. Other sources of funding (including grants and local contributions) will continue to be explored. It is suggested that the capital receipts funding for an existing capital budget (Coastal Adaptations (Cliff Protection)) be used to part fund the scheme, with the remaining shortfall funded by borrowing, as there are no other funding sources available unless a grant funding application is successful.

4. **Corporate Priorities**

- 4.1 The following Corporate Plan objectives are relevant to the proposed course of action:

Protect and transition our coastal environments

- *Realising opportunities of external funding to secure a sustainable future for our coastal communities through transition and adaptation responses*
- *Continuing our programme of investment in coastal and resort infrastructure and amenities, building on the progress made in recent years*

5. **Comments from the S151 Officer**

The scheme should be approved if the Council want to 'buy time' to develop a package of social mitigation measure. However the funding of the scheme will be through borrowing with the possibility of some grant funding which would reduce the overall level of borrowing required. There are some options to reduce the level of funding if Members are willing to reallocate budgets from other coastal works (as laid out in paragraph 1.5 of Appendix A). However this would significantly reduce the Council's ability to move swiftly in addressing any other coastal issues as there would be no approved budget. I would recommend that

Members only consider Options 2 or 3 of the possible budget reallocations.

6. Comments from the Monitoring Officer

The options considered to improve the sea wall range from doing the minimal amount to address health and safety obligations only, to a full refurbishment. The recommendation – option 4 – is for more targeted works. Various funding options are outlined, but if none are considered suitable, and/or if grant funding is not successful, there may be increased borrowing: the cost of which and making repayment will need to be considered. If works are to be carried out, the timing is detailed as relevant regarding urgency and cost factors.

7. Risks

Risk	Commentary/Consequence/mitigation
Failure of sea defences before works have begun	Rough seas, particularly storms from a northerly direction, especially coupled with high tides, can have a damaging impact on the coast by reducing beach levels and exposing vulnerable areas of the sea wall. Clearly these could occur at any time and there is no effective mitigation. It is crucial that the proposed repair works are undertaken as soon as possible.
Winter working	A scheme such as that proposed is best undertaken at when daylight working is maximised and stormy weather is less likely/frequent. Any delays in implementing the scheme will push it further away from the ideal working window. Winter working will lead to the works taking longer and being more expensive, and risk further failure as a result of stormy weather. Expediting processes to ensure work can start as soon as possible will help mitigate this risk. Failure to complete the scheme before winter might be managed by phasing the scheme, ensuring the most vulnerable areas of the sea wall are secured first of all, with the others perhaps following on after the winter has passed.
Public safety	Deteriorating condition of the sea wall will lead to greater risk to the public (users of the promenade/beach either on/in the vicinity of the degraded sea wall/promenade and linked coast protection structures owned by NNDC, with consequential liability for the Council. This can be mitigated by monitoring the condition of the assets, and any hazards posed, and managing public access in their vicinity accordingly. Expediting the implementation of the scheme will help to manage this risk.
Resources	The timely and successful implementation of the

	scheme will depend not only on the availability of finances but on availability of suitable NNDC staffing, consultants and contractors. NNDC staffing resource (for procurement and technical coastal and project management roles) will need to be planned for, nevertheless, the scheme's timely delivery will rely on the availability of suitable external consultants and contractors, which will need to be procured as soon as possible. The project plan suggests that the procurement procedures are undertaken in parallel with funding bid drafting. The 60% optimism bias is believed to help mitigate any resource constraints by providing suitable budget headroom. Whilst the Cromer and Mundesley scheme is nearing completion, thus potentially freeing up internal staff resources, the impact of weather events or other unplanned for or urgent works elsewhere, contributes to this risk.
Unaffordable scheme cost due to inflation (or other unexpected occurrences)	The cost estimates include an optimism bias (OB) of 60%, which is deemed essential at this early stage in the scheme's development. This should allow sufficient headroom for any substantive cost increases. Significant delays in commencing the scheme, especially if they necessitate winter working, may not be mitigated by this OB allowance.
Ability to attract Grant in Aid (GiA) funding	A reasonable proportion of GiA has been predicted for the recommended option on the basis of technical analysis and relevant consultations undertaken, however it is not guaranteed; neither is the timing of any GiA payment known (were such an application to be successful). The amount of GiA may be lower than predicted or may not be awarded at all. There is presently a typical wait of twelve months for approval of (grant aided) spending on detailed design and tendering. Awaiting an outcome would thus push a potential start date for on-site works at Overstrand into the 2026-2027 financial year, with a commensurate increase in costs (and risks) over this timeframe. It is recommended that a short form Outline Business Case (OBC) be submitted for FCERM GiA funding in parallel with progress on detailed design and tendering of the proposed works. There will be a need to ensure sufficient funds are available to cover the entire scheme cost, in the event that GiA is not forthcoming. The costs

