

Welcome

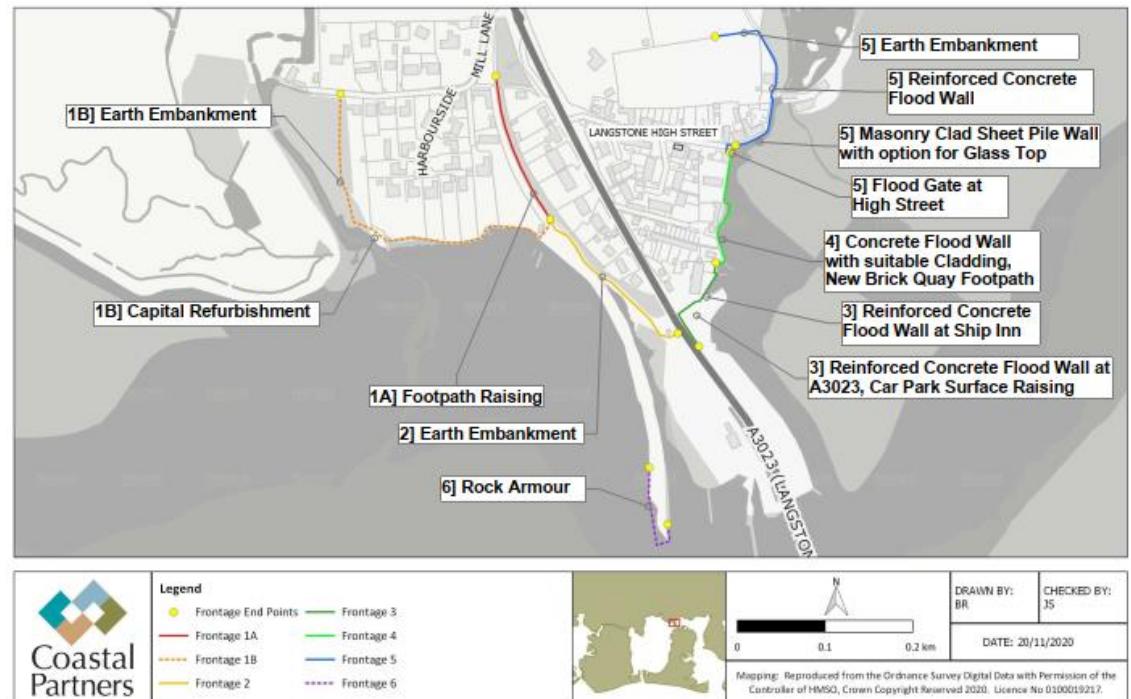
The previous design stage and options appraisal culminated in an outline design proposal for the most achievable solution, also known as the 'leading options'. These were presented to the community for feedback at public exhibitions in January 2020. Over the last two and a half years, we have continued to work with AECOM as designer, and the community to refine these leading options further, culminating in a 'design review' for all frontages which concluded in February 2022, during the early stages of Detailed Design.

The design team have explored the feedback received from earlier community engagement, frontline residents and businesses and the Langstone Stakeholder Working Group, alongside the views of statutory stakeholders (Natural England, Historic England, HBC Conservation Officer and the HCC County Archaeologist), who regulate our work and may mandate their own specific requirements on the design.

We were also asked to explore the structural integrity of some of the existing defences further to see if they can be integrated into the new flood defences. Therefore, further structural and ground investigations were undertaken in Autumn 2021 to inform design proposals for each frontage.

This leaflet aims to provide an update on the latest design proposals being taken forward into 'detailed design' for each frontage of the Langstone Flood and Coastal Erosion Risk Management (FCERM) Scheme, highlighting where these remain the same, and where these have changed to account for stakeholder feedback and the findings of the latest ground and structural investigations.

Where available, sketches are provided for information purposes only. The detailed design process will refine these into drawings suitable for obtaining detailed cost estimates for construction.



Map showing leading options for each frontage.

