



Langstone FCERM Scheme Detailed Design

Community Participation Evenings July 2021 – Event Summary



COMMUNITY PARTICIPATION EVENINGS EVENT SUMMARY

This event summary provides an overview of the two Community Participation Evenings that were hosted by Coastal Partners and engineering consultants AECOM for the Langstone FCERM project. These events took place in Langstone on Wednesday 21st and Thursday 22nd July 2021 and included a tour of the frontages.

This event summary will cover:

- The objectives of the Community Participation Evenings
- The agenda
- Summary of each evening
- Next steps
- Questions and Answers

Event Objectives

The objectives of the participation evenings were:

To update – Coastal Partners and AECOM updated those in attendance on the recent progress of the project, the key tasks which are being undertaken and the programme going forward.

To listen – Coastal Partners and AECOM wanted to hear the views of the community and key stakeholders, and their ideas and aspirations for the flood defences in key areas. Moving forward this information will be used to help shape future designs.

To answer questions – Coastal Partners and AECOM answered questions on the existing outline design and explained the rationale behind some of the design decisions to date.

To illustrate – AECOM brought along cut-out sections representative of the height of the proposed flood defences to help visualise any impacts on views.

To build consensus – These events aimed to build a consensus among the community on the preferred way forward.

The Agenda

The agenda was split over two evening sessions; July 21st and July 22nd to enable adequate time for discussion of each frontage. The timeslot was chosen to reflect feedback from the community at previous events.

| Date: Wednesday July 21st, 2021 (low tide at approx. 3pm) | | |
|---|---|-------------------------------------|
| 3.45pm – 4.00pm | Meet at Royal Oak/ Langstone High Street, sign in and collect event leaflet | |
| 4pm – 4.15pm | Introductions from project team and overview of objectives of the working evening | |
| 4.15pm – 5.15pm | Royal Oak and Cottages discussion | Winklemarket to Ship Inn discussion |
| 5.15pm – 5.30pm | Short break / Switch Group | |
| 5.30pm – 6.30pm | Winklemarket to Ship Inn discussion | Royal Oak and Cottages discussion |
| 6.30pm – 7.00pm | Wrap up and outstanding questions | |

| Date: Thursday July 22nd, 2021 (low tide at approx. 3.30pm) | |
|---|---|
| 3.45pm – 4.00pm | Meet at the Ship Inn Car Park, sign in and collect event leaflet |
| 4pm – 4.15pm | Introductions from project team and overview of objectives of the working evening |
| 4.15pm – 4.45pm | Ship Inn car park discussion |
| 4.45pm – 5.15pm | Billy Line and Langstone Spit discussion |
| 5.15pm – 5.30pm | Short break |
| 5.30pm – 6.30pm | Harbourside seawall discussion |
| 6.30pm – 7.00pm | Wrap up and outstanding questions |

Summary of Wednesday 21st July

This event registered 38 attendees from the Community alongside members of the Project Team. The event began with introductions from Jon Short, Project Manager from the engineering Consultancy, AECOM. Jon confirmed that the event was the next step of community engagement, and that overall, they were designed to be interactive and informal. The agenda for the session was outlined, along with the aims. The project team were introduced. Jon then confirmed the need to split the group into two smaller groups, with one group focusing on the High Street and Royal Oak to start, and the other on the frontage between the Ship Inn and High Street before swapping at the break.

Jon Short led discussions on the High Street and Royal Oak frontage, using cardboard templates to indicate visual impacts of the proposals in this location. There were a number of questions/comments from the group which are set out in the 'questions and answers section'.

Ben Taylor (Assistant Project Manager) provided an introduction to the design for the Ship Inn to High Street frontage and that it is one of the frontages undergoing design refinement at this stage. Two options are being considered, and are dependent on consultation with landowners and the structural investigations:

1. Installation of a concrete floodwall in front of existing, to the same height or:
2. Use of existing walls, which may need strengthening.

This led to a number of questions/comments from the group which are set out in the 'questions and answers' section.

At the end of the session, remaining attendees assembled at the end of the High Street for a debrief. Jon confirmed that the event sparked good discussions and that there were clearly some common themes to investigate and some conflicting interests. Jon confirmed that AECOM would be undertaking a design review to identify and confirm any changes to the design.



Image 1 – One of the groups discussing the Royal Oak Frontage on day 1.

Summary of Thursday 22nd July

For the second evening, the group (including 26 members of the community) assembled on the quay adjacent to the Ship Inn car park for discussions about proposals at the Ship Inn, Hayling Billy Trail, Langstone Spit and Mill Lane/Harbourside Frontage. Introductions to the project team were provided by Jon Short from AECOM alongside a plan for the session.

Jon provided an explanation of the design across the Ship Inn car park and that this is also a location for design refinement and consideration of alternatives such as raising surface levels to negate the requirement for a flip up flood barrier. The general alignment of the flood barrier was indicated.

The group moved over to the west side of the A3023 to cover the proposals for the Hayling Billy Trail, before discussions about proposals for the end of Langstone Spit and Mill Lane/Harbourside Frontages, with the session concluding with discussions about the proposals for the northern section of the Hayling Billy Trail up to where it meets Mill Lane.

Discussions on these frontages are captured in the 'questions and answers' section.



Image 2 – The group discussing the Langstone Spit Frontage on day 2.

Next Steps

This Event Summary document will be circulated to all event attendees who opted to receive it when registering for the event. It will also be published on the project webpages at <https://coastalpartners.org.uk/project/langstone-coastal-defence-scheme>.

The Event Summary has also been presented to the designer (AECOM) who will consider the feedback from a technical, social, environmental, heritage, economic perspective as to inform the detailed design.

Furthermore, during the events, the team highlighted 3 key areas where the feedback from the events will inform the review of the outline design proposal. These include:

- The Royal Oak frontage
- Langstone High Street to the Ship Inn frontage
- Carpark adjacent to the Ship Inn

The feedback we have received from these community events and community preferences will be further explored with the statutory stakeholders (Historic England, HBC Conservation Officer and the HCC County Archaeologist) who will regulate our work and may mandate their own specific requirements on the design. The findings of the ongoing structural and ground investigations will also be considered as part of this 'design review' process.