	(e.g. interest) of any delayed GiA payment (were such an application to be successful) will also need to be covered by the budget for the recommended scheme.
Borrowing costs	The costs of borrowing (interest) to fund the capital scheme (or the opportunity costs of savings, were it to be funded from reserves) will need to be accounted for. Clearly interest rates could change, so informed estimates for this will need to be made.
Cliff slips	The cliffs along the entire Overstrand coastal frontage, including those behind the sea wall, are unstable and prone to slumping, sliding and erosion, particularly when the water content is high. A cliff slip in the vicinity of the recommended works may lead to delays and/or increased costs or complications. Frequent monitoring of this frontage is undertaken, especially of the most active cliff areas, although unforeseen slips can occur, and this occurrence cannot be mitigated.
Failure to implement the recommended scheme	Failure to act would lead to the imminent loss of a major coastal asset at Overstrand, exacerbating erosion along the Overstrand coastal frontage, impacting residential, business and community assets. This would detrimentally impact upon the recreation and tourism value of the Overstrand promenade, including beach access and beach huts as well as the amenity value of the Overstrand frontage, in advance of any adaptation plan being implemented.
Timescales: Procurement/Resourcing	The route to procurement needs to be determined, both in terms of initial consultancy support with detailed design (which may also require ground investigation) and production of construction tender documents and subsequent procurement of construction works. Timescales are very much dependent upon the procurement route used. In addition, demands on NNDC's Coastal Management professionals are high, being still engaged in the Cromer and Mundesley Scheme as well as a full pipeline of ongoing repair and maintenance works.
Timescales: Marine Management Organisation (MMO) Marine Licence and Additional Consents	NNDC has a MMO marine licence in place until 3 July 2028, for the repair and maintenance of existing sea walls and toe piling repair and maintenance. This is subject to meeting a limited number of conditions, at least six weeks before commencement of licensed activities. Requirement for planning permission or other

	consents would also need to be determined and sufficient timetables/costs be built in to mitigate for potential delays.
Timescales: Shoreline Management Plan Action Plan and Implementation of Adaptation Plan	The proposed works to the Overstrand sea wall are based upon providing time for developing a longer-term adaptive transition approach to be implemented at Overstrand. This is in line with the Shoreline Management Plan Action Plan for the Overstrand frontage. Without capital coast protection works, there is the possibility that there may be a move towards a more reactive management approach having to be utilised, operating over a much shorter timescale, due to sea wall/promenade failure and resultant cliff top landwards transgression/coastal slope movement.

8. Net Zero Target

An initial appraisal of the likely climate and environmental impacts has been undertaken using the climate impact assessment tool.

Works such as those proposed will utilise materials with unavoidable embedded carbon, and during the implementation of the scheme, emissions will be inevitable. Based on a very high-level early-stage assessment, using information relating to similar government schemes, the following formulae might be applied.

- During construction: 5 tonnes of carbon dioxide equivalent per £10K scheme cost
- Lifecycle: 10 tonnes carbon dioxide per £10K cost

Using this, appendix 1 (which gives the scheme cost estimates) shows the indicative estimated total emissions. This is an indicative figure only, commonly used at the earliest stage of such project submissions.

It is unlikely that alternative plant/materials could be used to complete the proposed works in such a way as to significantly reduce emissions given the specific requirements for working in the marine environment and the likely budgetary constraints. These matters will be addressed as far as possible in procurement processes.

The proposed refurbishment of the Overstrand sea wall will 'buy time' for a 'package of social mitigation measures' to be developed, as referenced in the Shoreline Management Plan (SMP), Overstrand 6.06 unit, adopted in 2012. This will help ensure the whole settlement of Overstrand remains sustainable in the long term and does not unduly experience the adverse impacts of coastal change and blight. The quantum of emissions avoided by delaying the loss of property cannot be estimated.

Improving the condition of the Overstrand sea wall through the proposed refurbishment, will obviate the need for multiple, frequent smaller works over a longer time period, with additional increase in greenhouse gas emissions.

Wherever feasible materials will be reused as part of the scheme and waste materials will be utilised/recycled.

9. Equality, Diversity & Inclusion

The contents and recommendations of this report have no impact upon the Council's [Equality, Diversity & Inclusion Strategy](#) or obligations.

10. Community Safety issues

The contents and recommendations of this report will lead to a means by which potential future public safety concerns might be avoided or mitigated, e.g. by suitably securing the structural integrity of the sea wall.

11. Conclusion and Recommendations

Given the importance of ensuring the timely refurbishment of the coast defences at Overstrand, it is considered necessary to establish a capital budget and to commence the scheme as soon as possible.

That Cabinet recommend to full Council that it approves the required works to the Overstrand sea wall (option 4 of this report at paragraph 3.9) and that £1.280m be added to the Capital Programme for 2025/26 for this scheme and that this be funded by £0.245m of capital receipts, £0.386m of grant funding if able to obtain grant funding and the balance from borrowing.

That Cabinet agree an option (from options 1 to 4 as outlined in the table at paragraph 1.5 of Appendix A) to reallocate existing scheme budgets to reduce the level of overall borrowing if it is minded to do so.

That Cabinet recommend to full Council that the scheme be funded by up to a maximum of £1.035m of borrowing depending on which option it would like to agree. It should be noted that the Council may be able to access grant funding (c. £0.386m) for this scheme and if successful it is proposed that the level of borrowing be reduced to £0.649m.

That Cabinet approve that delegated authority be given to the Assistant Director for Sustainable Growth, in consultation with the portfolio holder for Coast, to procure, design and deliver the scheme, together with the development of any applications for external funding or necessary consents.