Interim Works at East Beach, Sidmouth

Joint position statement, June 2016

East Devon District Council (EDDC), Devon County Council (DCC), Environment Agency (EA), Natural England (NE) and Jurassic Coast Team (JCT) have published this position statement in response to the recent calls for interim works to protect the Westernmost extent of East Cliff (known as Pennington Point) against further coastal erosion whilst the Sidmouth and East Beach Management Plan (BMP) is completed and the preferred BMP option implemented.

The above authorities are in agreement that the most appropriate course of action in the interim at East Cliff is to retain the Alma Bridge in situ, as long as it is safe, dismantling the existing structure once it becomes unsafe (and it is safe to do so). At that time the South West Coastal Path would be temporarily diverted inland to the existing footbridge at Mill Street.

It has been agreed that this is the most appropriate course of action as:

- DCC has in place measures to manage the risk to public safety, and any potential obstruction of the River Sid due to debris from the Alma Bridge.
- EDDC will work with DCC to ensure provision of ongoing emergency egress from East Beach if and when the Alma Bridge has been dismantled
- The risks from further exposure of the EA defences on the River Sid to coastal conditions will be mitigated through continued asset management, and consideration of wall raising as part of the Alma Bridge relocation
- The risks from further exposure of the SWW sewerage pumping station to coastal conditions will be mitigated through continued asset management and ongoing provision of an overflow
- Interim coastal protection measures are likely to result in increased erosion further East, including to properties on Cliff Road and would be vulnerable to outflanking in the short term
- Emergency funding would not be available and therefore any interim coastal protection work would direct limited financial resources away from implementation of the BMP
- All agencies are in agreement that resources are best directed to completing the BMP and implementing a sustainable beach management scheme across Sidmouth and East Beach

Devon County Council

East Devon

Environment Agency

JURASSIC COAST
DORSET AND EAST DEVON
WORLD HERITAGE SITE

NATURAL ENGLAND

Background

East Devon District Council (EDDC) is currently preparing a Beach Management Plan (BMP) for Sidmouth and East Beach, which is due for completion in Autumn 2016.

The BMP project aims to maintain the existing standard of Sidmouth's Coastal Defences, reduce the rate of erosion at East beach and to do so in an integrated, justifiable and sustainable way.

It is intended to develop a single beach management scheme from Jacobs Ladder through to East Beach to achieve these aims and the BMP will identify a preferred option to do so. It is expected that the implementation of the preferred BMP option could begin as early as 2019.

A long list of options has been consulted upon with the steering group, before a more detailed appraisal and further consultation on the short list is carried out to arrive at a preferred option. The preferred BMP option is not known at this time.

Based on recent detailed monitoring by DCC it is estimated that erosion could result in the closure of the existing Alma Bridge within the next 12 months.

There are plans to replace the Alma Bridge in a less vulnerable position further upstream, which may enable the replacement to go ahead prior to implementation of the preferred BMP option, although DCC's current preference is for it to occur afterwards.

The BMP steering group has therefore requested that consideration is given to what options there may be for work at East Beach to reduce the rate of erosion as an interim measure before the preferred BMP scheme is implemented.

Options

A number of options have been considered as an interim measure prior to implementation of the preferred BMP option.

Option A - Divert the South West Coast Path inland via the footbridge in Mill Street and Beatlands Road

DCC is monitoring the safety of the Alma Bridge on a weekly basis and expect to close it within the next 12 months. It would then be dismantled, as soon as practicable after closure, to remove this potentially dangerous structure from Sidmouth sea front. The steps from East Beach would also be reconfigured to ensure continued provision of emergency egress.

Diversion of the South West Coast Path (SWCP) could affect the local economy through loss of tourism and loss of a local walking link into Sidmouth Town Centre.

DCC plans to replace the Alma Bridge in a less vulnerable location further upstream. Discussions are ongoing regarding the precise location and the timing of the construction of a replacement bridge in relation to the BMP scheme.

Increased exposure of the SWW sewerage pumping station and EA flood defences on the Western side of the River Sid may also occur. Given the limited exposure and the presence of an overflow at the SPS, it is considered unlikely that this would significantly increase the risk of flooding from the sewers in Sidmouth during this time.

The EA will continue to monitor the exposure of its flood defences. The EA and DCC are exploring whether a limited length of wall raising could be included within the design of the replacement Alma Bridge to mprove the standard of protection from flooding in this area.

Both SWW and EA will continue to monitor, and as necessary, maintain their assets during this period. Therefore the risk of failure of these structures due to the increased exposure is low.

This option has no additional costs beyond those already programmed or predicted to occur.

