

September 2018

Borough Council of King's Lynn & West Norfolk King's Court Chapel Street King's Lynn Norfolk PE30 1EX

# Quality information

Prepared by	Checked by	Approved by
George Batt	Dan Glasson	Paul Norton

# **Revision History**

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# Prepared for:

Borough Council of King's Lynn & West Norfolk King's Court Chapel Street King's Lynn Norfolk PE30 1EX

# Prepared by:

AECOM Infrastructure & Environment UK Limited Midpoint Alencon Link Basingstoke Hampshire RG21 7PP UK

T: +44(0)1256 310200

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# 1. Introduction

# 1.1 Project Background

AECOM Infrastructure and Environment UK Limited has been appointed by the Borough Council of King's Lynn and West Norfolk (BCKLWN) to develop a Coastal Management Plan (CMP) to implement the 2010 Shoreline Management Plan's (SMP2) preferred management policy for the Hunstanton frontage.

# 1.2 The Site

Hunstanton is a seaside town along the west facing coast of the Wash in Norfolk, approximately 21km north east of the town of King's Lynn (



Figure 1-1). The study area comprises approximately 1.3km of undefended cliffs (Unit A) and approximately 1.5km of defended coastline (Unit B) that consists of seawalls, promenade, rear wave wall and beach management groynes. The entire coastline is fronted by a sandy/shingle beach of varying levels.

Hunstanton is a popular tourist area, particularly in the summer months. The promenade is a prominent amenity area with an array of attractions which are well trafficked by the public. There are numerous seasonal kiosks located along the promenade with an amusement park, leisure centre, aquarium and caravan park located just behind the rear wave wall.



Figure 1-1: Location of study area (imagery ©2017 Google)

# 1.3 Purpose and Structure of this Document

This report summarises the public consultation process that has been undertaken during the development of the Coastal Management Plan. The public consultation included drop-in exhibitions and feedback surveys, the results of these surveys are presented within this report.

# 2. Consultation Feedback Results

# 2.1 Public exhibitions

Two drop-in public consultation events were held in February and April 2018 at Hunstanton Town Hall. The exhibition content was designed to communicate the development of the Plan through a series of poster boards. These can be found in Appendix A of this document. As well as poster boards, members of the project team from BCKLWN, AECOM and St La Haye Ltd were present at both events to assist visitors and answer questions about the proposals. The two consultation drop-in events were advertised both in local newspapers and online.

The first exhibition gave information on how coastal protection schemes are funded, specific information regarding the condition of the defences and the environment of the frontage. A long-list of options was then presented along with future steps being taken in the development of the Plan.

The second exhibition two months later presented additional information on the developed short-listed options, which included a description of what the options would include, advantages and disadvantages, impact on the environment and an estimate of the costs of the options.

The BCKLWN website presented details of the Coastal Management Plan and how it was being progressed. As reports were prepared they were uploaded to the website to keep the public informed of progress. There was also a timeline displayed showing dates of the key project milestones.

# 2.2 Survey results

At each of the consultation events there was a feedback survey available for the public to review the drop-in events and to enable any comments to be captured. Also, following each of the events, an online survey was made available on the BCKLWN website. A total of 52 responses were received during the consultation using the online form. The questions were focused to inform the selection of preferred options.

The questions and results of the survey are presented in the sections below. Please note, where the total number of responses differs from the number of responses provided it is because one or more of the participants did not provide an answer to that question. The results of the survey are summarised in Section 3.

Please note that all responses have been printed verbatim of how they were received.

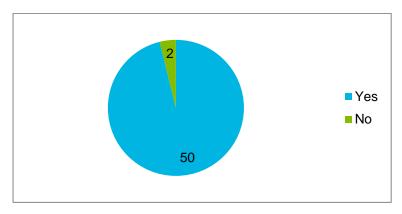
# 2.2.1 Unit A

#### A1/ Question:

The Options Appraisal Report has shortlisted 7 options: do nothing, do minimum, rock armour/sill, timber revetment, geotubes/sandbanks, beach nourishment, relocation of key assets.

