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## Progress in Detailed Design

AECOM Coastal Partners

**Activities have included :**

- Data Review
- Community Participation Evenings – Summer 2021
- Site Investigations (Ground, Structural and Ecological)
- Options Review
- Landowner Engagement
- Utilities Data
- Refined Design Solutions
- Commencement of Detailed Design

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## Progress in Detailed Design



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### Detailed design 0-50%

- Refinement of key characteristics – alignment, geometry, footprint and tie in principles.
- Geotechnical analysis for seepage, settlement and stability.
- Liaison with contractor and other specialists to confirm buildability.
- Liaison with utility providers regarding assets.
- Liaison with key stakeholders, including ‘frontline’ properties.
- Identification of landscape constraints and opportunities.
- Liaison with potential suppliers for finishes of cladding, flood glass and flood gates.
- 3D Model, updated General Arrangement, sections, artistic impressions

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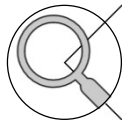
## Outcomes of Structural Investigation



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Investigations confirmed that we cannot rely on existing structures/walls



Existing walls would not provide necessary standard of protection



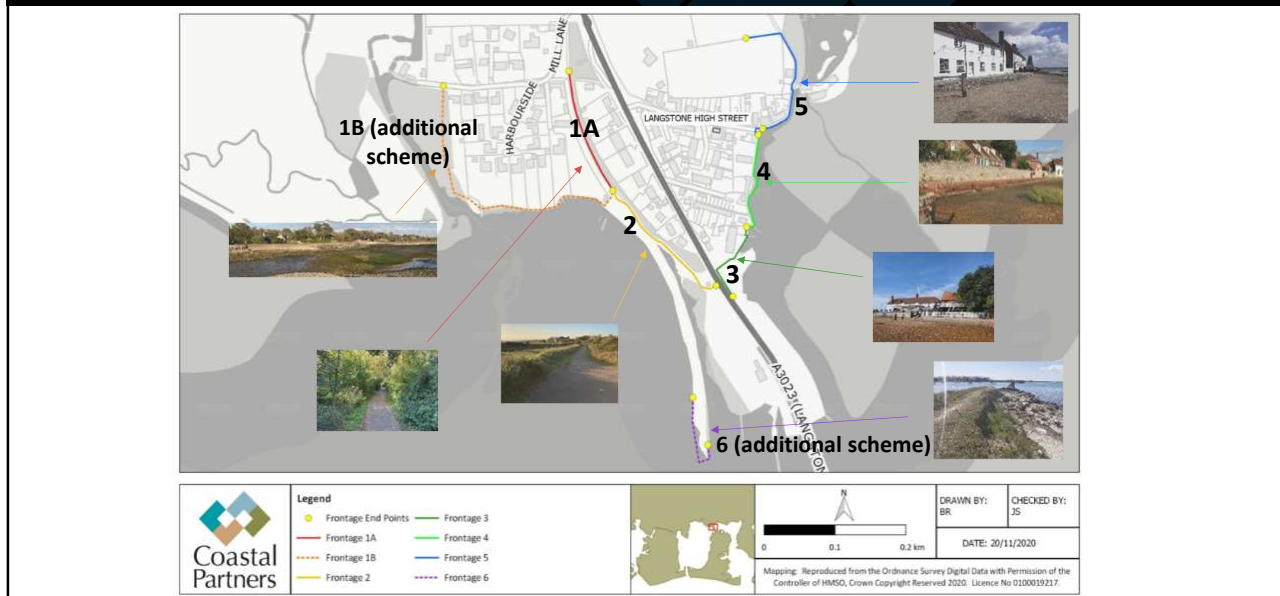
Existing walls cannot form part of the design of the new structures