Once this 'design review' is completed, we will present the outcomes to the community.

The designer will then take forward the leading options for all frontages into the 'detailed design phase' which is expected to start in November 2021.

If you have any further questions about the contents of this event summary please email the project team via Langstone-FCERM@havant.gov.uk.

Questions and Answers

This section aims to capture the wide-ranging questions and comments that we received over the two events. The comments questions and discussion of the events is presented in grouped themes.

The themes are roughly aligned with various locations along the frontage. You can navigate these themes using the list below.

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1) Langstone High Street discussion

Q1.1) What will the flood gate look like?

A) Based on the outline design, the flood gate is formed using stainless steel with optional epoxy paint finish. The gate is proposed to be double leaf (two panels), side hinged with 90 degree opening. Please note that this arrangement and the material (and potential use of paint or cladding finish) is still to be finalised during detailed design. We received feedback that a non-shiny paint is preferable if used.

Q1.2) Are flip-up flood gates a possibility in this location? What are the alternatives?

A) The potential for flip-up flood gates has been explored in this location, however, were discounted as unsuitable due to increased maintenance requirements (silting, buried by deposits). We will continue to engage with potential suppliers to confirm whether this location is suitable for flip-up flood gates or any other robust solutions. If an alternative solution becomes a more suitable solution, we will present this for further community consultation.

Q1.3) Can the flood gate be glass or topped with glass?

A) The material of the flood gate proposed in this location has not been decided. We will engage with suppliers to understand the possibilities and will present these for further

community consultation. The potential suitability of a glass topped version will be explored with suppliers

Q1.4) Can the top half or third of the flood gate be hinged so it flips down?

A) The configuration of the flood gate has not yet been confirmed. Further engagement with suppliers is required to understand potential solutions.

Q1.5) Can the flood gate be located further up the high street to make it smaller in height?

A) If the flood gate is to be moved further up the high street, the flood wall on the Royal Oak side will have to be extended to the new flood gate position in order to form a continuous barrier.

The position of the flood gate is also governed by the extent of the existing waterproofing system within the Winklemarket structure. If the flood gate is to be positioned beyond the existing waterproofing system, an additional floodwall will be required to form a waterproof barrier.

As part of the detailed design, flood gate position and height will be optimised with the consideration of the aforementioned restrictions. Based on assessment of topographic data the reduction in flood gate height is relatively minimal, however optimising the location in relation to view impacts and buried services may offer some benefits and this will be assessed in detail.

Q1.6) Can the post, if located next to the Winklemarket, look like brick?

A) We can investigate the use of brick a cladding material facade during the detailed design process alongside other potential materials, presenting these for further community consultation. An alternative solution would be to paint the steel post with a suitable and complementary colour to the gate and/or surroundings.

Q1.7) Can you provide more information about the operation of flood gates?

A) Coastal Partners manage the operation of a network of flood gates and other structures through a duty coastal incident officer (CIO) role (24/7). In the Havant Borough, Coastal Partners work with NorSE to operate emergency flood defences. Once we have a greater understanding of the design and operation of the defences, an operational manual will be prepared, in consultation with Langstone Flood Watch and individual landowners affected. This will set out the procedure for closing the gates, alerting the community and emergency action planning. The gates would only be shut during a high tide event which triggers a gate closure (not every high tide event would require closure of the gates), when vehicular access would not be possible along the foreshore anyway by emergency services. Coastal Partners work closely with the Environment Agency who are responsible for issuing any flood alerts. You can sign up to receive flood alerts from the Environment Agency here: <https://www.gov.uk/sign-up-for-flood-warnings>.

Q1.8) Does it cost more to make gates higher?

A) Yes. There are additional costs for higher (and wider gates) due to the material costs and accounting for additional forces which need to be designed for.

Q1.9) Will a scheme help with our house insurance?

A) Coastal FCERM Schemes have the potential to reduce insurance premiums but this is not guaranteed. It can often take some time after scheme delivery for the Environment Agency to update their flood risk maps and areas benefiting from defences. The insurance industry then updates their own records based on these maps. Its best to have a direct conversation with the insurance company you use. For further information on flood insurance please see - <https://coastalpartners.org.uk/flood-insurance>

Q1.10) Will AECOM revisit the design of the flood gate based on community feedback?

A) The detailed design stage of the project will include refinement of the flood gate locations, types and materials. The community feedback (and other key stakeholder feedback) will be considered in this process alongside technical, economic and environmental factors.

Other feedback from the community:

- The village residents need to be sure our village is safe (from flooding)
- It is heard that it is a hard decision, can we learn from solutions at other locations?
- I would prefer the material of the flood gate to not be shiny

2) Royal Oak and Cottages discussion

Using the cardboard templates to indicate visual impacts, several options were presented for this frontage, which is undergoing a design review prior to detailed design:

| Option | Detail |
|---------------|--|
| A | Full height stone clad wall |
| B | Half height stone clad wall topped with permanent flood glass |
| C | Full height stone clad wall with cut out sections with demountable flood glass |
| D | Full height stone clad wall with cut out sections with demountable boards |
| E | Full height flood glass wall |
| F | Demountables along extent with posts fixed intermittently |

These discussions highlighted that the inclusion of flood glass in the design for this frontage was desired by some frontline residents.

Q2.1) Why are you looking at flood glass in this location as part of the design review? Can you tell us more about it?

A) The inclusion of flood glass in the design for the Royal Oak frontage was originally discounted at the long list stage due to initial community feedback at consultation. More

recent feedback from residents has suggested that there is a renewed preference for a glass flood wall, not only for residents but also for visitors to the Royal Oak.

Alongside potential alternatives such as demountable sections we are revisiting potential glass wall options as part of the design review stage following community feedback on potential view impacts and aesthetics.

As part of the design review for this frontage, we are taking further advice from; our Heritage Consultant (Wessex Archaeology), Historic England, Havant Borough Council's Conservation Officer and HCC County Archaeologist. This engagement is to ensure this is an acceptable option from the perspective of heritage and visual impact. Affordability is another element which will be considered, during the design review, and compared to alternative glass-free solutions for this frontage.