Do you understand the different options?

#### Answer:



## Follow up Question:

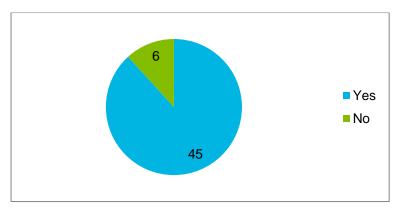
If no, why?

### Answer:

- I do not know what beach nourishment is or what geotubes are. Where is the explanation section?
- No definition of the terms.

#### A2/ Question:

Do you agree with the shortlisted options?



If no, what other options for Unit A would you like to have seen short-listed?

#### Answer:

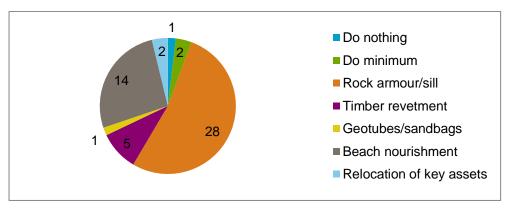
- Groynes.
- Better protection of key assets and better protection for Hunstanton cliffs, not only from the sea but also from the wind.
- With a weakened upper cliff and underscoring cliff erosion caused by water freezing from water in the holes left by the removal of fence posts and the drilling new holes for new pence posts. Water freezes, expands causing fissures. The cliff is fragile. I understand that WW2 gunners were reluctant to fire at German aircraft in fear of the cliff crumbling. Solution 1 Have no fencing. Sounds silly? Check Google Earth' along the cliff edge of the White Cliffs of Dover. Solution 2 Replace fence posts with concrete filled oil barrels. Why a post in the barrel they could be linked by fencing. when the time comes move the barrels by JCB to the new location. Also ban heavy weights by the cliff edge. I've seen camper vans presumably with full petrol and water tanks at the cliff edge during functions.
- More groynes and a new slipway near the Kit-kat site and land drainage of the green above the cliffs.
- Don't know.
- List comprises generically different concept options. Do Nothing and Do Minimum relate to the measure
  of intervention and the degree of protection thus afforded, whereas, the next five options (Rock Relocation)
  refer to different means of achieving Do Minimum. Others: strategic use of rock to provide immediate
  protection at hot-spot locations plus a measure of longshore sediment retention; strategic placement to
  avoid outflanking. Word count exhausted.

### Follow up Question:

Which of the shortlisted options do you prefer?

#### Answer:

(Respondents could select more than one option)



#### Other answers:

- Cliff drainage (as well as rock armour).
- Combination of items shortlisted (2 respondents).
- I need an explanation.
- Groynes and land drainage of the green above the cliff.
- Don't know.

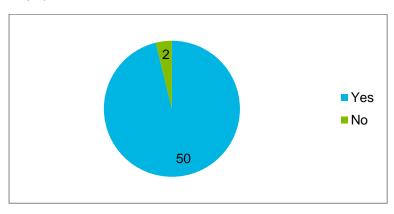
#### 2.2.2 Unit B

#### **B1/ Question:**

The Options Appraisal Report has short-listed 5 management approaches: do nothing, do minimum, maintain existing defences, sustain existing defences, enhance/improve the defences.

Do you understand the different options?

#### Answer:



## Follow up Question:

If no, why?

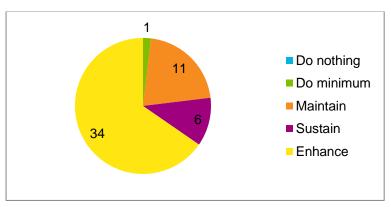
#### Answer:

- What is the difference between maintain and sustain?
- Don't know the terms.

### **B2/ Question:**

What is your preferred approach to coastal management in Hunstanton?

# Answer:



#### Follow up Question:

Why?

