



1

Core Scheme Funding

■ FDGiA ■ Other Sources

100% Funded



Value for Money	FDGiA (%)	Other Sources (%)
LOW	0	100
	20	80
	40	60
	60	40
	80	20
HIGH	90	10

How FCERM schemes are Funded

- Defra (Department for Environment, Food & Rural Affairs) has overall national responsibility for policy on Flood and Coastal Erosion Risk Management (FCERM) and provides funding (**Flood Defence Grant in Aid [FDGiA]**) for flood risk management authorities through grants to the Environment Agency and Local Authorities.
- In order to secure funds towards schemes they must demonstrate '**value for money**'.
- If schemes are not 'value for money' they must secure funding from other sources
- The Government has put in place a mechanism for funding Flood and Coastal Erosion Risk Management (FCERM) schemes called **Partnership Funding**.

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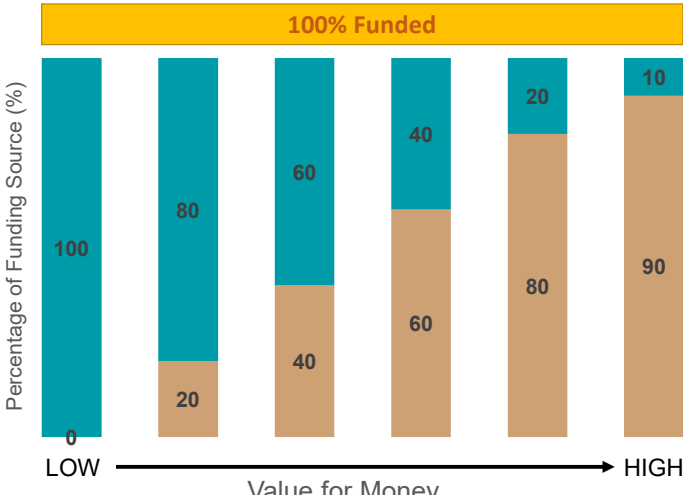
Core Scheme Funding

What is Partnership Funding?

- Where projects do not qualify for full government funding, **external funding contributions** can be sought to make up the shortfall.
- A scheme at Langstone is not guaranteed to attract full government funding, therefore we are actively working with the Council and external partners to explore opportunities to identify additional funding for the core scheme.
- The frontage at Mill Lane forms part of the 'additional scheme' due to the reduced number of properties in this area and relatively high cost, which reduces the 'value for money'. It therefore does not attract any public funding, and is reliant on other private sources of funding being secured.



■ FDGiA ■ Other Sources



Value for Money	FDGiA (%)	Other Sources (%)
LOW	0	100
Low-Mid	20	80
Mid	40	60
High-Mid	60	40
High	80	20
HIGH	90	10

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Investing in the Scheme

Closing the Funding Shortfall

How much do we need to contribute?

Contributions will be equivalent to the costs to construct a scheme for this frontage only, and will be confirmed at the 100% design milestone

When can we contribute?

This will be confirmed at the 100% design milestone once we are most confident with costings

How can we contribute?



We are currently seeking advice from our Legal Advisors as to how contributions can be secured and invested towards the scheme

Is it just us?

No, anyone can invest in a FCERM scheme. We will be inviting contributions towards the core scheme to help address the funding gap for the whole scheme

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Funding to Date



Coastal Partners

Funding Sources

- HBC Community Infrastructure Levy
- RFCC Local Levy
- FCERM Grant-in-Aid
- EA Other Government Department (OGD)
- Water Environment Investment Fund (WEIF)
- EA Covid Recovery Claim
- Hampshire County Council
- Endangered Landscapes Programme
- Environment Statutory Allowance
- Department for Education
- Highways England
- Commercial and Residential Contributions

Funding Contributions Summary	
Confidence	Value (£)
Committed	£6,114,486
High Confidence	£350,000
Medium Confidence	£344,000
Low Confidence	£500,000
Total (if all secured)	£7,308,486

Note: Bids have been submitted to the Department of Education, EA Environment Statutory Allowance and the Endangered Landscapes Programme for the Solent Seascape Restoration Landscape Project led by BLUE

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Construction Cost Estimates

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What's in the Construction Cost Build-Up?

