

Report to: Council



Date of Meeting 6th March 2024

Document classification: Part A Public Document

Exemption applied: None

Review date for release N/A

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## Exmouth Emergency Seawall Repairs Update

### Report summary:

The report is to update cabinet on the situation in Exmouth regarding the emergency repairs and to ask for decisions on its repairs and additional funding

### Is the proposed decision in accordance with:

Budget Yes  No

Policy Framework Yes  No

### Recommendation:

1. That council notes the decision to specify sheet piles of in-excess of 50year design life, which enables greater options for future cladding. This decision has changed since the previous cabinet report.
2. That council notes that the works will be phased, with the eastern section work (phase 1) being undertaken this March 2024, and the western section being deferred until all remaining risks can be mitigated, with the earliest start being September 2024.
3. That council notes that the eastern section works (Phase 1) proceed starting in March, with the aim to finish late-May.
4. That council notes that decisions will have to be made regarding the completion of phase 2, without the benefit of knowing the outputs of the larger Exmouth Seafront Placemaking strategy.
5. That council notes that optional weekend working is undertaken to reduce duration on site.
6. That council resolves to increase funding of Phase 1 only to £1.5m (from £1.1m for both Phase 1 and Phase 2 of the wall)
7. That council notes that a further request for funding will be needed to progress phase 2 and cladding.
8. That council notes the need for a further exemption to contract standing orders to allow the direct award contract to Moffat and Nichol (consultant) from due to the increase from £60k to £200k (within existing project budget outlines in recommendation 6)
9. That council notes that expenditure on the contract to Moffat and Nichol has exceeded £100k

### Reason for recommendation:

1. Although there could be a £75k saving, specifying thicker sheet piles at this point will give greater flexibility in selecting cladding in the future, to give the wall a 100year design life.
2. Although undesirable, from a business, visitor and residents' perspective, the benefits outweigh the negatives for a March start, with late-May Finish.
3. Due to uncertainties regarding the future of the placemaking of Queens Drive space, and the existing concessions and their leases, we cannot commit to design and construction without delay to the failed eastern section.

4. If weekend working is permitted, it will reduce the overall duration on site, reducing impact.
5. Cross service officer work is required to ensure phase 2 can begin before plans are finalised for any future Exmouth Seafront Placemaking plans, and to do so, phase 2 will need to work on assumptions and may require difficult decisions to be made regarding this section of wall.
6. Unlike most large construction schemes which are years in the making, this scheme has had rapid development, and to keep momentum, and meet deadlines, we may need to make major decisions that cannot wait for cabinet cycles.
7. Project costs have increased largely due to poor ground conditions following surveys so previously agreed expenditure needs to increase.
8. The original £1.1m estimate for the whole wall (without cladding) was based on assumed better ground conditions than found. Therefore Phase 2 and cladding will need to be funded from further budget increase at a later date.
9. As the project has progressed additional research and design has been required.

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Portfolio(s) (check which apply):

- Climate Action and Emergency Response
- Coast, Country and Environment
- Council and Corporate Co-ordination
- Communications and Democracy
- Economy
- Finance and Assets
- Strategic Planning
- Sustainable Homes and Communities
- Culture, Leisure, Sport and Tourism

**Equalities impact** Low Impact

**Climate change** High Impact

**Risk:** High Risk; See main report

**Links to background information** N/A

**Link to [Council Plan](#)**

Priorities (check which apply)

- Better homes and communities for all
- A greener East Devon
- A resilient economy

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## Report in full

1. **Background:** Please refer to Wednesday 29<sup>th</sup> November Cabinet Report Item 20. for further information. [Exmouth Sea Wall Emergency Repairs Budget.pdf \(eastdevon.gov.uk\)](#)
  - 1.1. In late August, EDDC engineers were made aware of cracks in the seawall in front of the Sideshore development, and appointed Moffatt and Nichol to gain all the required permissions to carry out trial holes and carry out investigations.
  - 1.2. However, a storm over the weekend of 28<sup>th</sup> /29<sup>th</sup> October significantly dropped beach levels and caused the wall to crack and slump, putting the wall at serious risk of collapse.