### Answer:

#### Do minimum:

 Coastal erosion and change is a natural process and efforts to control it almost always result in creating other, unforeseen, problems elsewhere along the coast.

### Maintain:

- More important to focus money on Unit A while maintaining Unit B area.
- They need some maintaining as they have been neglected.
- Best compromise between efficiency & cost effectiveness.

- To help prevent future erosion.
- · General maintenance always helps if kept up.
- Coastal management is a subject I am very passionate about and believe is extremely important for every
  community to be dealing with appropriately. Maintaining the coastal defences which protects Hunstanton's
  town area is crucial for the residents, businesses and tourists who use this coastline. In order to prevent
  further risk from flooding to affect people nearest to the sea and destroy their properties etc.
- groynes and other breakwaters have worked for many years, but new ones and taller ones need putting in to keep the sand on the beach at the northern end.
- Always need maintaining.
- Needs to keep the character of Hunstanton.
- Current situation seems to work and additional expense is reduced
- Homes are being lost.

#### Sustain:

- Because defences will need future-proofing.
- To correct any weak link and ensure what's present is in good order.
- Creating sustainable defences is a good option.
- Lower upfront cost than renewing defences. Increasing height with resurfacing future proofs. Easier to do in stages than new defences.
- Do nothing will lead to vastly increased future costs, do minimum or maintain will not increase protection beyond what it is there now, and the level of protection will almost certainly need increasing in the future. Sustain is a balanced cost/protection mixture that should improve protection to meet future needs without going over the top on expense. Enhance is the ideal but vastly expensive overkill solution.
- Providing the risks are not life threatening, then Sustain would ensure continuation of the present acceptable standards into the future subject to keeping pace with asset deterioration and changing pressures due to climate and morphological change (the beach).

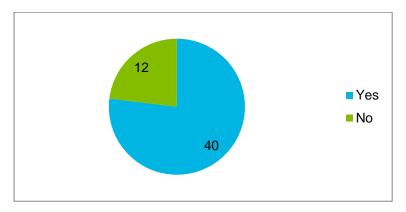
#### Enhance:

- There is increased probability of extreme high tides which would breach existing defences.
- Long-term protection for future.
- We must make every effort to protect the Cliffs and therefore the Town, at least Cliff Parade.
- Because the promenade is one of the biggest attractions for the resort, good for locals & visitors alike.
- If we do the work now to enhance and improve the defences, we are being proactive.
- Old Hunstanton needs something doing to protect it.
- Important for the economy.
- Vitality for the town. Beach is now in poor condition, needs to be recharged to continue to attract visitors. Prom is getting in to a poor condition.
- · They are not great.
- . Because if nothing gets done it will get much worse and even more expensive to make it right in the future.
- Make more attractive to visitors.
- All looks tired.
- Maintain or sustain is not enough, once the erosion has happened you can't put it back.