Utilities and services locations identified

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## Frontages



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## 50% Design Run-through

**For each of the frontages, the following will be presented:**

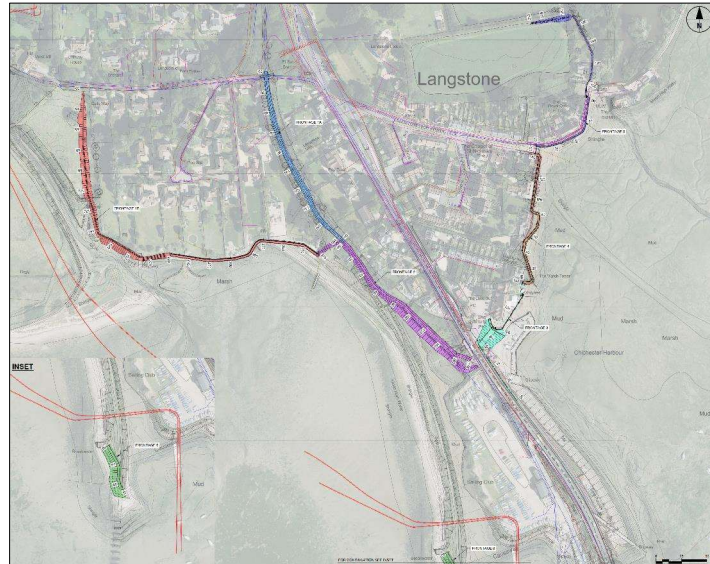
- An image which is representative of the frontage (Present Day)
- An overview of any design considerations and key constraints
- A map showing the alignment of the proposed design
- Cross sections of the proposed design and overview of solution proposed
- An artistic impression of the proposed design

**FRONTAGES HANDOUT – We'd like your feedback on each frontage**

**Any Questions? Note them down on the 'Frontages Handout'**

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## 50% Design



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## Progress in Detailed Design





## Further Influence from Stakeholders on the Design

Frontage/Area	Item	Design Influence
Frontage 3	Car park raising	Defence type changed from flip-up flood gate to car park raising, enabling a more passive defence
Frontage 4 and 5	Using existing building and garden walls as part of the defence.	Structural survey undergone to investigate incorporation into the defence.
Frontage 5	Views from the Royal Oak and Highstreet	Flood glass barrier incorporated into defence where seating outside the Royal Oak is.
Frontage 1B	Residual flood risk if only core scheme is implemented.	Design alignment updated to include a flood embankment that ties the Billy Line Defence in with the existing sea wall along Frontage 1B.

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## Progress in Detailed Design






### Aspects to be shaped by Stakeholders


Frontage/Area	Item	Design Influence
All Frontages	Wall Appearance	Finishes for each of the quay and flood walls.
All Frontages	Flood Gate Appearance	Finishes for each of the flood gates.
All Frontages	Landscaping	Wider landscaping opportunities or ecological improvements to the shoreline, e.g. coastal planting.
Frontage 4	Wall positioning	Steer on whether alternative option is worth pursuing.