Next Steps for Detailed Design

AECOM are now developing the 'detailed design' phase which progresses the leading options for ALL frontages to a higher level of design detail, where we aim to refine:

- The technical details for planning, construction, and buildability
- The impacts on heritage, landscape and environment
- The appearance, construction materials and finishes
- The whole life cost for each frontage

Progress is presented to the design team at three milestones of refinement; 50%, 80% and 100% completion.

We will present the 50% design outputs to our Statutory Consultees, the Langstone Stakeholder Working Group (LSWG), and Frontline Residents and Businesses who are directly impacted by the scheme. Their feedback goes into preparing the '80%' design. You can now find the 50% design outputs on our project webpages.

We will then present the design at 80% completion using artistic impressions and 3D photomontages of the latest designs for all frontages at a public exhibition later in 2022. This will also be supported by the final LSWG. For further detail on upcoming engagement, please visit our project webpages.

The complete design at 100% will then be available for consultation as part of a planning application to Havant Borough Council, and will also be available on the project webpages.

Stay up to date!



Visit the UPDATED website
<https://coastalpartners.org.uk/project/langstone-coastal-defence-scheme>



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NEWSLETTER



Frontages 1, 2, 3 (&6)

1A] Hayling Billy Line North

The leading design solution for the northern section of the Hayling Billy Line remains unchanged from raising of the existing footpath and National Cycle Route (170m long) along a section of the old Hayling Billy line, between 0-500mm.

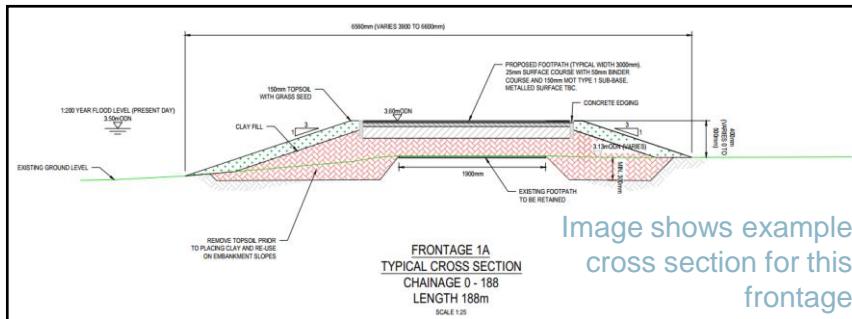


Image shows example cross section for this frontage

1B] Private defences at Mill Lane and Harbourside

The outline design 'leading option' continues to be Capital Refurbishment of the existing private defences, and earth embankment to the west.

We will continue to work with the community to identify an affordable solution for this frontage.



Aerial Image of West Langstone including Mill Lane and Harbourside (Coastal Partners, Dec 2020)

2] Hayling Billy Line South

The leading design solution for the southern section of the Hayling Billy line remains unchanged from an earth embankment along the existing embankment alignment for 120m.

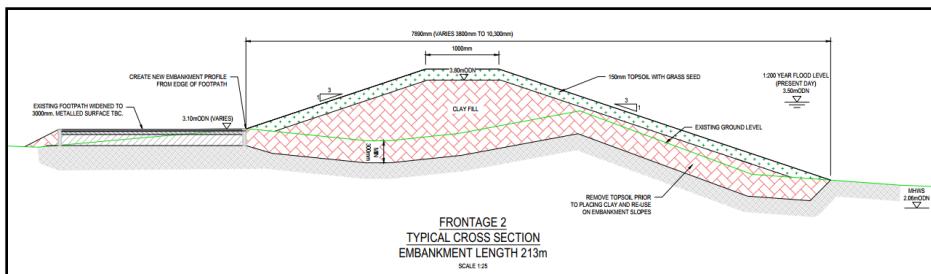


Image shows example cross section for this frontage looking south down the Billy Line

[6] Langstone Spit

The leading design solution for the Langstone Spit remains unchanged from rock armouring for the 50m section at the end of the spit.

We will continue to work with the community to identify an affordable solution for this frontage.