- To ensure protection for the future.
- To stop Hunstanton cliffs sliding into the sea.
- Prevent possible further loss of life and property.
- If the place is to be vibrant in the summer, it has to be protected in the winter.
- Without enhancement the beach will continue to deteriorate.
- In the 2013 tidal surge, the sea was cascading down the speed boat ramp into South Beach Road. What
  is needed there is a rolling gate, like has been installed near the fairground. Also the drain in the road
  there has probably collapsed where the Wash Monsters drive over it, there is always a huge puddle there.
  I believe rocks assembled in a "Y" formation would help greatly, like they have done in Jaywick/Clacton in
  Essex.
- The town is growing, and an enhanced defences system would allow for the area to continue to develop
  for its future residents and visitors.
- Common sense to enhance and improve to actively reduce erosion on the beaches/cliffs. Once
  improvements are made, they can then be sustained until such time they need replacing and ideas looking
  at again.
- The beach needs recharging with sand/shingle anyway from a holiday destination perspective. Improve
  defence and improve the beach win, win.
- As global warming gets worse it's better to be prepared. Can't have a repeat of the floods!
- So we don't lose any more of our beautiful area
- Make it even better.
- Because the sea is a lot higher in the last 3 years.
- I see the cliffs falling down.
- The rate of climate and environmental change is quickening with higher precipitation, stronger winds and higher tides. Combined with higher sea levels, due to global warming, all coastal areas will become higher risk a combination of likelihood and impact. Failure to enhance defences will, by default, increase vulnerability and hence risk. Impact analysis will clearly demonstrate that the total cost of disaster recovery is significantly higher than the cost of enhancing sea defences.
- Why not.
- While the current sea defences in place are adequate for the majority of the conditions faced, there are occasional times when more advanced defences could be useful.
- Improving the existing defences would help to protect the area during times where the current defences aren't up to the job.
- This is a historic area.
- To provide adequate protection for today and the future and reduce the need for ongoing maintenance/improvement which are financially wasteful and intrusive to the community/amenity.
- Hunstanton is a seasonal seaside resort with outstanding natural beauty and "The Wash" is a Special Protection Area and we the residents deserve the very best funding to adopt and embrace our environment.

#### **B3/ Question:**

Do you accept that funding limitations may constrain the selection of the adopted solution?



If no, why?

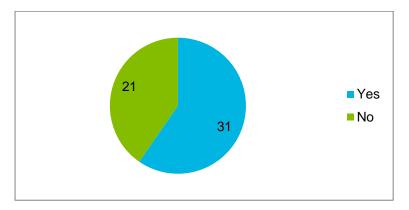
#### Answer:

- It's a question of priorities.
- It is too important to not to give total protection. Many other sea side towns have afforded it, why can't we.
- Investment is needed which in turn bring more money to the town, increased usage benefits the local economy. Defences need to be enhanced to cope with more adverse weather/tidal events and protect the towns assets.
- There should be no funding limitations to providing sustainable coastal defences. Funding solutions and partnership working with other agencies such as the Environment Agency needs to take priority.
- If this isn't cost viable then it makes no sense offering it as an option.
- Hunstanton has thousands of visitors every year and a very caring community. Council needs to utilise
  owned open spaces for fundraising events people would attend Motorhome shows earn thousands for
  vehicles just to park up and have a few stalls and some evening entertainment. There are public toilets
  nearby. Open Air concert where people buy tickets, a pride in Hunstanton day with stalls and people
  bringing picnics, stall holders will pay it's done elsewhere.
- Stupid question not knowing how much money is available it is an impossible question to answer. You are
  likely to spend more on consulting on a number of things, rather than the doing of things to play lip service
  to the process of consultation.
- Without intervention the resort and especially the beach area will continue to deteriorate.
- Spending too little money on this is false economy. Do it and invest for the future. Half do it and it will have to be redone in a short time and will cost even more. If a longer term loan has to be taken out at least it will be money invested for the future.
- If you're going to do something allocated funds must be in place otherwise no point in giving us all these options.
- Find more funding.
- Hunstanton is a seasonal seaside resort with outstanding natural beauty and "The Wash" is Special Protection Area and we the residents deserve the very best funding to adopt and embrace our environment.

# 2.2.3 Existing Timber Groynes (to the south)

#### TG1/ Question:

Do you agree that the timber groynes are generally performing well?



If no, why?

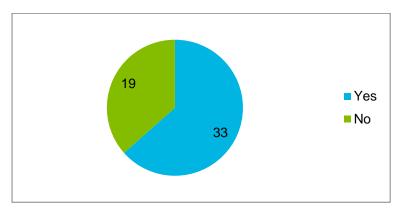
#### Answer:

- Beach material is not being retained along the full length of the beach.
- Lack of maintenance.
- Because they are old, tired and cannot cope with the variations of sand deposits.
- · They urgently need repair as do the concrete groynes some of which are been undermined.
- Most are buried in sand.
- · Falling apart.
- They are worn out.
- There is not much of them left.
- Groynes alone are insufficient.
- They need refurbishment.
- They are changing the nature of the beach.
- No sand on the beach...
- Flooding happening and making the prom unable to walk on when windy. Also the movement of the sand changing continuously proves the groynes may not be working.
- No, because there is too much sand so they can't do their job properly.
- They look worn and battered.
- · Sand disappearing.
- Badly deteriorated.
- Old and deteriorated.
- Appear to be too low and in a poor state.
- We deserve better.
- Groynes only ever effective in reducing longshore loss, not offshore. Loss of sand aggravated by groynes being perforated - sand passes through! Beach is stony. Other significant factors: the groynes are not subject to so severe longshore transport; insufficient sediment at upper beach; conditioning effects of the coastal features (e.g. boat ramp). Need to examine issue in broader context of these things. Word count exhausted.

# TG2/ Question:

Do you think that refurbishing the existing groynes is an effective solution?

#### Answer:



#### Follow up Question:

If no, why?

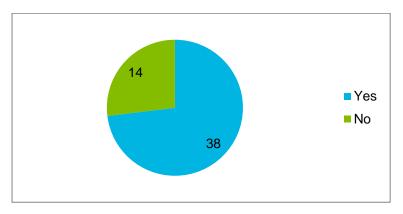
#### Answer:

- They are showing signs of deterioration.
- As above they, the existing groynes are old, tired and don't cope with the fluctuations of sand.
- Just don't.
- Because the older parts of the groynes will continue to deteriorate.
- I do not understand the science and an explanation of the worth would be useful and not for an hour at the community centre on a day when working people cannot attend.
- The beach is changing into an unattractive area with ongoing cost issues. Sweeping the promenade twice a day, repairing damages incurred by rocks being thrown at the seafront.
- No sure, they have lasted a very long time but disappear in high sands and therefore not fulfilling their
  jobs. Maybe replace them higher, but then you are looking at removing the stretch of views across them
  of the beaches and stopping people climbing over to move from section to section.
- Don't have enough knowledge to comment.
- They seem rather old and withered, new ones may be more effective and sustainable.
- At this point they appear to be well past their best and costly repairs will only extend their life for a limited period before future repairs are needed, a bit like triggers broom!
- They just need sand clearing away.
- I don't think it is enough.
- Situation will remain unimproved.
- The old ones need removing and replacing, which would be more cost effective.
- Need replacing with new ones.
- Difficult to assess integrity of buried elements, financially wasteful to carry out remedial works with potentially overall short lifespan. Tide and weather could seriously add to costs and duration of works.
   Would need regular inspections.
- We deserve better
- Opportunities to be had with replacement groynes: make more efficient by not perforating; take advantage
  of weak transport gradient to have more widely spaced (fewer) groynes; avoid the zig-zag which (despite
  marginal x-shore advantage) means the groynes must be ~50% longer than that needed for given effective
  length. The survey does not enable discussion on scheduling of works. Word count exhausted.

#### TG3/ Question:

Or would you rather see new groynes along the frontage?

#### Answer:



### Follow up Question:

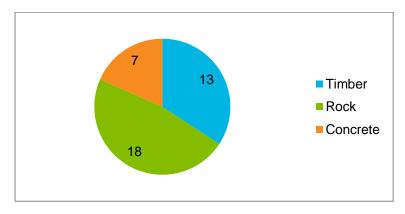
If no, why?