- 1.3. Emergency works were completed in the following days to shore up the wall through the next storm, with the wall surviving. Due to limited time, the works consisted of concrete blocks placed at the base of the wall, and lots of sand being placed on the wall. This kept the wall intact.
- 1.4. Following the storm, a large void opened out in the old lifeboat slipway and required fixing to enable access to the beach.
- 1.5. To date the temporary sand bund has held and the wall is still standing.
- 1.6. Following Item 20 on Wednesday 29<sup>th</sup> Cabinet, Moffat and Nicholl were appointed as consultant to deliver the design and Teignmouth Maritime Services were appointed to deliver the construction.
- 1.7. The target date for being on site was January 2024, but now a mid-March date is likely.
- 1.8. The reason for the delays is multiple issues have arisen which are not uncommon for a large civil engineering project that only started in December 2023. These issues include:
  - 1.8.1. Ground investigation was added to the scope to help design the wall, as without it, the wall design may have been over specified, therefore increasing cost, or potentially may lead to failure.
  - 1.8.2. Ground investigation revealed ground is poor, so further design has been needed for anchoring ties to hold the wall back.
  - 1.8.3. The design is based on having quickly available sheet piles, and availability has changed over the project's life.
  - 1.8.4. Investigations into providing a wall rebuild around the concessions has taken a lot of time, revealing more risks.
  - 1.8.5. A desk study revealed a risk of unexploded ordinance in the area, requiring further survey. This risk, requiring further survey, which has recently confirmed low risk
  - 1.8.6. Assents, permissions, etc taking longer to sort than anticipated.
  - 1.8.7. The piling operation cannot occur for 2.5hours over every low tide, due to disruption to feeding birds. Which limits amount of work that can be done in a day.
- 1.9. Although we have had some design delays, we have achieved the following.
  - 1.9.1. Design drawings complete
  - 1.9.2. Plant and materials reserved for use.
  - 1.9.3. Consultation with member's event
  - 1.9.4. Consultation with public and concession tenders
  - 1.9.5. SSSI assent application submitted and now approved
  - 1.9.6. DCC streetlighting removal booked.
  - 1.9.7. Relevant plant provisionally booked.

## **2. Sheet pile design life**

- 2.1. Whilst designing the wall, the project team has had to make a decision regarding specification of the sheet piles to ensure critical path deadlines have been met.
- 2.2. Based on cabinet's desire to have the sheet piles clad at a later date, we previously had selected thinner section sheet piles that will need cladding installed to give a 100-year design life, but have since found out the thinner sheet pile selection would limit choices of cladding, likely costing the overall project more
- 2.3. Without cladding, these thicker piles would have a design life between 50 and 100years, however it is still intended to clad the piles to give the full 100year design life.
- 2.4. Installing thicker piles will cost £75k more but will enable cladding options that save at least that amount in the future.

## **3. Continuing work into the summer or delaying starting on site until September.**

- 3.1. Due to design and licencing delays, we have not started on site in January on site as hoped, and now looking at a mid-March start. This means the current programme is looking at a late-May finish on site. Clearly this will have an impact on visitors, residents and businesses in the spring months, and beyond the Easter Holiday target we had hoped for. Therefore, we will be working through the end of March, April and into May which is the best time of year to avoid disruption.
- 3.2. The date of council gives us a last chance opportunity to defer the start until September to avoid some of the risks of construction during spring, however this would in turn bring other risks to the project.
- 3.3. The risks of either option are outlined below. With further discussion below.

### **3.3.1. Spring 2024 Construction Start**

#### Advantages

- Emergency works status and buy in/momentum from professional partners and the public from the public.
- Access to FDGiA funding, retaining the emergency works status.
- Potentially more lenient DCC requirements on partial road closures.
- Retrospective planning requirements only.
- Functioning coastal defence structure in place of the failed wall with a walkway open to the public for most of the Summer and Autumn.
- Positive public perception that repairs have been made, promenade is clear for the summer, plans are in hand for the final scheme.
- Coastal protection against Autumn / Winter storms (and throughout Summer albeit that the risk of summer storms is lower)
- Time to review and plan the Phase 2 works effectively, without the programme pressures to repair the failed section.
- Opportunity to further test ground conditions for anchors and ties which may reduce construction cost of phase 2.
- Phased approach means that disturbance and “noisy” works in particular are very limited in duration.
- The construction will hopefully benefit from improving daylight hours and weather.
- Wall and landward area should be tidy prior to main summer season (with further construction planned at a later date)