Q2.2) Can you confirm whether the cottages (adjacent to the Royal Oak) can be used as the primary flood defence?

A) Based on the initial stage Structural Surveys in 2018, the cottages are deemed unsuitable to be used as an effective flood defence to provide the required standard of protection and required function.

Q2.3) Can you reduce the height of the flood gates and quay wall to reduce visual impact?

A) No, the height is determined by the anticipated water level of a flooding event with a 0.5% (Annual Exceedance Probability - AEP) chance of occurring in any year. The standard of protection against flooding will reduce if the height of the flood gate is lowered. Providing the standard currently designed for is a key driver for the scheme and enabling funding.

Q2.4) Can seating be integrated into the flood defence?

A) Yes. As part of the detailed design, incorporating public amenity into the flood defence such as seating will be considered. Should a glass topped flood wall be taken forward it may also prevent the potential for sitting on top of the wall.

Q2.5) Will a handrail be needed along the flood defence?

A) A risk assessment will be undertaken to determine the need for a handrail along the flood defence for this frontage.

Q2.6) For any glass panels; what is the material of the frames?

A) The toughened glass panel frames are likely to be supported by stainless steel frames.

Q2.7) How wide will the footpath path be (around the Royal Oak)?

A) The design aim is to keep the existing footpath width unchanged. If seating is to be incorporated, the width may be affected slightly in places.

Q2.8) Will the foreshore access be widened slightly to accommodate for piling in front of the existing wall?

A) There is no intention to widen the foreshore access, as it will involve breaking into the existing quay wall or encroaching on designated habitats.

Q2.9) Will mooring facilities be provided along the wall?

A) We understand that this area is used recreationally, including for boat activities. We haven't yet integrated mooring facilities into the wall, but we will consider the potential requirements during the detailed design phase. The alternative could be for continued use of access up the slipways.

Q2.10) What happens to foreshore access in the long term?

A) In the long term, access will continue to be available via the slipways.

Q2.11) Access is still required into the allotment garden behind the Royal Oak; a swing gate is preferred, have you considered this?

A) It is possible to maintain access to the allotments in this location, and this will be investigated during detailed design and in conjunction with the landowner.

Q2.12) The existing alignment beyond the Royal Oak will not protect the footpath leading north and east. Have you considered an alternative which enables emergency access/egress (pedestrian) via these routes?

A) Options were considered for this frontage, which included demountable defences and Property level protection for the Old Mill, however following further engagement with the landowner these do not form part of the core scheme. Any further investigations of works to the east will remain the responsibility of the landowner. Emergency access/egress is being considered as part of the detailed design for the Royal Oak frontage.

Q2.13) Will it be possible to have pull (flip?) up boards rather than slot in boards?

A) It is possible. However, this may not be visually desirable and has significant operational and residual risk issues. Such alternatives will be reconsidered as part of the design review stage prior to detailed design of the final scheme.

Q2.14) What will the effects be on the Royal Oak Pub/ what is their opinion?

A) Greene King have shown support of the leading option proposed for the pub frontage to form a new quay wall, utilising existing defences with a flood wall on top and are accepting there may be some impacts on views. Coastal Partners are continuing to liaise with the Royal Oak and Greene King Management Team and will present the outcomes of the design review for this frontage for their further feedback.

Q2.15) How often do these properties flood at present?

A) Langstone Flood Watch have been undertaking the community response to flood events for Langstone. The team recollect several serious flood events in recent years namely the St. Valentines storm (Feb 2014) which led to flooding of the High Street up to the A3023. Storm Katie (March 16) led to wave impact on the quay, Storm Angus (Nov 16) flooded the high street, Storm Eleanor (Jan 18) high winds led to some street flooding and Storm Brendan (Jan 20) where strong wind led to significant wave action impacting frontline properties.

Whilst these events led to flood water within property boundaries (including gardens) it is not clear whether individual residential or commercial buildings were inundated or damaged. It was evident that many properties were alerted to the risk of flooding and were able to deploy sandbags and flood boards to minimise impact of flooding.

Q2.16) If these properties are already resilient to flooding, why are you constructing a defence here?

A) Whilst some of the properties here have some resilience measures in place these would not be adequate to protect against an extreme flood event or if the defence were to fail and the land and property behind were to erode into the sea. There also needs to be a continuous defence along the length of the frontage to ensure complete flood protection, therefore new defences are needed in this location. You can find out more about the key drivers behind the scheme here <https://coastalpartners.org.uk/project/background-langstone-scheme>

Other feedback from the community:

- Looking at glass option "instantly looks better"
- Residents understood reasoning when engineers explained the relative defence heights against existing
- Solid wall not liked by passers-by/those at pub
- Recreation and outdoor space are highly prized by locals and visitors in this location

3) Ship Inn to Winklemarket frontage discussion

Q3.1) What are you proposing instead of the 'boardwalk'?

A) We are currently undertaking a design review for this frontage which aims to remove the 'boardwalk', through design of a cantilever (overhanging) footpath to maintain the current footpath width. This is subject to ongoing structural investigations along this frontage to further confirm the suitability of existing structures and potential for incorporation of the new defences.

Q3.2) Will the design in this location lead to a narrower pathway? What are the impacts on access for each option considered?

A) The design aim is to improve the accessibility of the footpath, and where possible improve the width, ideally to a minimum width of 1.5m to allow for wheelchair users and pedestrians to pass one another.

Q3.3) Can you clarify the purpose of the existing concrete apron in the options considered?

A) The concrete apron provides stability to the new wall. The concrete apron will also form the new footpath.

Q3.4) Will the level of the existing footpath be maintained? Why not raise the level so that it doesn't continue to flood?

A) We have received feedback that the existing levels are in place to ensure privacy of neighbouring properties (if raised, path users would be able to look over the wall) and therefore will not be raising the footpath level.

Q3.5) If the footpath will continue to flood, is it possible to improve signage for visitors?

A) As part of the scheme design, landscape opportunities and enhancements such as improved signage will be incorporated where possible. We will be seeking the community's ideas and feedback as we develop these design enhancements.