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## Design by Frontage

### Core Scheme



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# Frontage 1A



## Billy Line North – Raised Embankment

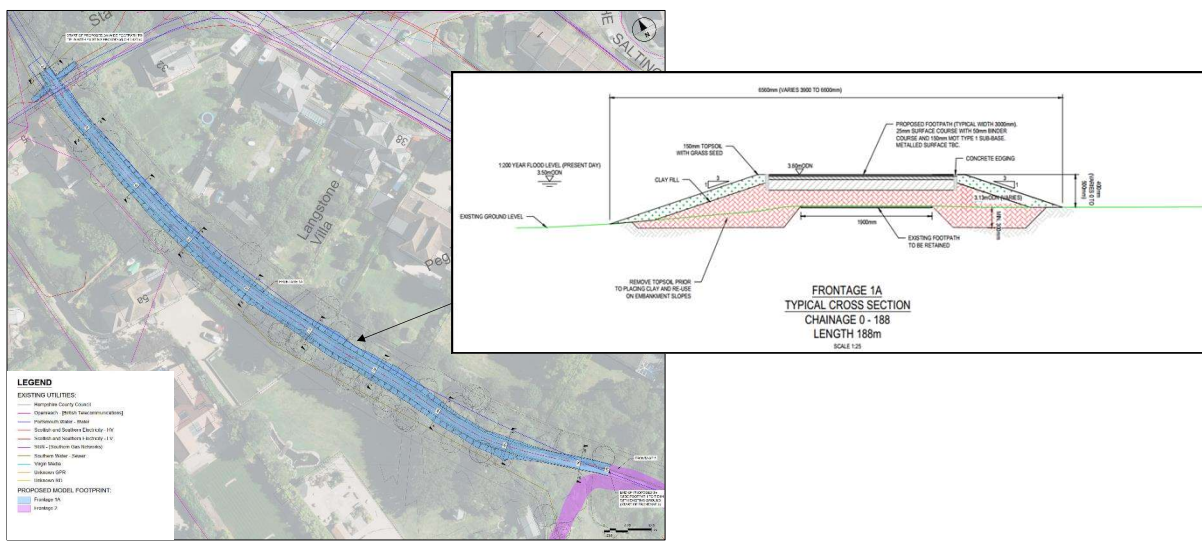


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# Frontage 1 A



## Billy Line North – Raised Embankment



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## Frontage 1 A



### Billy Line North – Raised Embankment



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## Frontage 2



### Billy Line South – Raised Embankment

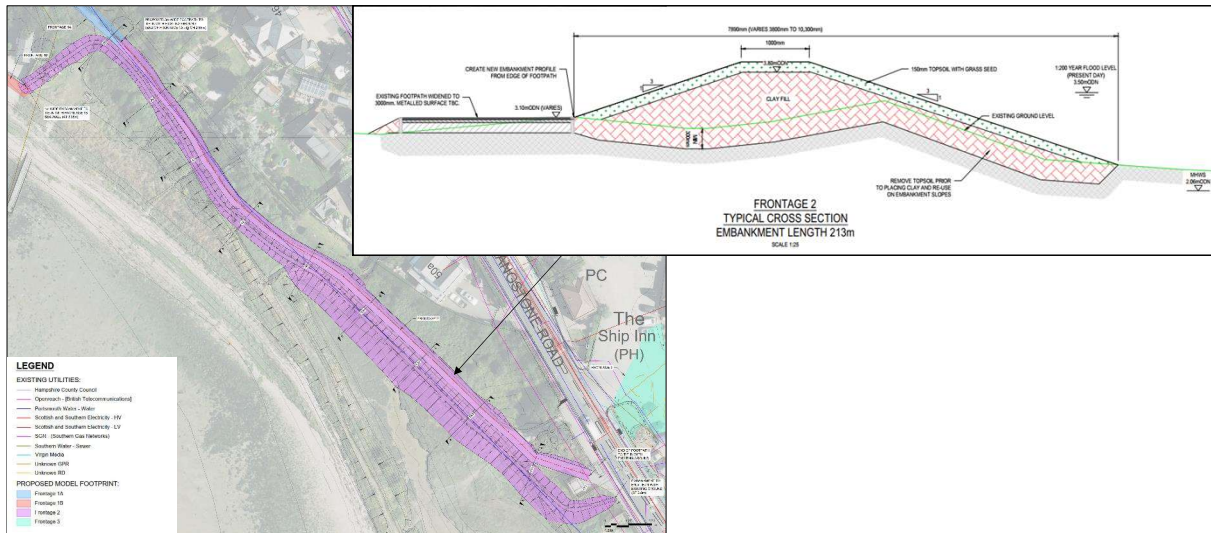