#### Disadvantages

- Spring and early summer disruption to the public.
- Completion of Phase 1 only without cladding
- Negative public perception of the wall without cladding.
- Rapid consultation period.
- Various programme risks do exist that could push the works out towards summer.
- Managing expectation of not achieving Easter completion
- Will incur additional site mobilisation/de-mobilisation costs for completing phase 2 at a later date. (Estimated to be around £40k)
- Events are planned for the green triangle nearest Sideshore in June, and any delay may impact these

### **3.3.2. September 2024 Construction Start**

#### Advantages

- Potentially complete Phase 1 & Phase 2 as one construction programme with cladding included (although completing Phase 1 and 2 together generates some other additional risks).
- Time for further consultation on design and finishes.
- No disruption in the early summer from construction works.
- Risk of construction overrun will affect business/public less.
- Opportunity to tender construction to confirm value for taxpayer.

#### Disadvantages:

- Will not be seen as emergency works.
- Access to FDGiA (central government funding) funding may receive more scrutiny.
- Central Government funding may not be available in year (as viewed as not an emergency) so may need to wait to a later year.
- Planning approval requirements - it won't be retrospective.
- Failed seawall is vulnerable to further failure / collapse leading to elevated risk and much harder to implement emergency works.
- Ongoing Health and safety risks associated with the partially failed seawall and the walkway.
- Both the seawall and the walkway will continue to deteriorate and lose fines, risking further failure outside excluded area.
- Reputational damage with a closed off walkway for the entire summer period.
- Delayed programme could run into the winter providing challenging working conditions.
- Although completing Phase 1 and 2 together generates some efficiencies e.g., mobilisation costs, it does generate additional risks to the programme, for example:
  - all agreements with concession need to be in place and
  - final decisions on cladding and placemaking are required.
  - The potential consequence of all of the above is that an Autumn start could be unachievable, a deferred start could result in being a Winter 2024 / Spring 2025 start.
  - Some minor additional costs through ongoing management and abortive licences/permit applications
  - Ongoing disruption for events such as park run.

- 3.4. The current onsite construction programme is 2 months 1 week, inclusive of site set up and reinstatement which are generally less intrusive activities. As of 13<sup>th</sup> February 2024, the target on site programme is as follows:

#### **March**

- 18<sup>th</sup> Mobilise on site in the triangle grass area to the west.
- 21<sup>st</sup> Start removal of wall to enable piling.
- 26<sup>th</sup> Two and a half weeks of piling - Should be finished mid-April.
- 4 Day Easter Break, no works proposed.

#### **April**

- Ongoing sheet pile anchors and walers installation, wall capping, removing defunct wall etc.

#### **May:**

- Installation of new handrailing
- Reinstatement of the grass area and footpath/cycleway. (2 weeks)
- Removal of Compound – End of May

- 3.5. The noisiest and arguably most disruptive element of the works is the sheet piling activity. This is due to take 2.5 weeks and could start just before the Easter 4-day bank holiday weekend (if we start early-March) The sheet piling is due to be installed from the west end, working east towards sideshore.
- 3.6. The remaining works are generally less noisy and there will be less disruption and impact etc.
- 3.7. The works will be disruptive to the public and businesses, although there could be some offset with increased visitor numbers viewing unusual construction in a public place.
- 3.8. The majority of the disruption will be in April (if we start in mid-March) and would be in mid-September (if we start in September) with both periods being busy but not peak season, so there is similar disruption for both periods, however the risk of overrunning into the summer exists for an early/ mid-March start, verses an overrun into poorer weather conditions for a September start.