#### Answer:

- The existing ones will have sufficient lifespan providing they are maintained.
- Not needed if they can be maintained.
- This will not assist in any way.
- · Not required in all cases. Maintain those still fit for purpose & replace those too damaged to be effective.
- Existing ones are fine.
- I don't know enough about how effective the groynes are at the moment and since there isn't a don't know
  option had to say yes. I would leave it to the experts because new groynes are going to be quite expensive
  so if they can be refurbished it would be good enough in my view.
- Plenty of life left in the existing groynes if refurbed, also less cost.
- They are mostly in reasonable condition and full replacement would be costly and disruptive to beach
  users. The existing old groynes also have good biodiversity value for beach fauna and the birds that feed
  on them.
- Not a definite no for the reason above.
- Based on the assumption that overall groynes work and if "Groynes" are the chosen sea defence option
  then I would think each groyne would need to be surveyed to see if can be repaired effectively or, if not,
  would need replacing. With limited budget we don't want to be spending good money on something that
  won't last.
- If the existing groynes were maintained more and new ones put in where needed this would be okay.
- They appear to be doing their job at preventing too much sand drift and are largely solid.
- There is not a lot wrong with them.
- Don't spoil the frontage.

#### Follow up Question:

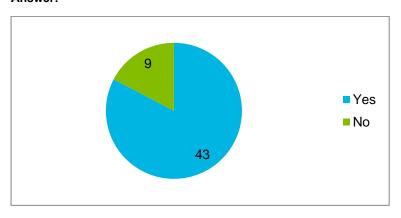
If yes, what would you like to see – timber / rock / concrete?



#### TG4/ Question:

Do you accept that full scale replacement may be constrained by funding limitations?

#### Answer:



# Follow up Question:

If no, why?

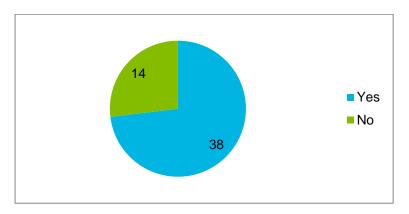
## Answer:

- The subject is too important to take half measures.
- As per previous comment.
- Effective coastal defences should not be constrained by funding. The right solution should be the priority.
- Again, stupid question when you don't know costs involved.
- · We have plenty of bedrock which could be utilised.
- To do this without full investment is false economy.
- Once again if you cannot fund something do not offer it as an option.
- Get more funding.
- We deserve to be treated better.

# 2.2.4 Existing Concrete Groynes (to the north)

# CG1/ Question:

Do you agree that the concrete groynes are generally not performing very well?



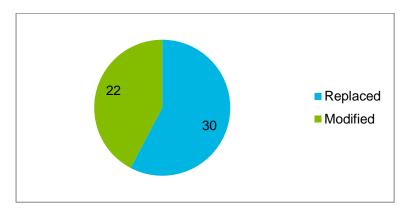
If no, why?

- Never seen them.
- I haven't seen evidence of this.
- Again, need scientific explanation.
- They serve a purpose well.
- Need remedial works.
- Where we still have the straight concrete groynes, the beach has retained its character. The zigzag ones retain too much sand and do not allow the tide to redistribute the sand. This means we have the strange situation of over-sanded beaches one end and under-sanded the other end.
- Whilst they appear to be performing reasonably well they are unsightly once they get broken.
- I have only lived in Hunstanton for 9 years, my knowledge of how old they are, how long they last, how effective they are is not enough to really make a decision.
- Not that I know of?
- I don't really know if they are or are not. This question seems very leading.
- Sand disappearing.
- Why not?
- Concrete is strong and therefore should be able to withstand the sea.
- The groynes are at the cliff end going around the promontory, so hardly surprising that for a given tide
  level the water's edge looks closer to the shore. See Google Earth 1999 performance of the concrete
  groynes appears superior to that of the longer timber ones to the south despite the significantly more
  difficult shoreline orientation.

#### Answer:

## CG2/ Question:

Would you rather see the existing groynes modified or replaced?



Why?