Q3.6) If you are proposing to cover up the existing wall with a new wall, how will this impact landscape/heritage? Is it possible to leave any of it exposed (especially the top?)

A) Although it is possible to leave the top of the existing wall (i.e., above design crest level) exposed it would form a ledge in front of the existing wall which poses aesthetic impacts but also potential security issues for properties behind, so is not proposed to be taken forward. If a new wall is utilised in front of the existing, it will be clad to match as closely as possible the existing materials and appearance. We will take advice from our appointed Heritage Consultant as to the viable cladding options.

Q3.7) You mention cladding for the new flood wall. Do you have examples on what is possible here? Who will be consulted with to decide what this will look like?

A) Cladding options will be further explored during the detail design and planning process. Relevant key stakeholders will be consulted including the community, Historic England, Havant Borough Council, the Conservation Officer, etc. Image 3 below sets out some of the material options identified during the previous outline design for this frontage. If a new wall is utilised in front of the existing, it will be clad to match as closely as possible the existing materials and appearance.

Coastal Partners have experience from other local schemes where heritage considerations were integrated into the look and feel of coastal defence, through liaison with Historic England <https://southseacoastalscheme.org.uk/old-meets-new-in-southsea-seawall-design>

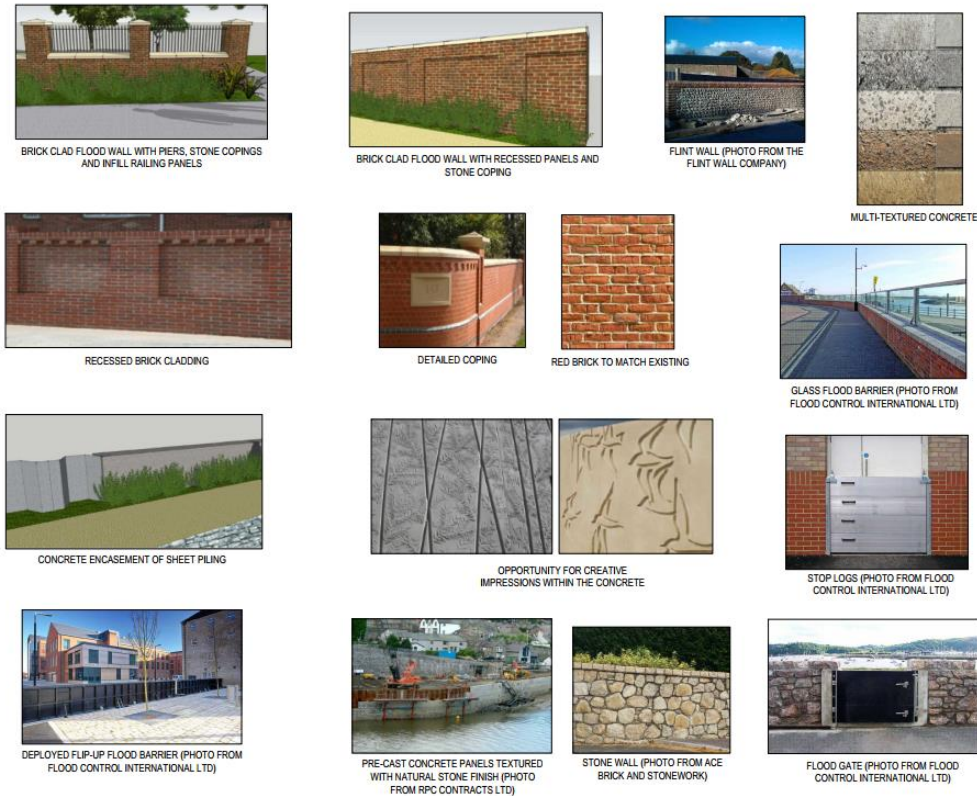


Image 3 – Material options identified during the previous outline design.

Q3.8) If using existing walls, is it possible to build the defence landward of existing?

A) Building the defence landward of the existing will cause significant disruption and potentially some land take for properties behind the existing wall (e.g., construction machinery access, scheme footprint etc). As part of the design review, we will continue to liaise and work with landowners to explore opportunities to utilise the existing structures where possible (subject to further surveys and technical suitability).

Q3.9) What is the order of priority for considerations for this frontage; flood protection, access, heritage, environment, health and safety? Is it possible to deliver all of these considerations?

A) All of the above are priorities and all are being strongly considered together by Coastal Partners, AECOM and a number of statutory stakeholders (including Historic England, Natural England, the Local Planning Authority, Havant Borough Council’s conservation officer, Chichester Harbour Conservancy, the Langstone Harbour Board and the Environment Agency) to develop a technical, environmentally, social and economically feasible scheme. The Langstone FCERM scheme aims to deliver a flood defence which provides protection to the Langstone Community, important heritage assets and the A3023, the only road crossing to Hayling Island.

Q3.10) Can there be passing places along the footpath rather than a wider path?

A) Opportunities for passing places will be considered and incorporated if appropriate.

Q3.11) What forces are acting on the wall in this location and how does the design accommodate these?

A) In technical terms, the primary forces acting on the wall in this location are the structure's self-weight, forces induced from retained soil, pedestrian load and hydrostatic (water) forces. Accompanying forces include wind action, snow and waves. The design will consider two combinations for Ultimate Limit State (ULS) and one load combination for Serviceability Limit State (SLS) (deflection and crack) in accordance with required standards.

Q3.12) What is the impact of the outcomes of the structural investigations on the estimated costs for this frontage?

A) Surveys and investigations are still ongoing and their impacts on the final option and detailed design (and cost) is yet to be determined.

Q3.13) Why have you been doing structural investigations on this frontage?

A) Initial structural investigations were undertaken in 2018 to indicate the condition of the existing structures. Following feedback from the community we agreed to further investigate the feasibility of integrating existing structures into the design proposals where suitable. The initial investigations have informed more detailed investigations, which commenced in summer 2021 and will conclude in the autumn. The findings of these investigations will inform the design review.

Q3.14) What other structural investigations are you doing and when will we know the outcome?

A) A non-intrusive survey (Ground Penetration Radar survey) is scheduled to be undertaken in October 2021. Further ground investigations are also being undertaken in late September / early October to provide greater clarity on the design parameters below ground in key locations. We will present the findings of the investigations when these are available.