#### **4. Phasing of works to the wall.**

- 4.1. Regardless of a decision on recommendation 2, we believe the works will need to be phased, with the failed eastern section needing to occur sooner, and works to the non-failed but at-risk western section being deferred until ongoing risks can be mitigated.
- 4.2. The Emergency seawall repair is generally characterised by the following:
  - Eastern Section- 90m of failed wall requiring urgent work to replace the wall. This is the section from the Sideshore development running east towards the first concession. To aid discussion, this is referred as Phase 1
  - Western section- 115m (not including slipway) of wall at risk of failure (due to low beach) but not yet failed. This is the section encompassing all three concessions to the slipway. To aid discussion, this this is referred as Phase 2.
- 4.3. Via the cabinet report, and support from cabinet, we originally planned to complete both sections at once, to secure the seafront wall, to minimise construction impact to Exmouth.
- 4.4. As we have developed the project, ever increasing risks/opportunities have come to light for the western section of the wall repair. We will not have time to address these risks within the next day's/weeks to enable works to start work this side of Easter. To enable the Eastern section to have its work completed soon, we need to delay the start to the western section until all the risks have been resolved or managed.



Above: Map of Site.

- 4.5. Project risks: The risks involve cross service solutions, as well as member and public consultation. We would need to progress resolving these risks as a council immediately to allow for as earliest start on the western section as possible. There is some urgency to protect/maintain the western wall from failure. Provisionally this would be September 2024, but wary this could slip a year.
- 4.6. To help identify the risks, they are split into each phase as below.
- 4.7. Phase 1 risks**
- 4.7.1. Programming around Spring/Early Summer, and delays will push towards summer.
  - 4.7.2. Ongoing part and soon to be full closure of the footpath/cycleway.
  - 4.7.3. Small risk of damage to Sideshore land.
  - 4.7.4. Retrospective planning permission needed for change of wall from sloped revetment to vertical.
  - 4.7.5. General Risks reduced as site and material need reduced to only a 90m construction.
- 4.8. Phase 2 risks:**
- 4.8.1. There are three concessions along this stretch. The western most concession is in an EDDC building, and is leased out. The other two concessions rent the land from EDDC, but are responsible for their building.
  - 4.8.2. Sheet piling around the existing concessions risks damage to the buildings and adds significant cost.
  - 4.8.3. The two eastern concessions are at significant risk of storm damage in existing locations, even with sheet piling.

- 4.8.4. Potential to move one/two of the concessions to a single enlarged site next to the western concession building. This would make the wall repairs simpler and cheaper and offer better longevity to the concessions. Wary any changes have implications for any future plans for the Queens Drive space.
  - 4.8.5. Relocating buildings using retrospective planning is extremely risky, so really would need to follow the correct planning procedure and be complementary with the larger placemaking plan.
  - 4.8.6. One of the buildings has poor foundations given the lowered beach, so the building's life is limited.
  - 4.8.7. The other building has much more substantial foundations and better build quality due to a larger investment in the building to date. It however remains at risk of storm damage, and the building/concession would still want benefit from increased sea defences.
  - 4.8.8. Another choice is stopping wall repairs at the concessions and infill when the concessions move in the future, which although cost effective and reduces risk of building damage would be unpopular, as EDDC would be seen as not protecting its concessions.
  - 4.8.9. There is also an ongoing rent review process, seeking to update rent rates, which further complicates issues.
  - 4.8.10. Aside from creating new space next to the slipway, (to allow for an easier uniform wall repair) there is no suitable site for the concessions to move to within the QDS This is due to the QDS placemaking being in its infancy.
  - 4.8.11. Although it is generally accepted that the failed eastern wall (of Phase 1) would be replaced as a vertical wall, the sloped revetment of phase 2 has not failed, and potentially could be saved using a different construction technique.
  - 4.8.12. Phase 1 works will need to have retrospective planning for a wall change, which would be reasonable, however for phase 2, potentially relocating buildings using retrospective planning permission would be extremely risky to EDDC.
  - 4.8.13. Not fixing the wall in Phase 2 risks it failing in the next large storm (until the wall is improved)
  - 4.8.14. Any buildable land 'gained' on the foreshore, will need to be compensated for either locally, or as part of contributions towards other schemes. Therefore and land gain should be balanced with land being returned to the foreshore.
  - 4.8.15. There are general concerns over the long term beach levels at this location, due to current trend of the movement of Pole Sands towards the mouth of the Estuary, with the navigation channel being pinched towards Exmouth.
- 4.9. Risks of trying to complete Phase 1 and 2 prior to summer.
    - 4.9.1. Given the big decisions that need to be made in less than a month, it unlikely the project would get to site this side of summer.
    - 4.9.2. If we did want to complete both phase 1 and phase 2 prior to summer, EDDC would need to make snap decisions with no consultation with members, concession owners and the public. EDDC would be gambling with retrospective planning permission.
  - 4.10. Mitigating risks of leaving Phase 2 wall less protected for the foreseeable future
    - 4.10.1. It is important to note that the wall of phase 2 has currently not failed, and the beach did not drop low enough adjacent to it to cause failure.
    - 4.10.2. We are planning on reusing the concrete Lego blocks used in the temporary repair to shore up the wall.