#### Answer:

#### Replaced:

- Aesthetics.
- Aesthetics.
- Again, no half measures, please.
- They are old & tired.
- Replace would look better.
- I would like them replaced with more modern concrete units.
- More in keeping with natural environment.
- Not performing well, the way they are.
- Most have deteriorated.
- Because the other groynes are old and will continue to deteriorate even with modification.
- Some groins are worn out.
- They are ineffective.
- As ensure longevity.
- I don't understand why you ask this question.
- Return them to straight groynes and let the beach even out.
- Said it before, replaced is best if its within budget. My choice of rock is simply because (with my limited knowledge) that sounds the strongest!????
- I think a different coastal defence technique should be used to see if it is more effective rather than just modifying a technique that is already being viewed as not performing very well- if this is the case. My preferred type would be concrete because I think this would be most effective out of rock and timber.
- They are withered and old, never seen them replaced before so may be more effective.
- Some are broken, could be modified but are aesthetically a bit 'industrial' looking. Would look nicer to be timber.
- Why not.
- No point patching up, if you're going to do something at least do it right in the first place.
- They work in some places but not in others.

- The old ones are reaching the end of their useful life.
- Preformed concrete is relatively easy to position but difficult to maintain and once compromised by water/wind, deteriorates relatively quickly.
- · They'd be better.
- Cost, appearance and longevity.
- With more effective and more aesthetically appealing defences that do not impose on the areas historically attractive coastline.
- Integrity of existing elements difficult to assess, carrying out concrete works below high water mark is
  difficult, costly and carries environmental risks. Better to place rock armour, placing of which is less
  affected by weather and tides, needs little maintenance and is good environmentally, not least as a habitat
  for crustaceans.
- We deserve better.

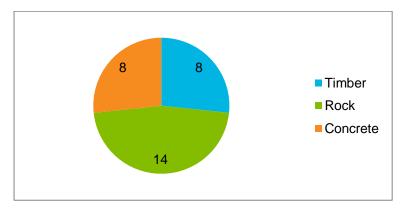
#### Modified:

- Change profile to make them more effective.
- Costs less.
- Cheaper than replacement.
- It would cost less.
- Modified or replaced depending on the solution that is most likely to be the best.
- Likely to be the cheaper option.
- More cost effective.
- Again, don't know enough about the effectiveness of the concrete groynes but have noticed that many
  of them are buried in the sand so maybe a modification is called for.
- Updated.
- Modify all, rather than only replace a few (cost).
- Would be a shame to replace something with so much history.
- Less expense.
- Any repairs should be sensitive to the location.
- Modified or replaced.
- It would be too costly to replace all groynes though this would be the ideal solution.
- Replacement will cost more than modification with no guarantee that they would work any better.
- They don't need complete replacement.
- Modifying seems cheaper.
- · Reduced costs possible.
- Cost effective option.
- Better.
- Generally, they appear to be in (certainly relatively) good condition.

# Follow up Question:

If replaced, what is your preferred type of groyne for this section of the frontage - timber / rock / concrete?

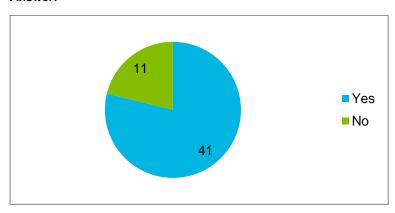
#### Answer:



# CG3/ Question:

Do you accept that full scale replacement may be constrained by funding limitations?

#### Answer:



# Follow up Question:

If no, why?

- Again, it's a question of priorities. Perhaps we could get by with a few less festivals and events to preserve the fabric of our coastline.
- I'll say again no half measures.
- Effective solutions should not be constrained by funding when it comes to coastal defences.
- Because you have a wealth of land available to use for fundraising events and a plethora of tourists that
  would pay to have fun or see/do something different. You could have a dog show, sports day where
  everyone competes, concerts, let's try a new sport day, stall holders would pay, visitors would pay and so
  would Hunstanton residents.
- There are reserves of money in all stakeholders' budgets, use them.
- False economy will mean more cost in the long run.
- · Because there is no excuse on being a tight ass, if you're going to offer it as an option you must fund it.
- Get more funding.
- We deserve the best.