Estimated construction costs for the Langstone FCERM scheme are presented showcasing the initial cost estimate undertaken by AECOM in 2020 which forms the baseline costing and the most recent cost estimate at the 50% Design in June 2022 by an independent cost consultant, Faithful & Gould.

These costs are not directly comparable with differing levels of information available at the time of estimating. The build-up of each estimate is shown below and the associated uplift % to allow for any uncertainties at the design stage.

2020 Estimate		2022 Estimate		
Build-up	Uplift %	Build-up	Uplift %	Example
Base Construction Cost	n/a	Base Construction Cost	n/a	£1,000,000
Waterside Working	30	Waterside Working	30	£300,000
Preliminaries	35	Preliminary Cost (based from Preliminary Cost Model)	n/a	£500,000
Contingency	60	Contractor Fees	8	£144,000
		Construction Contingency	30	£390,000
		Preliminaries Contingency	20	£100,000
		Inflation	17	£413,780
		Project Design, Management & Survey	20	£569,556
		Allowance for utilities & statutory authorities	n/a	£250,000
		Total		£3,667,336

Level of Information Available Increased

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Construction Costs Summary

	Whole Scheme		Core Scheme (F1A-5)		Additional Scheme (F1B & 6)	
	2020:	50% Design:	2020:	50% Design:	2020:	50% Design:
With Risk	£4,220,000	£13,996,257	£3,610,000	£10,659,942	£727,272	£5,133,592
	Maintenance: £545,000		Maintenance: £455,000		Maintenance: £90,000	

*with risk =

- For the 2020 estimate this includes for the base construction costs including 30% waterside working + 35% preliminaries and 60% contingency.
- For the 2022 estimate (50% design costs) this includes for a combination of base construction costs including 30% waterside working + preliminaries + 8% contractor fees + 30% base construction contingency + 20% preliminaries contingency + 17% inflation + 20% Project Design, Survey and Management Costs and a £250k allowance for utilities and statutory authorities.

Note: Whole Scheme is cheaper than Core + Additional as F1A would not be constructed and there is an efficiency with the Preliminary costs.

Cabinet 2020:

- Core Scheme:** range of £4.5-5.1 million including risk and appraisal costs
- Additional Scheme:** costs estimated at an extra £2 million

Why have costs increased since 2020?

- Changes in defence solution since Outline Design across all frontages following survey results, Early Contractor consultation and feedback from engagement with stakeholders and the community
- Greater understanding of construction method and access although uncertainties do remain at present; e.g. compound spaces, temporary diversions, access routes and construction programme
- Development of a Preliminaries costing model
- Inflation impacts following World and European events over the last 2 years resulting in current uncertainty in the market and rapidly increasing material prices and market rates; e.g. steel and clay

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Industry wide cost increases – May 2022 Coastal Partners

Market Volatility and Inflation - Unprecedented impact on UK construction and global supply chains.

- Ukraine conflict has had a dramatic and immediate impact on costs
- Covid pandemic continues to impact global supply chains
- Rapid upturn in UK construction fuelling high demands
- Volatility following Brexit continues

Last 12 month actuals:

- 15% increase on materials

12 month forecast:

- 8% further increase on materials

Concrete

- Energy prices significant factor in increased costs.
- Increase of 15% over last 12 months with prices continuing to rise.
- Precast concrete increased 25% in last 12 months.

Fuel / Energy
















- Red diesel banned in UK construction, fuel duty now applies. 50% cost impact.
- Ukraine conflict showing 35% increase in fuel.
- Wholesale Gas up 26% since Jan.
- Wholesale Electricity up 16% since Jan.

Steel

- Ukrainian mills closed
- Belarusian mills under sanctions
- Black Sea ports closed
- Oil and Gas costs driving reduced production to avoid peak energy costs
- Cost rise £300/t in last 10 days of Q1

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Industry wide material increases – May 2022 Coastal Partners