Q3.15) When will this section be constructed? Will it be constructed in phases?

A) Construction is currently anticipated to commence over a period of 2 years over the summer months (April – September) in 2023 and 2024. Construction will only occur during the summer months due to environmental constraints within the harbours, namely the Overwintering Bird Period. A construction programme will be produced following completion of the Detailed Design and appointment of the Construction Contractor, which will consider phasing of the works.

Q3.16) Have you thought about introducing lighting improvements? This would improve safety along the footpath at night, and assist with flood gate operation?

A) Lighting improvements will be considered in detailed design as part of overall landscape opportunities and enhancement. However, it should be noted that negative impact of light pollution will also be taken into consideration.

Q3.17) Has flood glass been investigated for the Winklemarket location?

A) For this section of defence, the pathway is narrower (in comparison to sections where we are considering flood glass) so it would have a different impact (more imposing). Flood glass has been considered where it is likely that views are obscured which is not the case for this section. Furthermore, adding glass to the whole frontage would significantly change the look and feel of a relatively long section without enough justification for its use.

Other feedback from the community:

- Climate change is a priority; we will have wetter winters, more extreme events and higher sea levels so flooding will be inevitable. I am in favour of protecting the area.
- Any wall is better than one which isn't fit for purpose regardless of the sight. I am sure that any plans will be sympathetic to the surroundings. Change is a positive.
- If health and safety rules are non-negotiable and a handrail is needed, then that's fine so long as it's sympathetic to the surroundings.
- Making this path accessible for pushchairs/ wheelchairs is great- any improvements to the current path is a benefit and will be better than the existing setup.
- I am conscious that the more the time passes the harder it maybe to secure funding so keen to help secure the best solution.

4) The Ship Inn (East) frontage discussion

Q4.1) What will happen with the sloped apron here? How will accessibility be improved? How will access to the beach be maintained?

A) The detailed design will investigate options to reduce or remove the gradient on the sloped apron to make it a more usable path. We have commenced discussions with Hampshire County Council (in relation to public rights of way) and with the Ship Inn to discuss potential solutions for improving accessibility. Access to the beach will continue. Any pedestrian flood gates will remain in the default open position until they require deployment during flooding.

Q4.2) What will the white picket fence be replaced with? Have you consulted the landowners to understand how this area is used and the access requirements here?

A) The leading option being considered in this location is a concrete flood wall which will be appropriately clad / finished. This will replace the picket fence to provide flood protection. Further engagement will be undertaken with the landowner to understand access requirements.

Q4.3) What will happen to the swans which use this area to rest?

A) Impact to the foreshore where the swans normally gather will be minimal. Mute swans although not a designated feature of the SPA are part of the waterfowl assemblage, it is not envisaged that the swans will be especially affected compared with other species, but this will all be robustly considered through the EIA process.

Q4.4) What are your plans for flood gates in this location

A) A side hinged single leaf steel (pedestrian) flood gate is being considered in this location (i.e. at the steps off The Ship Inn). Please note that the details have not yet been finalised.

Q4.5) What are your plans for flood glass in this location?

A) In this location a (approximately) 400mm high glass barrier fixed on top of the existing masonry wall is planned around the Ship Inn, and in consultation with the landowner.

5) The Lookout and Green Cottage frontage discussion

Q5.1) What are your plans for flood gates by the Lookout

A) The flood gate is likely to be fixed behind the existing brick pillars. Access width between the two pillars will remain unchanged.

Q5.2) Is it possible to integrate flood gate posts into existing brick pillars in wall to avoid a narrow gate at The Lookout? This access is used by residents.

A) The flood gate is likely to be fixed behind the existing brick pillars. Access width between the two pillars will remain unchanged.

Q5.3) Why is a handrail necessary?

A) A risk assessment will be undertaken to determine the need of handrail along the flood defence, in line with the necessary Health and Safety requirements.

Q5.4) Where exactly is a handrail required/not required?

A) A risk assessment will be undertaken to determine the need of handrail along the flood defence. We acknowledge that this is something that the community would like further detail on so we will use the risk assessment to create a map showing the anticipated locations where a handrail is required.

Q5.5) What will the handrail look like? How high will it be?

A) Height of the handrail is typically 1.1m above ground. The details of the handrail have not yet been finalised.

Q5.6) Will there be provision for access to the beach in this location?

A) Access to the foreshore is not currently formalised in this location (i.e., access steps/ ramp/ slipway) The proposed design does not allow for formalised access to the foreshore to be introduced in this location. Given the area has multiple environmental designations, any significant encroachment to the beach beyond that which is absolutely necessary will not be permitted.

Q5.7) What are the alternatives to a handrail in this location?

A) Alternatives to a handrail have not been considered yet and are subject to further risk assessment. However, given the restrictions in the area (i.e., existing footpath width and environmental designations on the foreshore), a handrail appears to be the most effective edge protection solution.

Q5.8) What are the public rights of way in this location?

A) A public footpath (Footpath 129) runs along the top of the existing defences. Coastal Partners are working closely with Hampshire County Councils Rights of Way Team throughout the Detailed Design phase of the project. Further information regarding Rights of Way can be found here: <https://maps.hants.gov.uk/rightsofwaydefinitivemap/>.

Q5.9) Can the low wall (at Green Cottage) be integrated into the defence?

A) The detailed design will consider incorporating the low wall into the flood defence; however, this is subject to agreement by the landowner.

Q5.10) What are the impacts on public right of way in this location? Who will be consulted about the changes?

A) Coastal Partners are working closely with Hampshire County Council's Rights of Way Team. The current preferred option would result in a slight diversion of the existing footpath from running directly in front of Green Cottage to running along the edge of The Green. Direct consultations are being held with private landowners directly impacted and with Hampshire County Council. Following confirmation of the design, a Public Path Order application will be needed to divert the footpath. More detailed information on Public Path Orders can be found here: <https://www.hants.gov.uk/landplanningandenvironment/rightsofway/definitivemap/pathorders>.