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# Frontage 2



## Billy Line South – Raised Embankment

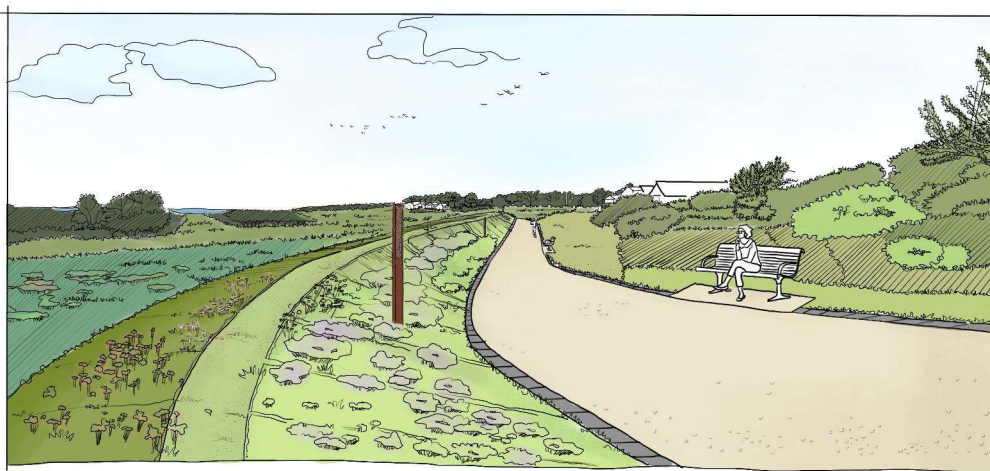


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# Frontage 2



## Billy Line South – Raised Embankment



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# Frontage 3



## Ship Inn Car Park – Raised Surface

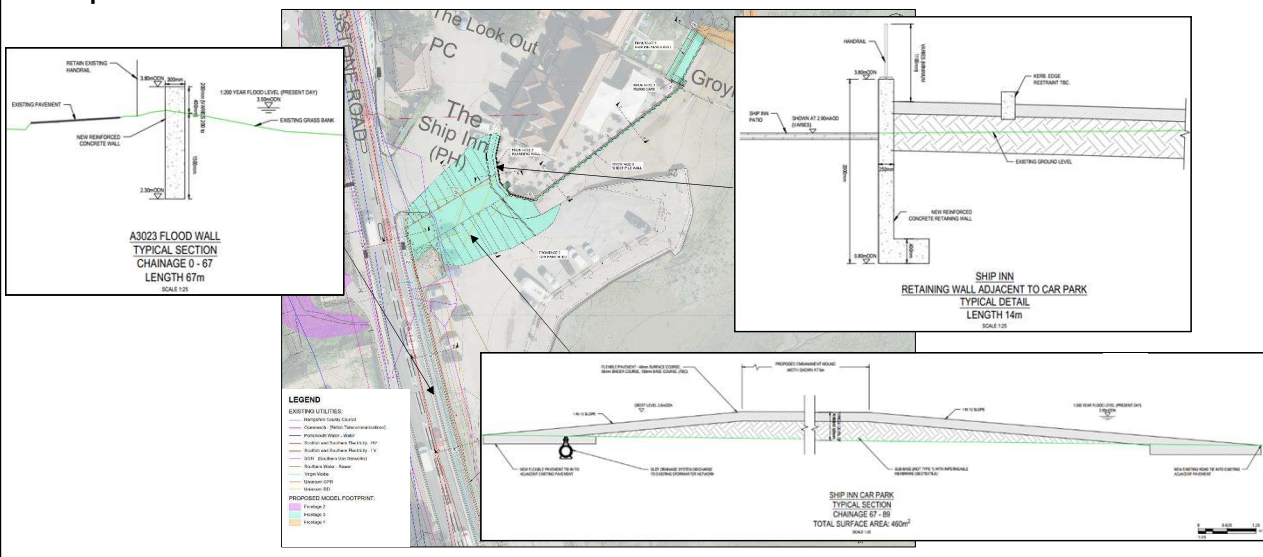


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# Frontage 3



## Ship Inn Car Park



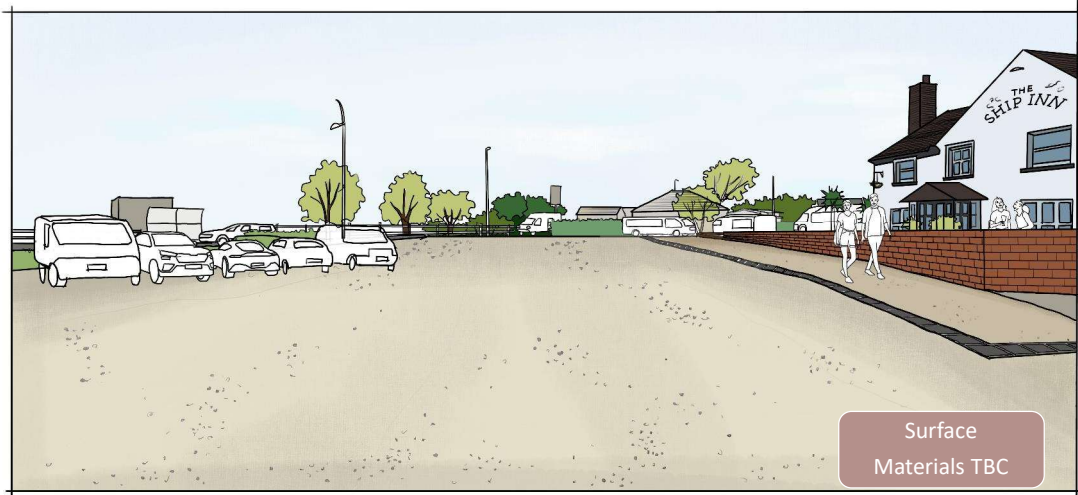
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# Frontage 3



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## Ship Inn Car Park



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# Frontage 3



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## Ship Inn



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## Frontage 4



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### Lookout and Green Cottage



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## Frontage 4



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### Flint Wall and Winklemarket