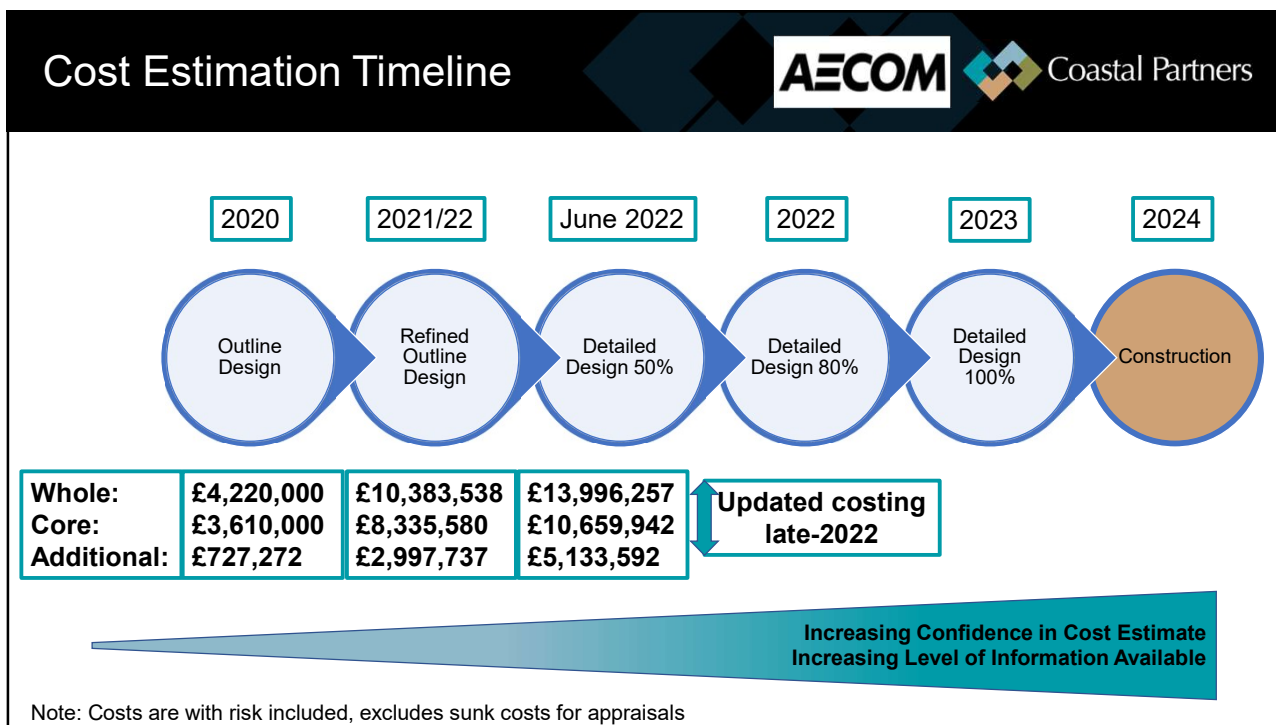
MATERIAL	Price Change	Current Movement 12 Months	Forecast Price Change	Forecast 12 Months - Trend	Availability / Concern	MATERIAL	Price Change	Current Movement 12 Months	Forecast Price Change	Forecast 12 Months - Trend	Availability / Concern
 AGGREGATES	12%	12%	12%	10%	10%	 STEEL SUPPLY	50%	50%	50%	2%	2%
 ASPHALT	10%	10%	10%	8%	8%	 TIMBER / BOARD	50%	50%	50%	5%	5%
 CEMENT, LIME & GGBS	25%	25%	25%	10%	10%	 SITE ACCOMMODATION	5%	5%	5%	5%	5%
 CONCRETE	15%	15%	15%	10%	10%	 PLANT HIRE	8%	8%	8%	5%	5%
 DIESEL / GAS OIL	16% / 54%	16% / 54%	16% / 54%	5%	5%	 PLANT SALES	5%	5%	5%	5%	5%
 DRAINAGE	15%	15%	15%	15%	15%	 PRECAST CONCRETE	25%	25%	25%	10%	10%
 LIGHTING / ELECTRICAL	5%	5%	5%	5%	5%	 RAIL MATERIALS- GENERAL OVERVIEW	10%	10%	10%	10%	10%
 REBAR & MESH	40%	40%	40%	5%	5%						

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Industry wide trade increases – May 2022