4.10.3. Sand levels have built up so much at Orcombe Point end that a large-scale beach pull back will be required to avoid frequent and expensive closures of the highway. There is an opportunity to move significant volumes down to the phase 2 area.

## 5. Opportunity of weekend working.

- 5.1. We originally were hoping to avoid weekend working, but due to the construction programme heading towards summer, it has been suggested by the contractor to bring the programme duration down.
- 5.2. We are proposing that the contractor to be allowed to carry out weekend working for half of the weekends within the current programme.
- 5.3. The expectation is that weekend working would be planned around the long-range forecast for poor weather weekends (when possible)
- 5.4. Weekend working would only be used for essential activities that would reduce project duration times.
- 5.5. Weekend working would help reduce the duration of piling activities are on site (as they are restricted with prohibitive working windows over low tides.
- 5.6. Additional staff cost for works would be offset by less time on site.

## 6. Phase 1 construction cost increase.

- 6.1. When the previous paper was put before cabinet, the estimate for 210m of sheet piling was £800k. This along with a risk budget, consultant fees and expected cost of emergency temporary works would bring the project in under £1.1m
- 6.2. The original estimate had no allowance for anchor ties, but was thought if some were needed, it they would be within the risk budget.
- 6.3. Due to the ground conditions being so poor, many more ground anchors were needed, and costs for the anchors have added an additional £450k to the project.
- 6.4. Although it is hoped the beach will return, it was prudent to design the wall to allow for future lower beaches, rather than risk a failure in the future. This has contributed to the increased cost.
- 6.5. With the aim to reduce costs, we have investigated not installing anchor ties at this stage, however calculations show the wall would only be fine with the beach at its current level. Any further dropping of the beach (of 500mm or more) could risk wall failure. This risk was felt too high to take, so tie anchors have been included, so no cost saving is possible.
- 6.6. To reduce time on site, and further cost, the sheet pile wall will finish flush with the esplanade path, removing the cost of a temporary capping. As the esplanade is a shared use path, 1,4m railings are now required to protect against fall to users. This has added additional cost.
- 6.7. The temporary emergency works cost more than expected. This included two mobilisations of plant, lots of large concrete blocks to site and an emergency slipway repair. The final figure is still being debated, but is significant and included in the table below.

Phase 1 90m	Estimated spend	Notes
Emergency repairs	£ 165,341.10	
Design of Phase 1	£ 136,029.24	
Permits/enabling works	£ 25,000.00	
Construction of Phase 1	£ 1,053,353.16	
Risk Budget of Phase 1	£ 105,335.32	10% of construction cost
Phase 1 totals	<b>£ 1,485,058.82</b>	

- 6.8. All the above costs have pushed the construction cost for phase 1 above the £1.1m value for the whole wall

- 6.9. Due to the emergency nature a compliant competitive tender process has not been possible, therefore the work has been direct awarded to a South West Contractor
- 6.10. To ensure the construction price of phase 1 is good value for the taxpayer, we have had an independent contractor benchmark price the job. We believe the works to be fairly priced

**7. Further estimated costs for phase 2, cladding and external contributions.**

- 7.1. Although we are not seeking funding approval to spend for phase 2 and cladding now, it is worthwhile to give some understanding of the likely future costs.
- 7.2. The table below shows an interpolation of phase 1 costs for the remaining wall of phase 2, plus additional estimates for cladding
- 7.3. Phase 2 costs are extrapolated costs from phase 1. We will consider alternative construction types, or further phased delivery to reduce costs in Phase 2. These will be identified at a later cabinet report.