3] The Car Park at the Ship Inn

The outline design 'leading option' for this frontage was a reinforced concrete flood wall and flip up flood barrier across the car park. Community feedback which highlighted the impact of this proposal on the car park, alongside a review of operation and maintenance requirements has led to a design review for this frontage which considers localised surface raising. This negates the need for a flip up flood barrier and associated operational requirements.

The revised leading option for this frontage is now 'localised surface raising to form a mound'. Further design refinement will be undertaken to minimise impact on operation of the area as a car park, alongside how it will tie-in to defences at the Ship Inn and the A3023.

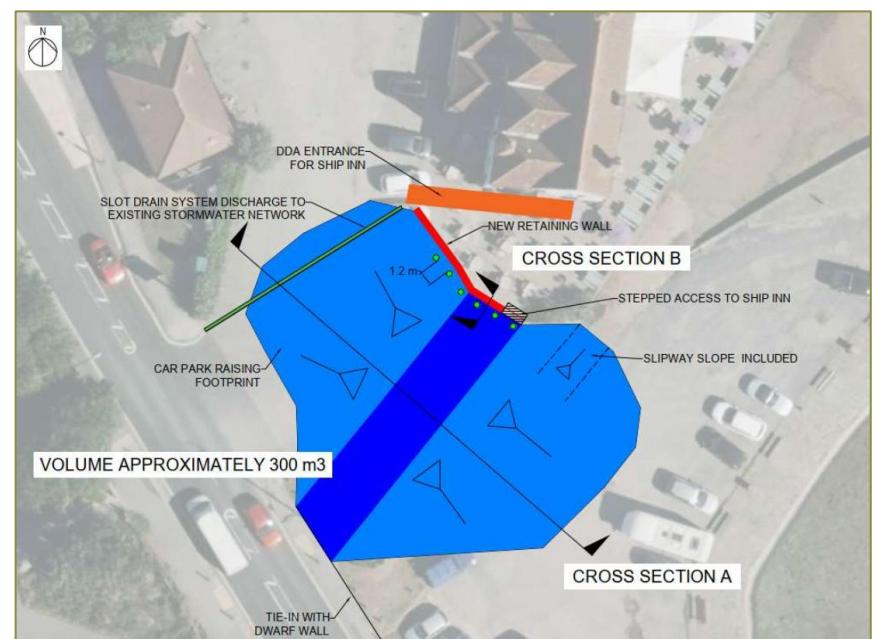
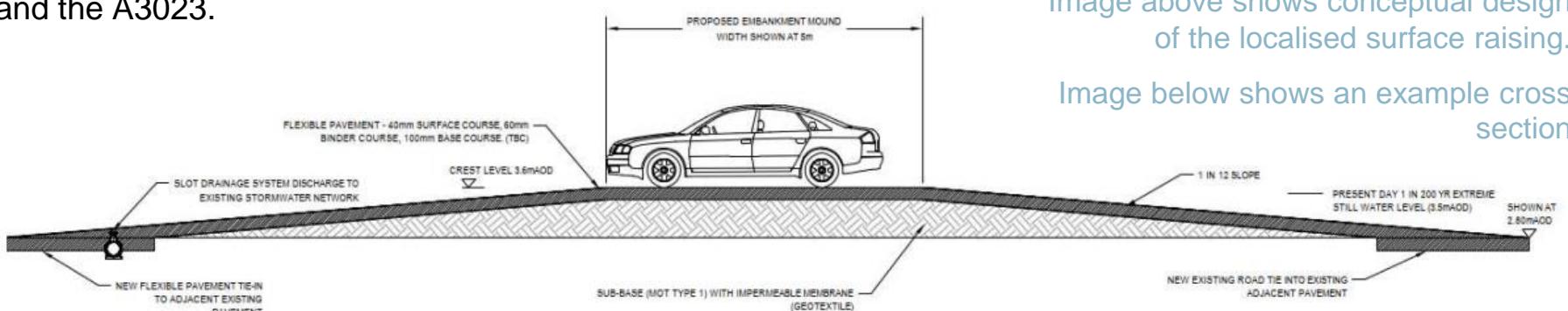


Image above shows conceptual design of the localised surface raising.