TRADE	PRICE CHANGE	CURRENT MOVEMENT 12 MTH	FORECAST PRICE CHANGE	Forecast Next 12 Months - Trend / CONCERN	AVAILABILITY / CONCERN	TRADE	PRICE CHANGE	CURRENT MOVEMENT 12 MTH	FORECAST PRICE CHANGE	FORECAST NEXT 12 MONTHS	AVAILABILITY / CONCERN
AGLE ELECTRICAL	Yellow	5%	Red	10%	Yellow	LABOUR / AGENCY BLUE COLLAR	Red	10%	Yellow	7%	Red
CLADDING	Red	75%	Green	-5%	Red	LABOUR / AGENCY WHITE COLLAR	Red	10%	Yellow	5%	Yellow
FENCING	Red	20%	Yellow	5%	Yellow	M&E	Red	15%	Yellow	8%	Yellow
FIT OUT / FINISHING TRADES	Yellow	5%	Yellow	5%	Yellow	SHIPPING	Red	500%	Green	4%	Yellow
HEAVY CIVILS inc. DRAINAGE EWKS, FRC	Red	10%	Red	20%	Green	STEEL FABRICATION CIVILS	Red	30%	Red	10%	Yellow
INDUSTRIAL DOORS	Green	2%	Yellow	5%	Yellow	STEEL FRAMES WAREHOUSING	Red	45%	Red	10%	Yellow

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How can we increase cost certainty?

Future cost estimates will consider:

- ✓ The **latest design outputs** as these are refined at the 80% and 100% design completion stages
- ✓ Ongoing **advice from Early Contractor Engagement**
- ✓ Any **efficiencies** that are identified in relation to construction methods and sequencing – construction programme
- ✓ Challenges of gaining **safe access** within the coastal area, foreshore and narrow access areas
- ✓ **Impacts of World and European events** where these still remain
- ✓ **Material costs** for high price items such as steel and clay
- ✓ Levels of **Risk contingency**
- ✓ Tendered prices for Construction

Updated Cost Estimates Provided:

June 2022

- 50% Design

2022

- 80% Design

2023

- 100% Design



2024

- Construction

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Core Scheme – Frontage 1A

Billy Line

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£57,250	Base Construction Cost	£215,282
Waterside Working (30%)	n/a	Preliminary Cost*	n/a
Preliminaries (35%)	£20,038	Waterside Working	n/a
Contingency (60%)	£46,373	Total**	£215,282
Total	£123,661	<small>*£2,069,127 total prelims for the whole scheme. ** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.</small>	

Design Changes:

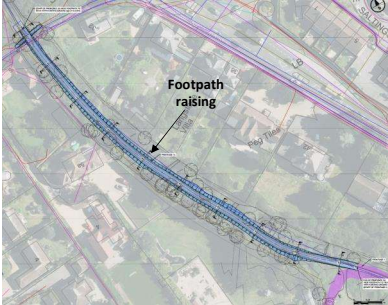
- Raised footpath length increased from 170 to 183m; upon receipt of topographic data.
- Footpath width increased from 1.9m to 3m to conform with new LTN 1/20 guidance.

Cost Increase:

- Additional disposal of excavated material off site
- Increased allowance for landscaping
- Increase in quantity and rate of clay material



Risks/ Uncertainties:

- Utilities; Portsmouth Water potable water pipe (main supply to Hayling Island) and Southern Water surface run-off pipe
- Densely vegetated area; limits height of plant and potential for extensive root systems
- Close proximity to residential buildings and gardens
- Diversion of Public Right of Way required

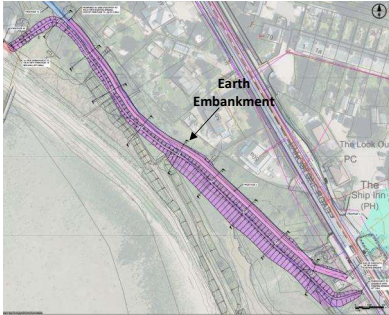


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Core Scheme – Frontage 2 Billy Line Earth Embankment

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£37,150	Base Construction Cost	£271,833
Waterside Working (30%)	n/a	Preliminary Cost*	n/a
Preliminaries (35%)	£13,003	Waterside Working (15%)	£40,775
Contingency (60%)	£30,092	Total**	£312,608
Total	£80,245		



Risks/ Uncertainties:

- Current design indicates foreshore encroachment
- Utilities; Portsmouth Water potable water pipe (main supply to Hayling Island) and Southern Water surface run-off pipe
- Close proximity to residential buildings and gardens
- Diversion of Public Right of Way required

Design Changes:

- Frontage length increased from 118 to 172m incorporating widening and resurfacing of the footpath to tie-in with Frontage 1A



Cost Increase:

- Additional disposal of excavated material off site
- Increase in quantity and rate of clay material
- Inclusion of waterside working for construction of embankment

*£2,069,127 total prelims for the whole scheme.
** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.

