Thorpeness

A first step in how we manage an important part of the Suffolk coast

Photo Mike Page

coastal partnership east

EASTSUFFOLK COUNCIL

Taking steps to manage the Suffolk coast

Involving people who live, work on and visit the coast is important in ensuring that people are aware of, understand and can see that their views have been taken into consideration about the future management of an area valued by them. Our approach is to work with groups of local people to seek their help, local knowledge and comments ahead of sharing information with the wider community. We have taken this approach in Thorpeness, forming a community liaison group in November 2018. This iterative process, together with wider community engagement, ensures the right management decisions are made for both the community and coastline and that they are; socially conscious, economically viable, technically apt and environmentally sustainable.

Progression

Our next step is to involve the wider community, seeking their views on the Thorpeness Coastal Management Options Report. This consultation will run from 31st July to 30th September 2019. The report includes possible management options, design, costs, funding information and timescales.

The report content and its recommendations will be revised based upon feedback from the community. Key statutory consultees include: Natural England, Suffolk Coast & Heaths Area of Outstanding Natural Beauty, the Environment Agency and Suffolk County Council.

Where can I find out more?

Thorpeness Coastal Futures Group (TCFG)
www.thorpenesscfg.wordpress.com

Shoreline Management Plan (SMP7) Thorpeness to Orford Ness
(Royal Haskoning, 2010)
www.suffolksmp2.org.uk/index.php

Thorpeness SMP Policy Change Procedure:
(Suffolk Coastal District Council Cabinet 2014)
www.suffolksmp2.org.uk/publicdocuments/section8/Suffolk_Coast_Forum_2014_09_13_SMP_Change_Process_Thorpeness.pdf

Mott MacDonald Coastal Processes (2014) and Works Options (2016)
www.coasteast.org.uk/our-work/projects

Introduction

A significant part of Thorpeness village's appeal is owed to the coastline.

The frontage accommodates several large properties of significant value, hence the community aspiration "to provide protection to property north of the Headlands to year 2060". East Suffolk Council (ESC) are the local authority with erosion risk management responsibility over the northern Thorpeness frontage. Coastal Partnership East is the team who undertake this work. The Environment Agency (EA) manages the flood risk over the lower-lying southern frontage.

Coastal Partnership East is a partnership of three local authorities, North Norfolk District Council, Great Yarmouth Borough Council and East Suffolk Council. All three councils are Coast Protection Authorities under the Coast Protection Act 1942.

Coastal Processes

Thorpeness' shoreline is relatively stable, and long-term average erosion rates are low compared to others in Suffolk. Rates and directions of sediment movement along the coast here are variable, but volumes are considerable. The general trend is for periods of normal beach levels fluctuation to be interrupted by spikes in erosion. The stability is provided by the influence of a geologically robust 'Coralline Crag' outcrop. Erosion pressure is temporally and spatially variable; reasons for this are poorly understood, but likely related to changes in offshore sea-bed level. Localised erosion has recently focused on the northern coastal frontage. Over the past century erosion pressure in the southern extent has retreated the shoreline landward and lowered the shingle bank. Future rates of erosion are gauged using forecasts. The erosion rate is ~0.25m /yr under a slow erosion scenario. This is a long-term average across periods of high and low erosion pressure. Under a fast erosion scenario, assumed net retreat is ~0.5m /yr.

What options have been assessed?

In 2016 Mott MacDonald (MML) produced a Works Options Report for ESC, which identified six potentially viable works options. These options are currently numbered in order of MML preference. Many of these options are technically unsuitable and financially unviable, particularly when the decommissioning costs are considered. The three remaining viable options require substantial intervention. If an alternative intervention option, not yet considered, can be deemed technically, economically and environmentally appropriate, then it can also be explored.

Option	Description	Length (m)	Cost (£k)
1	Beach recycle/recharge, monitoring and emergency planning	>400	1,150
2	Small, low level rock revetment with end transitions	366	1,028
3	Medium, low level rock revetment with end transitions	391	1,378
4	Large rock revetment with end transitions	410	3,887
5	Steel sheet pile wall with end transitions.	329	511
6	Artificial reef	250	3,051

Photo Mike Page

Funding

A high level review of the costs and viability of funding sources will be necessary to ensure expectations are set realistically and practicable decisions are made. Three tiers of cost and associated funding from ESC could be utilised at Thorpeness.