Option B - Construct a short length of rock revetment on East Beach

An option considered to reduce the rate of erosion at East Cliff is to install a short length (up to 10m) of rock armour against the cliff toe to reduce the exposure to wave action. Whilst this would protect this immediate length of East Cliff, it is likely to result in increased erosion at the Eastern end ("terminal erosion"). This is of concern as it could result in outflanking of the rock armour within a relatively short time frame, and would affect properties on Cliff Road.

This option is estimated to cost £241,000 to construct excluding VAT, detail design, permissions, permitting and eventual removal.

Option C - Construct a rock groyne on East Beach and recharge the beach

Beach recharge (import of shingle from elsewhere), or beach recycling (movement of shingle from elsewhere on East Beach) has been ruled out as a standalone option (ie separate to the BMP) as no control structures are in place to ensure the ongoing retention of that material. However, beach recharge has been considered in conjunction with a 25m long rock groyne.

This option would help to ensure a more stable beach at the Westernmost end of East Beach adjacent to the Alma Bridge. However, terminal erosion is still expected with this option and it is thought that the effect would be greater than the rock revetment option, with greater risk of outflanking in the short term.

Construction of the rock groyne and the associated beach recharge has been estimated to cost £563,000 excluding VAT, detailed design, permissions, permitting and eventual removal.

Option D - Construct a timber groyne on East Beach and recharge a beach

As with Option E, but with a timber groyne to retain the beach recharge material. Although a timber groyne would have a far shorter lifespan than a rock groyne, it is considered that it would be sufficient as an interim option.

Terminal erosion effects would be similar to Option C, with the risk that this work could be outflanked in the short term.

Construction of the timber groyne and the associated beach recharge has been estimated to cost £203,000 excluding VAT, detailed design, permissions, permitting and eventual removal.

Access

Access for plant and materials to East Beach is extremely limited, with access via the beach at Port Royal only feasible for around 45 minutes at low tide. Access via this route also involves crossing critical SWW infrastructure at the end of the River Sid training Wall. Similarly, the working window on East Beach itself is limited, with work limited to approximately 4 hours per shift.

Option B, C and D have been estimated on the basis of construction of a stone ramp for the purpose of getting material onto East beach from the fishermen's area. It has been assumed that the existing structures (and services) in this area could take sufficient loading for this.

There would be very limited access for the Fishermen, Sailing Club or Lifeboat via the fishermen's area during the duration of the works for Option B, C and D.

Consents

For Options B, C and D, consent would be required from both EDDC (as the Local Planning Authority) and the Marine Management Organisation. Both applications would need to be accompanied by an Environmental Statement and a Habitats Regulation Assessment due to the nature and location of these options.

NE has indicated that it would not be fundamentally opposed to a time limited consent for Options B, C or D. However, any interim protection on East Beach would need to be removed either as part of a BMP scheme or at an agreed date (whichever the sooner).

Funding

The necessary consents as well as the works themselves carry considerable costs. Emergency funding of interim works to reduce erosion at East Cliff has been discussed with the EA, and any such works (including Options A, B, C or D) do not meet the criteria for emergency funding.

Nor is it considered likely that the options considered could qualify for Flood Defence Grant in Aid (FDGiA) through the normal process, either as a standalone (ie separate to the BMP) scheme or as a contribution towards the BMP scheme. However, some of the material from Options B or C could potentially be reused as part of a BMP scheme.

The EA has suggested that should wall raising be required as part of Option A, this could be incorporated into the plans for the replacement Alma Bridge and that this element would be eligible for FDGiA funding (subject to an assessment of the benefit).

DCC has indicated that it would not be able to fund any interim works at East Beach as part of the project to replace Alma Bridge. Therefore, any interim works would need to be funded by EDDC or others. Funding would need to allow for investigations, temporary works design, detailed design, statutory consents (planning / MMO) as well as provision for removal of any structures at the end of the consented period.

Programme

The BMP is due for completion in Autumn 2016, with implementation likely to begin in 2019 at the earliest.

Option A would be implemented at an appropriate time, as determined by the regular inspection of the existing bridge structure carried out by DCC.

Given the further design and consents required for option B, C or D, it is considered that the earliest these could commence on site would be late 2016 / early 2017 should funding be made available immediately to begin progressing the necessary investigations, design and consents.

Conclusions

Whilst options B, C and D would increase the lifespan of the existing Alma Bridge, the benefit would be limited and risk unacceptable consequences to adjacent properties, through terminal erosion and outflanking. All of these options would also reduce the resources (both time and money) EDDC and other potential contributors would have available to implement the preferred BMP scheme.

Therefore, it is concluded that Option A (to Dismantle Alma Bridge when it becomes unsafe and temporarily divert the South West Coast Path until a replacement bridge can be provided) is the most appropriate course of action during completion of the BMP and before the preferred BMP scheme is implemented.

Options for the replacement bridge are being considered and once the BMP is completed and timescales are clear for implementation, this will give the assurance that investment in a replacement bridge close to the seafront will be protected for at least 50 years.