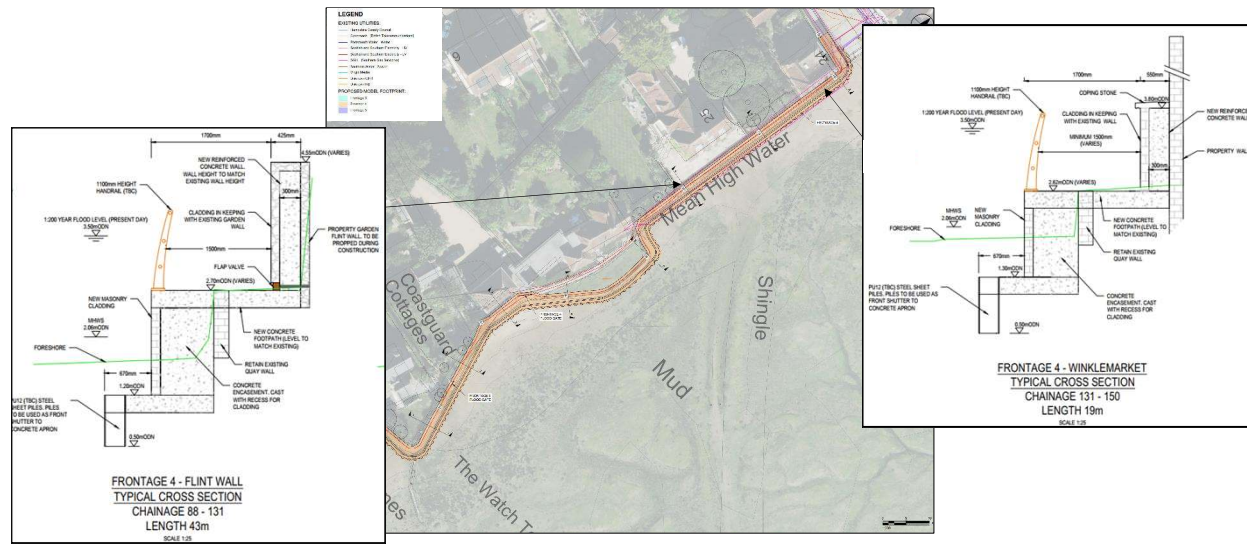


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# Frontage 4



## Flint Wall and Winklemarket



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# Frontage 4



## Flint Wall and Winklemarket



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# Frontage 5



## High Street

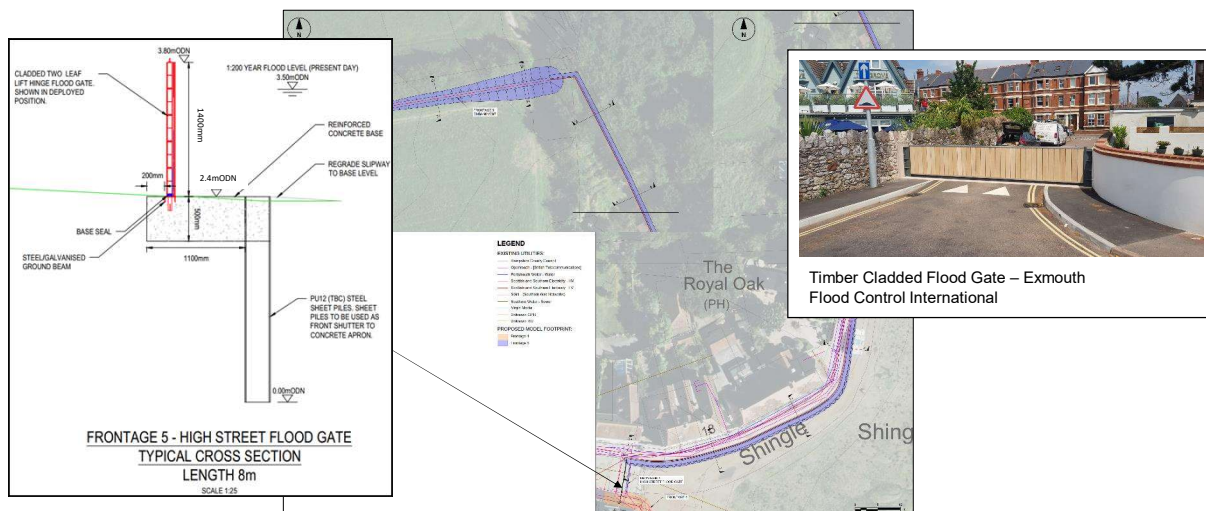


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# Frontage 5



## High Street



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High Street Gate		Placement	Gate Height	Advantages	Disadvantages
	Further Seaward	> 1.4m	<ul style="list-style-type: none"> <li>Slight reduction in defence length along each frontage.</li> </ul>	<ul style="list-style-type: none"> <li>Clashes with key utilities.</li> <li>Issues regarding storage, as flood wall curves.</li> <li>Deployment issues as more exposed.</li> </ul>	
	Current / Position	1.4m	<ul style="list-style-type: none"> <li>Avoids key utilities</li> <li>Defence length kept to a minimum.</li> <li>Ties in with end of Winklemarket building wall.</li> <li>Gate can be stored against the new quay wall.</li> <li>No impact on current street parking.</li> <li>No impact on driveways.</li> </ul>	<ul style="list-style-type: none"> <li>Potential for deployment issues as more exposed.</li> </ul>	
	Landward by 8.5 m	1.2m	<ul style="list-style-type: none"> <li>Slightly reduced visual impact.</li> <li>Ties in with end of Winklemarket garden wall and No 15 building wall - no impact on driveways.</li> </ul>	<ul style="list-style-type: none"> <li>Clashes with key utilities.</li> <li>Extension of walls by 8.5m.</li> </ul>	
	Landward by 22 m	1.0m	<ul style="list-style-type: none"> <li>Slightly reduced visual impact.</li> <li>Potentially easier to deploy as more sheltered.</li> </ul>	<ul style="list-style-type: none"> <li>Significant Wall extensions of 22m.</li> <li>Potential access issues for driveways along the Highstreet, or additional flood gates required across driveways.</li> <li>Reduced vehicle parking as no park zones will need to be introduced.</li> </ul>	