Minor repairs and maintenance:
Annual average expenditure of £4k—£6k over ~40 year asset lifespan. ESC annual revenue budget covers these costs.

Small projects: Each of value <£100k or an annual average of £12k —£16k over ~20 to 40 year lifespan. Small projects include beach recycling/recharge, geobag and/or gabion repair. For the purposes of this high-level funding assessment, ESC could facilitate defence maintenance and management works at an average rate of **£15k per annum.**

Large projects: Each of value >£100 k. Major works could include rebuilding defences; a proactive beach re-nourish/recycle to sustain protection; improving/extending the end transitions; removing defences at life expiry.

This cost requires Partnership Funding including ESC 'revenue' and/or 'reserve' budgets, and local community contributions through a Community Interest Company or other.

Flood Defence Grant in Aid (GiA):
It is possible but not confirmed, that a GiA sum of ~ £325k (2017 base) will be available as a contribution towards a large project.

Other potential funding sources include:

- Levy allocated by the Regional Flood and Coastal Committee (RFCC).
- Community Infrastructure Levy (CIL).
- Funds from Enabling Development.
- Other - to be identified during consultation.

How much will the options cost?

Partnership Funding in conjunction with ESC, will be necessary to cover costs. Costs shown facilitate comparison of different approaches but should not be taken as absolute. Costs based on 2015 prices which have increased by 8% since then. Costs do not include for maintenance or removal at life expiry.

Viable Approach	Estimated cost 2015	Estimated cost 2019 (+8%)	Contingency Cost (+60% Optimism Bias)
Beach recycle/recharge, monitoring and emergency planning	£1,150,000	£1,242,000	£1,987,200
Small, low level rock revetment with end transitions	£1,028,000	£1,110,240	£1,776,384
Medium, low level rock revetment with end transitions	£1,378,000	£1,488,240	£2,381,184

THE OPTIONS

OPTION 1

Beach recycle/recharge, monitoring and emergency planning

Creation and maintenance of a beach wide enough to absorb losses from erosion events would avoid excessive degradation of existing defences. This option works with inherent coastal processes, but sediment availability from local donor sites would be a long-term challenge.

OPTION 2

Small, low level rock revetment with end transitions

Strategic placement of ~30 tonnes of rock armour would provide a tried, trusted and robust cliff-toe defence. A rock slope could present an increasing challenge to safe public access over that of existing or alternative options.

OPTION 3

Medium, low level rock revetment with end transitions

The medium rock revetment option is larger in scale, potentially offering a higher level of coastal protection, but also instigating higher environmental impact and cost. The rock slope could be built in the space occupied by the geobags.

OPTION 4

Large rock revetment with end transitions

Rock revetment on this scale has been ruled out; based on grounds of expense and significant unfavourable environmental impact due to risk of impeding alongshore sediment movement.

OPTION 5

Steel sheet pile wall with end transitions

Driving a line of steel sheet piles (SSP) deep in to the beach could constitute an erosional backstop, but is deemed unviable due to the dangerous, and unsightly increase in exposed SSP as the beach lowers.

OPTION 6

Artificial reef

A ~250m long artificial reef constructed using suitable materials could significantly reduce wave energy focus on the frontage, with limited impact on the adjacent areas. This option is unviable due to sheer expense of marine based installation.

Who do I contact ?

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You can find information about the consultation on our website **www.coasteast.org.uk/our-work/projects**

Alternatively you can come along to a community drop-in meeting at Thorpeness Hotel and Golf Club, Lakeside Suite IP16 4NH on:

Friday 9th August from 5.30pm to 8.30pm
Saturday 10th August from 10am to 12.30pm

If you would like a printed copy of the consultation documents or need information in an alternative format please email **coastalmanagement@eastsuffolk.gov.uk**