Image below shows an example cross section



3] The Ship Inn

The leading design solution for the Ship Inn courtyard wall was for a Reinforced Concrete Floodwall and Glass Barrier Top. The revised leading option reflects the results of the structural investigations, seepage analysis and landowner discussions, so that a full height piled wall with no glass top is to be designed. The wall will be designed to be able to incorporate a glass top, should funding contributions be secured prior to construction.

The section of concrete apron and picket fence will be replaced with a concrete sea wall.

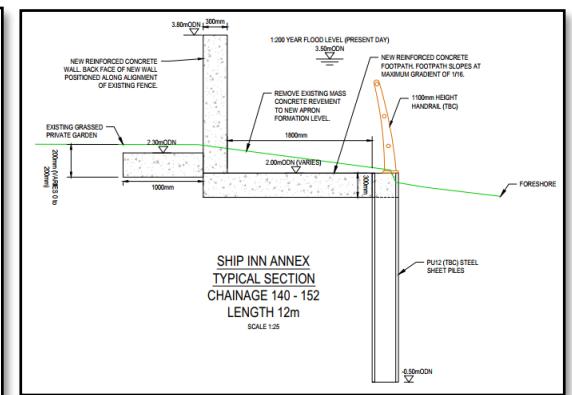
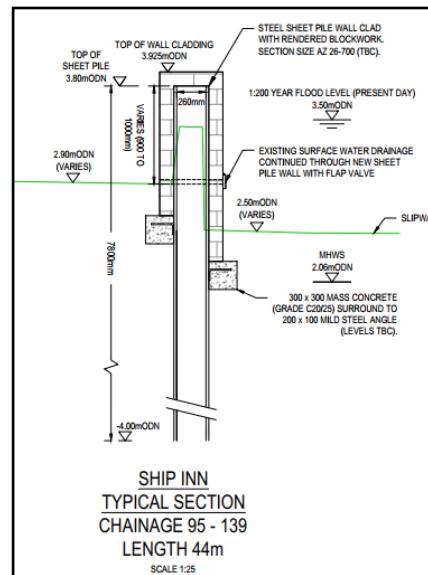


Image shows example cross section of Ship Inn Wall (left) and Annex (above)



Image of the Frontage between the Ship Inn and the Green at Langstone, Coastal Partners 2022

4] High Street to the Ship Inn

The outline design 'leading option' for this frontage was a new reinforced concrete flood wall and 'boardwalk'. Community feedback led to a design review for this frontage where the existing walls and structures were investigated more closely for integration into the scheme regaining some existing width for the accessible path.

The most recent structural investigations have determined that the existing structures are, regrettably, not suitable for integration into the new defences.

The revised leading option for this frontage is to construct a new reinforced concrete floodwall with brick quay wall and buried apron with sheet pile foundation. We will continue to work closely with frontline residents along this frontage to determine the design detail. A health and safety risk assessment will determine the requirement and extent of a handrail.

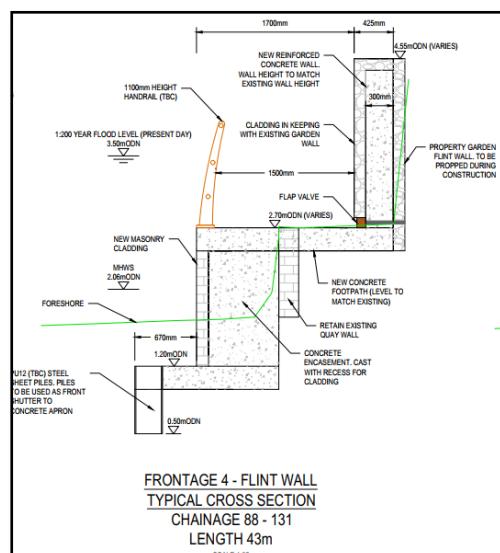


Image right shows example cross section for this frontage

4] Green Cottage

The outline design 'leading option' for this frontage was a new reinforced concrete flood wall and 'boardwalk'.