Q5.11) Can you clarify the design of the preferred option in this location and how the concrete apron will be integrated into the footprint of the structure and accommodate a path?

A) The intention is to construct the concrete apron on top of / in place of the existing footpath. Once constructed, the top level of the concrete apron will be the new foot path level. The concrete apron will be finished with a surface suitable for a footpath (i.e., brush finished or exposed aggregate finish – subject to discussion with the community).

Q5.12) Why not leave the path (around Green Cottage) where it is?

A) We will work with the landowners during detailed design to confirm the most suitable configuration for the path and access. If the route remained as it is, there would be an added requirement for floodgates in either side of the Green to maintain public access. This increases the risk of the defences being fully closed at the time of an event. We aim to minimise the number of open gates in the scheme.

6) The Car Park at the Ship Inn discussion

Q6.1) What will the design review consider in this location?

A) The leading option is to construct a reinforced concrete flood wall with flip-up flood barrier across the car park. We recognise the potential disruption to the car park, so are also investigating localised surface raising to negate the need for the existing alignment of defences across the car park.

Q6.2) Will the design here result in the loss of car parking spaces?

A) Provision for parking in the car park adjacent to the Ship Inn is not currently formalised. We are working with Hampshire County Council as landowner to optimise this area. The aim is to have as minimal as impact as possible on parking and where possible enhance the area.

Q6.3) With reference to the proposed gates, how will this impact access? Need to consider all uses of this area and not just cars.

A) Access will be a key consideration. Following community and key stakeholder feedback, design review of options is currently being undertaken in this area and alternative (no-gate) options are being explored to reduce impacts on usage and to optimise the final scheme.

Q6.4) Have you considered how this area is used for leisure and recreation?

A) Yes, the amenity and recreational value is recognised, and the scheme aims to support (or enhance) continued uses of the public space, carpark, quay walls and slipways.

Q6.5) What is the exact location/alignment of the wall/gates across the car park? Why have you proposed this alignment?

A) The alignment of the wall/gate across the car park is shown in the [outline design drawings](#). This alignment is perpendicular to the existing wall in front of the Ship Inn, to the road verge; hence the shortest distance to form an effective barrier. As part of the design review stage, alternatives such as a raised mound instead of the wall and flip up barrier in the same alignment will also be considered. This alternative would allow continuous car park access and remove any access width restriction.

Q6.6) Access/exit to this car park from the A3023 is a nightmare, do your designs consider this or even alleviate this situation?

A) We are liaising with Hampshire Highways in relation to this junction. Present designs do not incorporate any changes to the current layout. We do recognise feedback from the community that this junction is problematic and will share the community's ideas for alternative solutions.

Q6.7) Why not work on the A3023 road bridge at the same time?

A) We are liaising with Hampshire County Council who are undertaking the planned bridge refurbishment works provisionally programmed for 2023/4. Where possible, project efficiencies will be incorporated.

7) Hayling Billy Line Embankment discussion

Q7.1) What is the landownership in this area?

A) Havant Borough Council are the landowner of the Hayling Billy Line embankment on the west side of the A3023. The footpath is known as the Shipwright's Way. Hampshire County Council own the majority of Langstone Spit.

Q7.2) Has there been any flood modelling of flood pathways along this frontage?

A) Flood modelling has been undertaken for the understanding the length and height requirements of the scheme. A step-by-step approach was followed to determine the defence alignment details. To inform the economic appraisal, design water levels for four different scenarios were considered; for the 2019 1.33% AEP (1:75 year), the 2019 0.5% AEP (1:200 year), the 2069 1.33% AEP (1:75 year) and the 2069 0.5% AEP (1:200 year). A freeboard (or uncertainty allowance) was added to the design water level to determine the design crest level of the defences. For frontline defences, a freeboard of 0.3m was applied, whereas for setback defences a freeboard of 0.1m was applied. The freeboard was applied to help mitigate uncertainty in still water levels and to a limited extent the potential wave action that may occur in extreme events.

Q7.3) Can we have a map to show roughly where areas of raising are required and by how much they are raised along the Hayling Billy Trail?

A) The existing [outline design drawings](#) provide indicative raising areas with indicative sections showing height increases. However, the full detail will be provided by the detailed design stage.

Q7.4) Have you considered access to the beach over the proposed embankment if raised, as well as access across the creek onto the spit?

A) Access paths over the embankment / defences will be possible, much like it currently is given the modest raising required and slopes involved.

Q7.5) What is the impact on the ecology here, have you considered reptiles (such as slow worm?)

A) A series of ecological surveys have been undertaken or are in progress, which includes a reptile survey. The findings will be assessed and inform the Environment Impact Assessment (EIA) process and a policy of no net loss and if possible, net gain will be applied to all ecology matters. All reptile species including slow-worms are protected species and will be assessed as such.

Q7.6) Have you considered improving biodiversity here?

A) We always look at enhancing biodiversity wherever possible in our schemes and have a dedicated officer that investigates all opportunities. A requirement for 10% biodiversity net gain (BNG) is likely to be instilled in the emerging Environment Bill, we already aim to achieve this within our schemes. We have also secured funding to study the feasibility of re-establishing saltmarsh through the delivery of this scheme.

Q7.7) What wider benefits have you considered in this location? Reduced visual clutter is preferred.

A) We are investigating a range of wider benefits for the scheme across Langstone in terms of their feasibility for inclusion in the design proposals. For this location, there is potential for improved footpath resurfacing and access, wildflower seeding and 'bee blocks', rest places, beach cleaning (including micro plastics/nurdles), improved signage and updating interpretation boards.

Q7.8) If an embankment is constructed, how will it be left? Wildflower seeding is desirable.

A) The embankment will be topped with 150mm thick topsoil and seeded in the appropriate season (i.e., spring). As part of the detailed design, wildflower seed mix specification will be provided which will likely be a blend of various wildflowers and grasses to provide the most appropriate seed mix for that situation, that fits the ecology and management requirements. It is likely in this location we will match the choice to local habitat type and use a maritime grassland mix that could include representative wildflower species.

8) Langstone Spit discussion

Q8.1) What protection does Langstone Spit provide?