Phase 2 115m	Estimated Costs	Notes
Further design	£ 50,000.00	
Construction of phase 2	£ 1,331,297.72	Extrapolated from phase 1
Risk budget phase 2	£ 266,259.54	20% of construction cost
Estimate for additional concession repairs and slipway repairs	£ 200,000.00	Rough estimate
<b>Phase 2 total estimate</b>	<b>£ 1,847,557.26</b>	

Cladding	Estimated Costs	Notes
Further design	£ 50,000.00	Rough estimate
Cladding	£ 674,000.00	Estimate from similar job
Risk Budget for cladding	£ 269,600.00	40% of construction estimate
<b>Cladding total</b>	<b>£ 993,600.00</b>	

Total construction estimate	<b>£ 4,326,216.08</b>	
Likely external contributions	£ 1,100,090.00	Not confirmed
<b>EDDC to fund</b>	<b>£ 3,226,126.08</b>	

- 7.4. The project should be eligible for grant funding from central government (Flood Defence Grant in Aid from the Environment Agency) Our draft business case suggests this eligibility will be in the region of £1.1m It is not confirmed yet, but hoped EDDC will be eligible for these funds in 2024/15

**8. Increase in consultant spend above authorisation and above £100k threshold.**

- 8.1. Moffat and Nichols were direct awarded the work to carry out the design of the emergency repair. This was due to them being previously involved, and the emergency timetable meaning competitive tender was not possible.
- 8.2. Their initial estimate of the works was £60k.
- 8.3. The current estimate for remaining tasks is £136,029.24.
- 8.4. The additional costs are outlined in the table below.

Cost Description	Cost (£s)
Original time charge from emergency call out	5000
C001 Topographic survey*	3650
C002 No cost	NA
C003 Ground Investigation*	13,678.50
C004 Natural England Fee*	2055.74
C005 Ground investigation for Unexploded Ordinance (UXO)*	2013
C005 Updated time charge	15000
C007 Principle Designer support (Legal requirement)*	12200
C008 Project costs to 26/01/24	20473
C009 Ongoing Project management and engagement - for 20 Weeks	14112
C010 NEC4 production which is Completing contract for construction	5672
C011 OBC – producing document to gain funding from the EA	2080
C012 CDM– Required safety roles and documents for the built	7755
C013 Final design	16916
C014 Required Consents*	3228
C015 Site support of 6 weeks	12196
C016 Further design work to reflect budget and product availability	16250
C017 Additional UXO check	1600
Total	153879.24

\*Costs charged to consultant, which EDDC could have paid direct, but due to staff resource, M+N have arranged and paid for. These total £36,825.24

Note: Costs up to CE009 have been either fully or mostly incurred to date. Costs from CE009 have not been incurred but are estimates.

- 8.5. On Wednesday 29<sup>th</sup> November Cabinet, approval was only noted for expenditure up to £60k, and the additional forecast costs exceed this. Therefore, a further exemption in the sum of £200k will be issued through the exemption provisions permitted in contract standing orders.
  - 8.6. The additional expenditure is within the £1.5m budget requested.
  - 8.7. The main reason for increased costs is that the design and required legal requirements have taken more time than first anticipated. To meet the deadline for the Cabinet report of 29<sup>th</sup> November, we had to estimate the best available costs at that point, having not had time to sufficiently investigate the project.
  - 8.8. Since the original report was written. Additional costs (C016, C017) have been realised. A further UXO check has determined and confirmed that the risk is low. Further design work was required due to availability of anchor ties differing from original design. Changes in wall layout to give greater flexibility in future cladding. Design around change of pile thickness, and abortive work on potential redesign to reduce the cost of the wall, which was not carried on due to potential risks on wall stability.
  - 8.9. Much of the above costs will feed into Phase 2 design and management.
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**Financial implications:**

The financial implications are included within the body of the report. Completing phase 1 requests a further £400,000 and consideration of its financing is required as any additional new funding will have ongoing revenue budget implications. To remain within the approved capital financing budget a review of other projects/budgets, seeking reductions, could be undertaken in order to avoid further revenue budget strain. Phase 2 and cladding will also require further budget approval and financing.

**Legal implications:**

This is a complex project that is within the power of EDDC to deliver. It is important that procurement and legal advice is taken in respect of the various stages of the project and this is being done. There are no additional substantive legal comments to be added to this report.