This frontage has been revised in conjunction with the Langstone High Street to Ship Inn frontage to negate the requirement for a boardwalk. The revised leading option is a reinforced concrete flood wall with new brick quay wall and buried apron with sheet pile foundation.

We will continue to work closely with frontline residents along this frontage to determine the design detail. A health and safety risk assessment will determine the requirement and extent of a handrail.

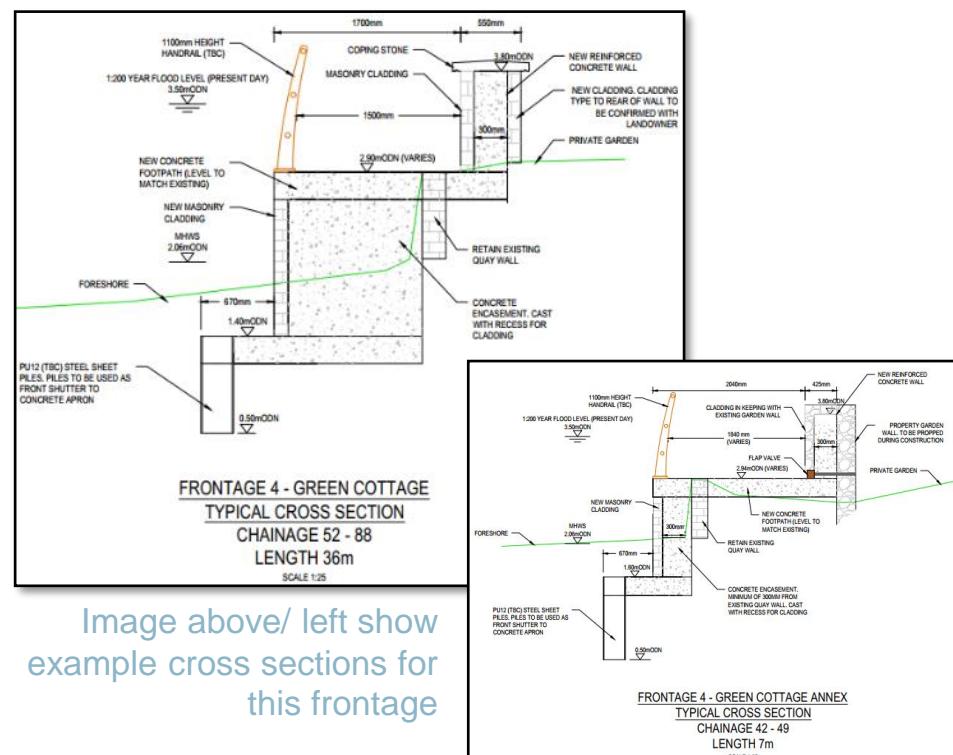
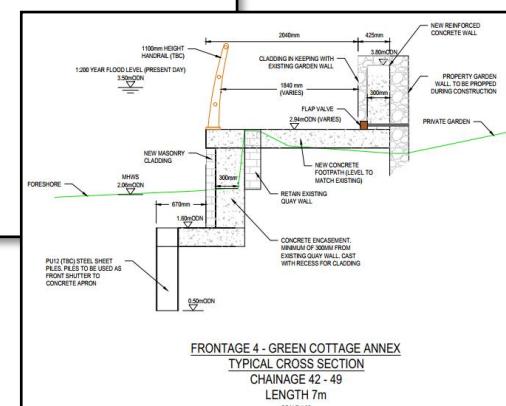


Image above/ left show example cross sections for this frontage



5] The Royal Oak

The outline design 'leading option' for this frontage was either a stone parapet wall built on top of the existing quay or a new concrete 'king post' wall built in front of the quay to the required defence height levels.