# 3. Summary of results

# 3.1 **Unit A**

For Unit A, 96% (50/52) of respondents understood the different short-listed options. The respondents who did not understand did not know the meaning of the terms used. However, definitions were supplied through attachments on the 'Hunstanton Coastal Management Plan' webpage, where the information displayed at the drop-in events and any other relevant reports were also provided.

88% (45/51) of respondents agreed with the shortlisted options. Of those who did not agree, 3 respondents mentioned the need for groynes. Groynes were included for discussion in the survey, but only after questions on Unit A and Unit B.

Of the short-listed options the most popular option was rock armour with 53% of the vote (28/53), the next most popular option was beach nourishment with 26% of the vote (14/53).

# 3.2 Unit B

For Unit B, 96% (50/52) of respondents understood the different shortlisted management approaches. Again, the respondents who did not understand suggested that they did not know the meaning of the terms used.

The favoured management approach of 65% (34/52) of respondents was enhance with the next most popular option being maintain with 21% of the vote (11/52). Reasons given for selecting the enhance option included the need to protect for the future and to make the frontage more attractive to gain visitors. It should be noted that some who selected the enhance option gave reasons that suggested they had not realised that the maintain and sustain approaches would include replacement of the existing defences at the end of their residual lives and would therefore also not allow erosion to occur.

Of the respondents 77% (40/52) accepted that funding limitations may constrain the selection of the adapted solution. Of the respondents that did not accept this the reasons given included that there should be funding available to protect the town given the importance of securing its future and that spending too little money now will mean more money will have to be found in the future.

# 3.3 Existing Timber Groynes (to the south)

60% (31/52) of the respondents felt that the timber groynes were performing well. Those who did not agree gave reasons including that the existing groynes are in poor condition and they are not retaining beach material effectively. However, others who also did not agree replied that they are not performing because they are buried in sand and appear to be too low relative to beach level.

In answer to the question of whether refurbishing the existing timber groynes would be an effective solution 63% (33/52) of respondents agreed. Those who did not agree gave reasons including that the condition of the groynes has deteriorated so much that replacement would be more cost effective and that the groynes in their current configuration are not effectively retaining beach material.

Whilst most respondents agreed that refurbishing the timber groynes would be effective, 73% (38/52) would prefer to see new groynes along the frontage. Respondents who did not prefer new groynes gave reasons including that if the existing groynes could have lifespan increased through maintenance that it would be more cost effective to do so, they also expressed concerns about disruption to the beach during construction and worries about changing the aesthetic of the frontage, there was also the suggestion of replacing the most damage groynes and maintaining those still fit for purpose.

Of those who would prefer new groynes 47% (18/38) would like to see them made out of rock, 34% (13/38) timber and 18% (7/38) concrete.

Of the respondents 83% (43/52) accepted that full scale replacement may be constrained by funding limitations. Those who did not agree gave reasons including that the provision of coastal defences should not be constrained by funding.

# 3.4 Existing Concrete Groynes (to the north)

73% (38/52) of the respondents agreed that the concrete groynes are generally not performing well. Those who did not agree gave reasons including that they were unsure or they had not seen the groynes and that in this location the beach has retained its character unlike the timber groynes that have retained too much material in places.

In answer to the question of whether the existing groynes should be modified or replaced 58% (30/52) of respondents chose the replacement option. Reasons for replacement included the perceived negative aesthetic impact of the existing concrete groynes and the opportunity to have a more effective option. Reasons for modifying the existing concrete groynes included that it would cost less and that there is no guarantee that replacing the groynes would be more effective.

Of those who would prefer replacing the existing groynes 47% (14/30) would like to see the new groynes constructed from rock, 27% (8/30) timber and 27% (8/30) concrete.

Of the respondents 79% (41/52) accepted that full scale replacement of the existing concrete groynes may be constrained by funding limitations. Those who did not agree gave reasons including that protecting the coast should be a priority, opportunities to raise funds are available and not funding defences now will cost more in the future.

# **Appendix A - Exhibition Poster Boards**