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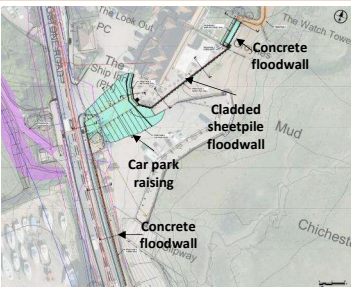
Core Scheme – Frontage 3 Ship Inn Concrete Apron

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£341,000	Base Construction Cost	£587,861
Waterside Working (30%)	£39,300	Preliminary Cost*	n/a
Preliminaries (35%)	£133,105	Waterside Working (30%)	TBC
Contingency (60%)	£308,043	Total **	TBC
Total	£821,448		

Risks/ Uncertainties:

- Car Park frequently used
- Adjacent to main A3023
- Medium pressure gas main in the grassed area in the car park
- Potential for flooding of working area during an extreme event
- Buried obstructions when piling
- Instability of Ship Inn Patio when removing existing wall



Design Changes:

- Change in defence solution in the Car Park from a flip-up flood barrier to car park raising with a retaining wall.
- Change in defence solution and increase in length at the Ship Inn from a reinforced concrete flood wall with glass top to a sheetpile wall with suitable cladding following structural investigations.
- Seepage cut-off requirement following seepage analysis introduced additional sheetpiles at the Ship Inn Annexe.

Cost Increase:



- Increase in quantities of excavation, breaking out, reinforced concrete, sheet piles and handrails.
- Significant increase in market rates particularly for steel.
- Small reduction in sheet pile length following investigations.

*£2,069,127 total prelims for the whole scheme.
** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.

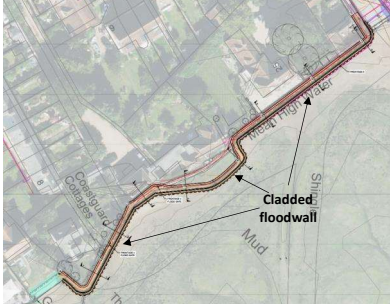
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Core Scheme – Frontage 4

Watchtower – Winklemarket (incl. Flood Gate)

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£393,000	Base Construction Cost	£992,967
Waterside Working (30%)	£104,400	Preliminary Cost*	n/a
Preliminaries (35%)	£174,090	Waterside Working	£297,890
Contingency (60%)	£402,894	Total**	£1,290,857
Total	£1,074,384	*£2,069,127 total prelims for the whole scheme. ** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.	



Risks/ Uncertainties:

- Tidal working; temporary works required to protect from tidal damage
- Buried obstructions when piling
- Landward access restricted
- Stability of existing walls and properties
- Utilities under the existing footpath
- Levels of foreshore encroachment
- Landowner objection

Design Changes:

- Extension of reinforced concrete floodwall seaward of the Winklemarket following structural investigations.
- Removal of the timber boardwalk following strong community opposition and assessment of future maintenance. Replaced with a min. 1.5m wide cladded concrete wall.
- Seepage cut-off requirement following seepage analysis introduced additional sheetpiles across the high street.



Cost Increase:

- Mainly driven by inclusion of a piling mat at c.£140k, general drainage allowance at c.£25k and a landscaping allowance at c.£20k.
- Increase in quantities of excavation, disposal, cladding and concrete encasement.

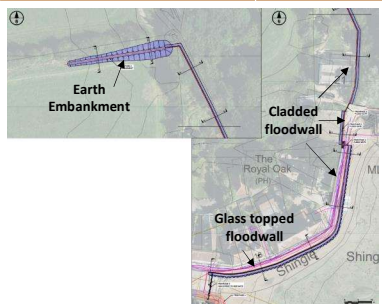
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Core Scheme – Frontage 5

Langstone High Street - Embankment

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£570,000	Base Construction Cost	£808,300
Waterside Working (30%)	£127,800	Preliminary Cost*	n/a
Preliminaries (35%)	£244,230	Waterside Working	£238,719
Contingency (60%)	£565,218	Total**	£1,047,019
Total	£1,507,248	*£2,069,127 total prelims for the whole scheme. ** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.	