A) Langstone spit once formed part of the Havant to Hayling Island railway which was in operation between 1867 and 1963. Since the railway's decommission (1966 to early 1980's), only some components of the bridge remain. The spit itself is not of typical natural formation (like the spit at the entrance to the Lavant Stream), however the remaining embankment provides shelter to the Sailing club from wind driven waves and helps stabilise the beach to the north.

Q8.2) How is the spit eroding?

A) A study of the coastal processes was undertaken in 2019, including an analysis of available historic mapping records of Langstone Spit. This concluded that the long-term trend (1946-2016) was of erosion, notably the seaward face. The rate of erosion varies along the length of the spit, and there is evidence that it is migrating to the east. In general, the base of the spit is eroding very slowly, compared to the tip of the spit which is showing greater loss of material. Works are therefore proposed for the tip of the spit. Considering future sea level rise and in the absence of any maintenance works this erosion is likely to continue.

Q8.3) What are you proposing for the end of the spit, and what will it do?

A) The detailed design will produce a design for a rock armour revetment at the tip (50m) of the spit to prevent erosion and help stabilise the feature. The implementation of this will be subject to securing the additional funding and is not considered integral to the core flood defence scheme for the village.

Q8.4) What happens to the beach during a storm? Does it overtop? If so, where?

A) During a storm, wave run up will be experienced and some over washing at the top of the beach may occur. The extent of overtopping depends on the combined severity of the elevated water levels and wave heights (and wind strength and direction). Some beach material may also be drawn down in times of storms and this will slowly build back up under more normal conditions. Intermittent erosion events (gradual down wearing) particularly towards the southern end of the undefended spit is also likely to be experienced during storms.

Q8.5) How will this frontage be funded?

A) We are working with a range of funding partners to achieve the funding for the core scheme. At the same time, we are looking for additional funding opportunities to try and secure monies for the Mill Lane and Spit frontages (the Additional scheme). However, it is very likely that 3rd party contributions from those who would benefit most from the protection of the spit will be required to deliver this part of the scheme.

Q8.6) For the revetment, what rock are you using?

A) Rock typically suitable for rock revetments are Granite and Gabbro with a density of more than 2600 kg/m³. This will be investigated during the detailed design stage.

Q8.7) Where will you source rock from and how will you get it to site?

A) The source is yet to be determined. Granite and Gabbro can be sourced from places such as Cornwall and delivered to site by barges. Alternatively, it may be more cost effective to import rock from places such as Norway. A contractor will be consulted during detailed design, to identify suitable quarry and delivery method.

Q8.8) How much will the rock cost? How does this compare with other coastal management schemes such as Southsea also using rock in large volumes?

A) The indicative cost of Granite armourstone from Cornwall are 1-3 tonne (£40/tonne) and 60-250kg (£42/tonne) excluding delivery. The material costs are dynamic and can vary. An updated cost estimated will be produced during the detailed design stage and we recognise the efficiencies in partnering with other major schemes to source materials for the Langstone scheme so will further investigate these opportunities.

Q8.9) Is there a cost breakdown for each frontage?

A) We have provided an indicative cost for the delivery of the Core Scheme and the Addition Scheme sections. this is available on our project [website](#). Further cost assessment

and refinements will be undertaken as more is determined about the structures and their materials during detailed design. We are also now seeing the impact on the construction sector from Brexit and the Covid Pandemic. Updated cost estimates for the scheme will be produced by a cost consultant during detailed design and where we are able to do so, allowing for commercial confidentiality, these will be shared when available.

Q8.10) Prior to construction of the rock revetment, will any of the old concrete and rubbish be removed at the end of the spit?

A) Any unsuitable materials including old concrete and rubbish will be removed prior to the construction of the rock revetment. Depending on the cost, carbon and environmental impact (i.e., noise pollution), the design will also consider utilising the old concrete as core material as a foundation for the rock revetment if suitable.

Q8.11) Is it possible to consider methods to reduce wave energy offshore? I.e., through kelp/saltmarsh regeneration.

A) Such an option can be possible in appropriate locations although may take some time to establish, especially in such an exposed location. This may also not stop erosion of the spit as weathering and other processes will continue.

We have also secured funding to study the feasibility of re-establishing saltmarsh through the delivery of this scheme.

Q8.12) Have you considered how this beach and foreshore area is used locally and by visitors? We know it is used by bait diggers, jet ski, fishing, swimming, parkour, paddleboard, other watersports etc. which have increased recently during lockdowns.

A) We are aware of the amenity value of this section of beach and foreshore. There will be no adverse impacts on this amenity value, so these recreational activities are likely to continue. Any wider benefits considered for this location will look to communicate and celebrate the natural features of this section of coastline.

Q8.13) Do you have any evidence of saltmarsh extent in both Langstone and Chichester Harbours fronting Langstone?

A) We will be reviewing the historic extent of saltmarsh for both the saltmarsh restoration feasibility study and for the EIA. [The Solent Dynamic Coast Project](#) (2007) looked at historic saltmarsh loss going back to 1946. We will be reviewing this data which shows significant losses in the Langstone area between the 1940s and 1970s.

Q8.14) Have you any plans for existing or new information boards?

A) A review of the existing information boards will be undertaken, and any enhancements will be considered and integrated where possible as part of the overall landscape design, in consultation with the community.

9) Hayling Billy Line Path Raising and Mill Lane and Harbourside discussions

Q9.1) What do you mean by ‘core’ scheme and ‘additional’ scheme? The terminology used sounds like residents at Mill Lane and Harbourside are lower priority.

A) The ‘core’ scheme refers to the affordable scheme alignment that can deliver the objectives and benefits of the project. The objectives of the scheme are aligned with the priorities of the organisation that provide the funding such as Havant Borough Council, HCC, and the Environment Agency. There are some areas along the Langstone frontage, including the Mill Lane frontage and the Langstone Spit, that are not included in the core scheme due to affordability (the ‘additional’ scheme). We have the aspiration to include these frontages although they will require additional contributions to enable the construction works to be undertaken with the Core Scheme.

The best outcome is that both the core and additional scheme can be delivered, and we are committed to providing detailed design for both additional and core scheme frontages.