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# Frontage 5



## Royal Oak and High St Cottages

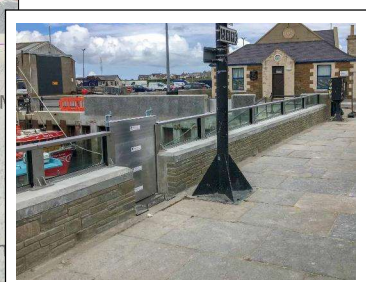
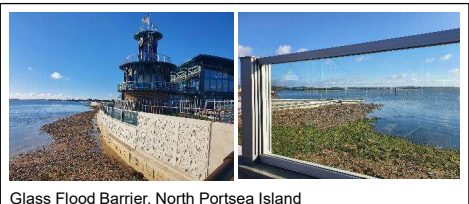
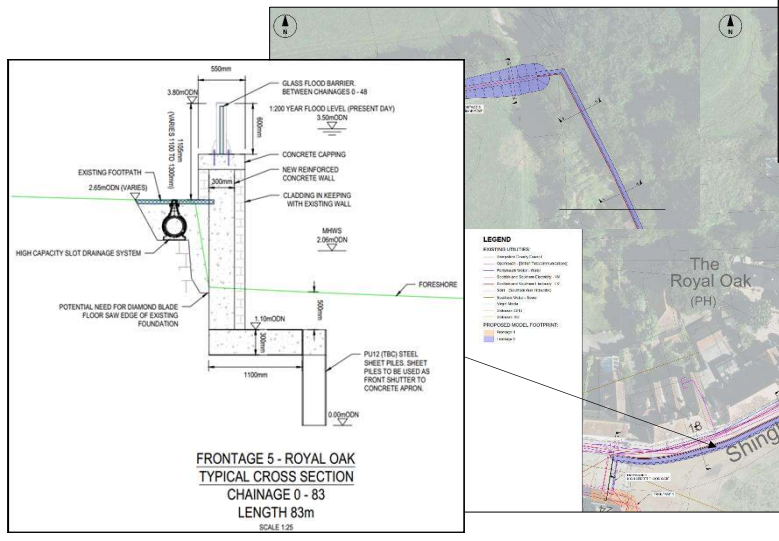


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# Frontage 5



## Royal Oak and High St Cottages



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# Frontage 5



## Royal Oak and High St Cottages



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# Frontage 5



## Allotment and No. 21 Langstone High St



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# Frontage 5



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## Footpath to the north of Royal Oak



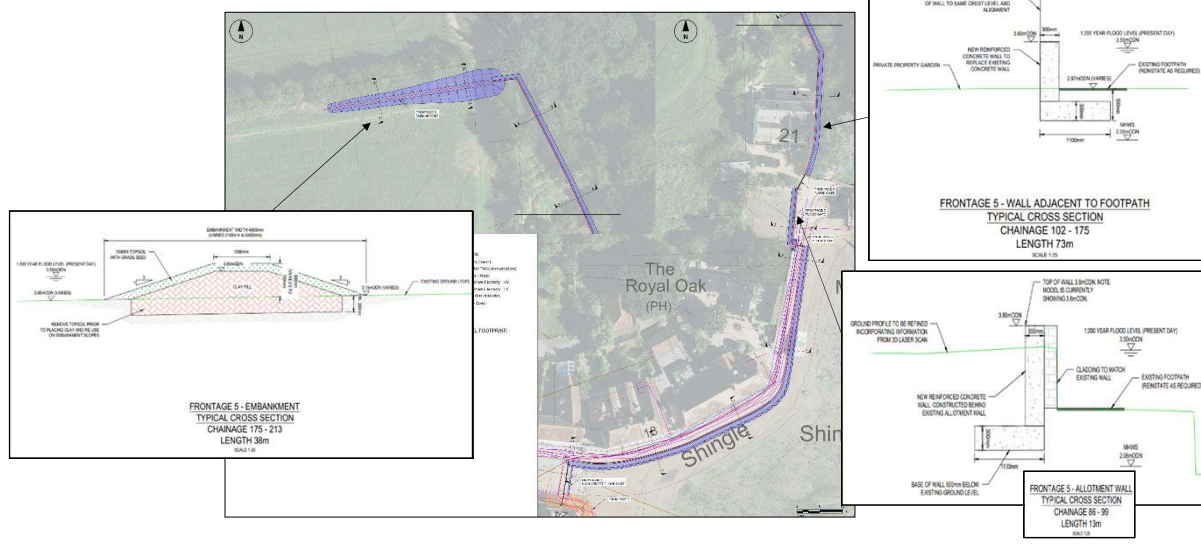
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# Frontage 5



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## Allotment and No. 21 Langstone High St