Risks/ Uncertainties:

- Tidal working; temporary works required to protect from tidal damage
- Buried obstructions when piling
- Utilities under the existing footpath
- Stability of existing buildings
- Residential access required
- Narrow construction space with dense vegetation adjacent

Design Changes:



- Change in defence solution with removal of the king post wall/ crest raising replaced with a reinforced concrete floodwall and sheetpile apron, topped with flood glass following structural investigations and community feedback.
- Slight increase in frontage length by 6m.
- Seepage cut-off requirement following seepage analysis.

Cost Increase:

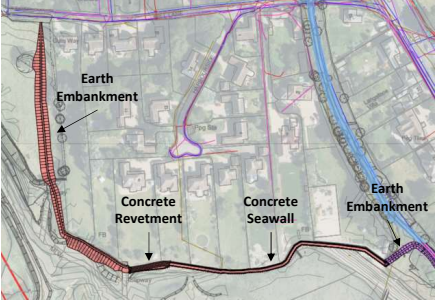
- Increase in quantities of excavation and reinforced concrete
- Introduction of flood glass
- Reduction in sheetpile length following investigations

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Additional Scheme – Frontage 1B Mill Lane and Harborside

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£225,000	Base Construction Cost	£864,001
Waterside Working (30%)	£51,900	Preliminary Cost*	n/a
Preliminaries (35%)	£96,915	Waterside Working	£259,200
Contingency (60%)	£224,289	Total**	£1,123,201
Total	£598,104	*£2,069,127 total prelims for the whole scheme. For the additional scheme preliminaries are at 50% of the base construction cost. ** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage. Note: May 22 figures estimated at £822k; circa. £2.55m with risks.	



Design Changes:

- Embankment length increased from 110 to 225m; upon receipt of topographic data and wave run-up calculations.
- Seawall refurbishment length increased from 105 to 156m. following condition assessment

Cost Increase:



- Increase in quantity of materials, landscape clearance, quantity of making good to the existing seawall and quantity of reinforced concrete to the new wall and apron.
- Clay material rate has increased.

Risks/ Uncertainties:

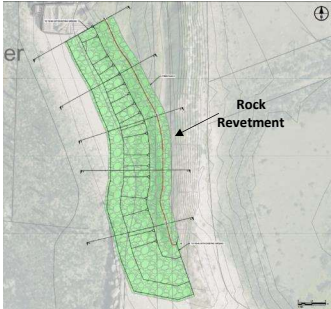
- Scheme price unaffordable to community
- Difficult access along a soft designated foreshore; type of plant may be limited
- Tidal working; temporary works required to protect from tidal damage
- Pile length in 2022 estimation was 2.3m, likely to increase to 8m; risk of buried obstructions in foreshore

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Additional Scheme – Frontage 6 Langstone Spit

2020 Estimate		2022 Estimate	
Build-up	Cost (£)	Build-up	Cost (£)
Base Construction Cost	£46,000	Base Construction Cost	£460,577
Waterside Working (30%)	£13,800	Preliminary Cost*	n/a
Preliminaries (35%)	£20,930	Waterside Working	£138,173
Contingency (60%)	£48,438	Total**	£598,751
Total	£129,168	*£2,069,127 total prelims for the whole scheme. For the additional scheme preliminaries are at 50% of the base construction cost. ** Contractor fee, contingencies, inflation, project design costs and utility allowance not available per frontage.	



Design Changes:

- Revetment length increased from 50 to 52m
- Design has significantly changed following ECI advice and wave parameter calculations with extensive foreshore excavation, two layers of 60-300kg secondary rock and two layers of 1-3t primary rock armour.
- Section size from landward to seaward edge has increased significantly.

Risks/ Uncertainties:

- Tidal working; temporary works required to protect from tidal damage
- Difficult access along protected foreshore
- Levels of foreshore encroachment

Cost Increase:

- Significant increase in amount of materials. Rock armour quantity has increased from c. 315m3 to 1,350m3.