Alongside the design work, we are able to support the community to investigate any potential sources of funding available to them with the aspiration of including the Additional Scheme sections.

Q9.2) Why are Mill Lane and Harbourside residents being asked to contribute to the scheme?

A) Defra (Department for Environment, Food & Rural Affairs) has overall national responsibility for policy on flood and coastal erosion risk management and provides funding for flood risk management authorities through grants to the Environment Agency and local authorities. The Environment Agency is responsible for taking a strategic overview of the management of all sources of flooding and coastal erosion. The Agency also has operational responsibility for managing the risk of flooding from main rivers, reservoirs, estuaries and the sea, as well as being a coastal erosion risk management authority.

Local Authorities, including Havant Borough Council, as risk management authorities are not legally required to do anything to protect against flooding and erosion, however they have permissive powers to carry out works where there is a wider public benefit, clear economic benefit, and an achievable solution.

Private Landowners have ultimate responsibility for protecting their own property from flooding and erosion but must act within statutory planning regulations and other applicable legislation.

Q9.3) When was it decided/approved that Mill Lane and Harbourside properties would not be included in the main/core scheme?

A) During the previous outline design stage, an options appraisal was undertaken. This took all options into consideration from a longlist to shortlist, culminating in an options appraisal to identify the leading option for each frontage. The Langstone Preferred Options Report identifies the preferred alignment according to the options appraisal and is where the

concept of 'core' and 'additional' scheme emerges. The longlist, shortlist and preferred options reports are publicly accessible on the project webpages <https://coastalpartners.org.uk/project/development-of-options/>. Engagement with stakeholders and the community has also underpinned the options appraisal. To find out more about this engagement, details can be found here: <https://coastalpartners.org.uk/project/previous-engagement>.

HBC Cabinet were provided with an update on the progress of the Langstone FCERM Scheme on the 28th October 2020. The purpose of this meeting was to receive Cabinet approval on the outline design and proposed route alignment options, and further approval to commence with procurement of a professional consultant to undertake the detailed designs. For further information on this Cabinet Meeting, including agenda, minutes and the decision, please visit the Havant Borough Council Webpages.

Q9.4) It feels like you are splitting the community with your proposals for core and additional scheme

A) We agree with the community that the best outcome is for the Mill Lane frontage to be protected by a scheme, and our aspiration is to include the delivery of the Mill Lane frontage in the construction stage of the scheme. We are treating all parts of the community equally but have been very clear that under the current funding rules we cannot make an affordable case to construct the defences on the Mill Lane frontage without considerable private contributions.

We are however, developing a design and costings for that frontage (at no cost to residents) to create the opportunity to link the additional scheme with the core scheme. Ultimately the outcome will be determined by whether the residents are able to help us raise the funds to deliver construction of the scheme and will continue to work with the community to close the funding gap for Mill Lane and spit frontage.

Q9.5) The west frontage is more exposed to waves and storm impacts than the east/main village frontage. Why is the east side getting more attention?

A) There are some physical elements which influence the design in each location. For example, flood defences along the eastern side of Langstone are relatively lower in height and in poorer structural condition. The eastern frontage, whilst more sheltered from south westerly wind and waves, is still vulnerable to increasing water levels during storms and over time due to sea level rise. At Langstone Spit, the south westerly facing beach dissipates wave energy, and is of an elevation to withstand storm events.

Q9.6) If you go ahead with your proposals to raise levels up the Hayling Billy Line, will this displace water and flood properties? What is the flow pathway with and without your proposed scheme? Have you properly assessed the risk?

A) Our proposals are ratified by Statutory Consultees, such as the Environment Agency, Natural England and HBC Planning. We will need to be able to prove that the scheme does not increase flood risk elsewhere to be able to obtain planning permission. The designer has undertaken numerical flood modelling to assess flood risk to properties and engineer a solution to reduce flood risk.

Q9.7) How does flood risk at Mill Lane and Harbourside compare if you deliver the core scheme as opposed to the additional scheme in this location?

A) The tidal flood risk will be largely unaffected. Given the nature of flooding there is no discernible difference to adjacent water levels with a defence in place given the almost infinite (comparatively) volume available of the receiving water (harbour) to accommodate any displaced flood volume. Localised flow paths and wave action will be further assessed and mitigated during detailed design to ensure no detriment (over and above the status quo) would occur to properties should the core scheme be taken forward.

Q9.8) If funding is secured to deliver the proposals for the Mill Lane and Harbourside frontage, will you still work on the proposals for the Hayling Billy Line raising?

A) If we are in the ideal position of securing the contributions needed to implement the works to the Mill Lane frontage then we would not have to implement the proposal along the edge of the billy line, which would make a saving on the project. This could be put towards the delivery of the scheme and will be factored into our contribution request; however, we are still working on closing the funding gap for the 'core' alongside the 'additional' scheme.

Other feedback:

- The entire group [of attendees to the event] are against raising the footpath along the Billy Line; "dividing the community"
- Harbourside residents feel they will be at an increased risk of flooding if the 'additional scheme' doesn't go ahead.
- Other community members don't understand the need for the raising (of the embankment) and believe it will cause unnecessary disruption to the existing ecology

10) General Questions

Q10.1) Some members of the community didn't know about this event. How do I receive future communications?

A) The best way to receive future communications in relation to this scheme is through subscription to our project e-Newsletter (visit the project webpages at <https://coastalpartners.org.uk/project/langstone-coastal-defence-scheme> to sign up to the Langstone e-Newsletter). You can also search information on previous communications. We are keeping our project webpages up to date and you can find out more about upcoming engagement here: <https://coastalpartners.org.uk/project/upcoming-engagement-langstone/> and follow us on social media by searching for Coastal Partners.

Q10.2) Can you explain why you are asking for contributions to the main scheme at this point when cost appears to be uncertain?

A) We received indicative costs as part of the outline design and are using this to inform our budgets in relation to funding and contributions. We have recently appointed specialist services from a cost consultant to help refine our cost estimate as the design develops. Our current costing work allow for uncertainty and risk at the project stage through the inclusion of a contingency element. This is standard practice amongst government projects to enable budgets to allow for unknown cost early in project development.