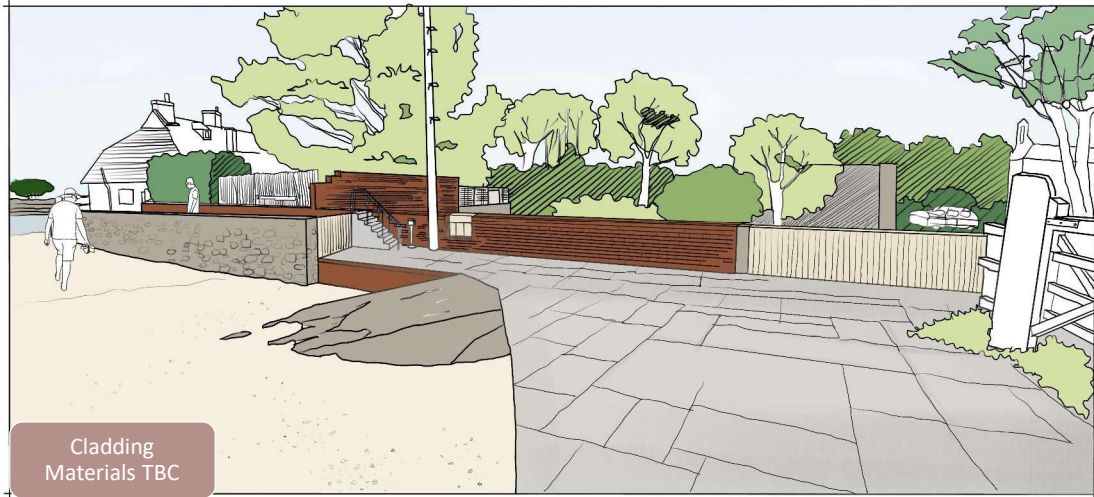


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# Frontage 5



## Allotment and No. 21 Langstone High St



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# Frontage 5



## Footpath to the north of Royal Oak



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# Design by Frontage



## Additional Scheme



Mill Lane Area


Langstone Spit

0 50 100 m


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# Frontage 1B



## Mill Lane and Harbourside



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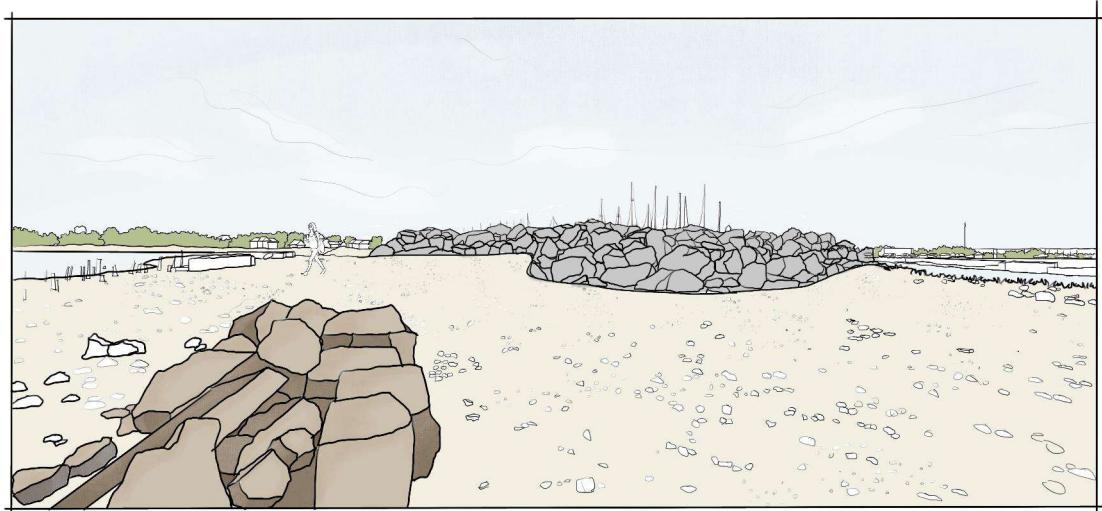




# Frontage 6



## Langstone Spit



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# 3D Model



3D Model in development to showcase the scheme.



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