There were several factors investigated in the design review for this frontage:

- The structural integrity of the existing quay and building walls was investigated through structural investigations which highlighted these could not be integrated into the design.
- Some frontline residents and businesses expressed interest in the incorporation of flood glass in the defence
- The potential impact on landscape and heritage was explored with an independent Heritage Consultant
- Early Contractor engagement to understand buildability

The design review has led to the development of a new concept option which is a reinforced concrete wall cladded in a suitable material with a piled concrete apron buried beneath the foreshore. This allows for the sheet pile toe to extend further from the existing wall, reducing the construction risks and enabling reduction of the thickness of the wall which limits foreshore encroachment. It also provides a seepage cut-off, which was identified as required through site investigations.

The design of the wall is then adaptable for a glass top barrier in front of residential properties and businesses, subject to securing additional funding, otherwise a full height flood wall will be designed.

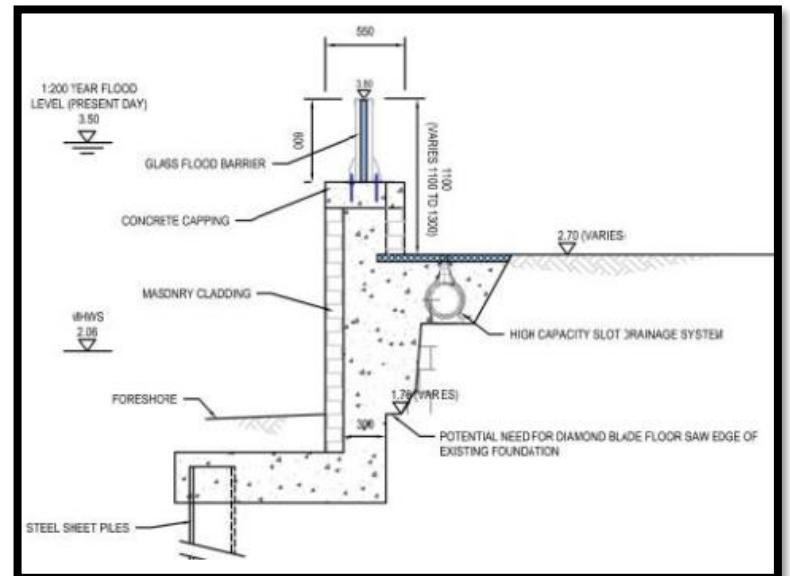


Image above shows new concept option with glass

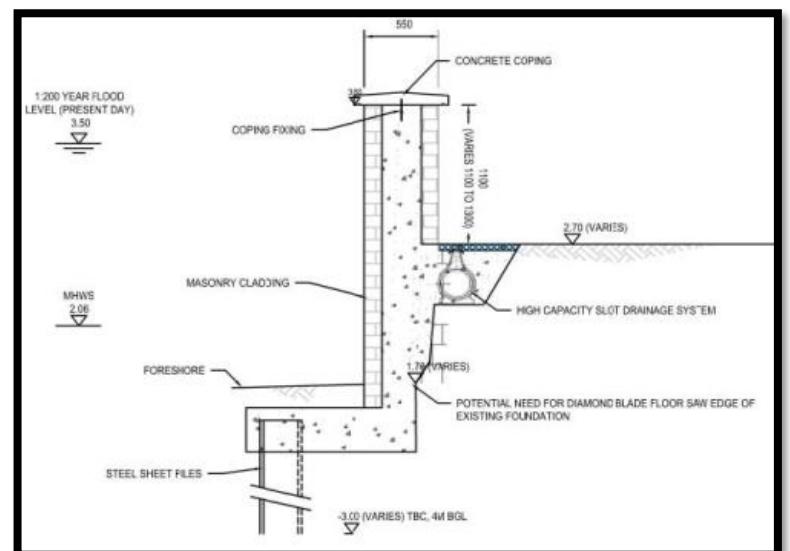


Image above shows new concept option without glass



Image of the Royal Oak and Cottages, Coastal Partners 2022

5] Langstone High Street

The design solution for the end of Langstone High Street remains unchanged and will consist of a flood gate across the high street. The type of gate will be determined during the detailed design process.

5] Footpath North of Royal Oak

We are working with the relevant landowners to progress the leading option for this frontage, which remains unchanged from a reinforced concrete floodwall along the footpath joining an earth embankment in the field to the north.