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Whole Scheme - Preliminaries

<p>What are they?</p> <ul style="list-style-type: none"> <u>Time-related on site costs</u>; e.g. site team staff, labourers, plant maintenance, site offices and welfare facilities, service charges, survey equipment <u>Non time-related on site costs</u>; e.g. site establishment – water, electricity, waste, security, ecological & environmental monitoring/ protection <u>Temporary Works for compounds</u>; e.g. fencing, diversions, service protection, haul road <u>Plant</u> associated with main compound and satellite compounds; ‘General Purpose Plant’ 	Preliminaries			<p>How can we increase certainty?</p> <ul style="list-style-type: none"> Continue discussions with the ECI Contractor who is providing advice and recommendations on both construction programme and site set-up Continue to liaise with landowners Confirm optimal construction programme, duration and site set-up
	Scheme	How have they been estimated?	Cost (£)	
	Whole	Preliminary Cost Model	£2,069,127	
	Core	Preliminary Cost Model	£2,069,127	
Additional	50% of the Base Construction Cost	£860,976		
	<p>How have they been estimated?</p> <ul style="list-style-type: none"> A preliminary cost model has been developed using rates for reference projects Based on an anticipated construction programme of 2 years (April-September 2024 & April-September 2025) working around the Over-Wintering Bird Period Based on an outline (not confirmed) site set-up. 			
	<p>What can influence them?</p> <ul style="list-style-type: none"> Construction Programme & Duration Site set-up (compound(s) and access routes) Market rates 			

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Next Steps

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Meeting Outcomes



Coastal Partners

After this LSWG, the following outcomes are due:

- Coastal Partners will prepare and circulate meeting minutes and set out any actions
- Include a summary of the feedback received in the breakout sessions including Q&A
- AECOM will take forward the breakout session feedback and incorporate into design where appropriate
- The project webpages will be updated to include the presentation slides and meeting minutes so that these can be shared widely by LSWG members

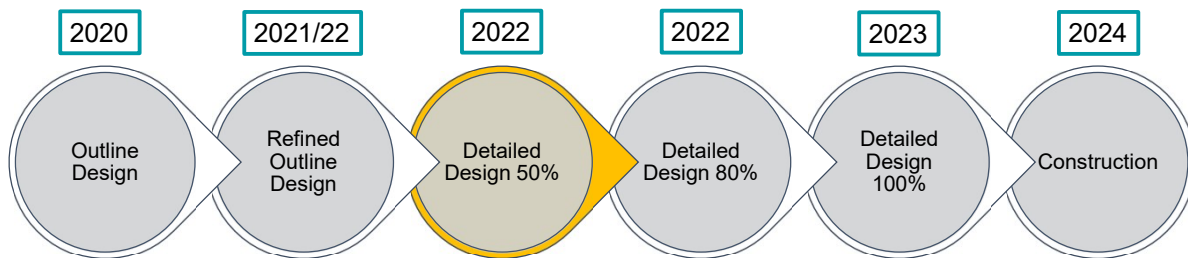


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Programme Ahead




Coastal Partners




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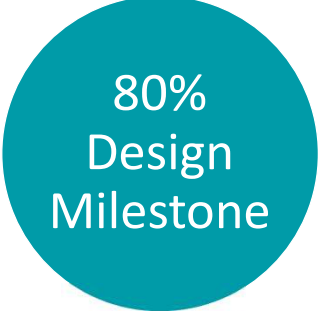
Engagement Ahead – All Frontages   Coastal Partners




**50%
Design
Milestone**




**Langstone Stakeholder
Working Group 2
Summer 2022**




**80%
Design
Milestone**



**Langstone Stakeholder
Working Group 3
& Public Exhibition
Autumn 2022**



**100%
Design
Milestone**



**Cabinet Meeting
Planning Application
2023**

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Wider Community Engagement   Coastal Partners

Engagement with our Community and Stakeholders

Engagement Channels	
Stakeholder Working Group	<p>We expect to involve our stakeholders, the community and individuals in these ways for the Design:</p> <ul style="list-style-type: none"> ✦ To raise awareness of the progression of detailed design ✦ Shape the appearance of the new structures ✦ Individual meetings with land and property owners that are directly impacted by the design. ✦ Work to encourage private contributions to close the funding shortfall ✦ Collecting feedback and making refinements for preparation the design approval and preparation of the planning application ✦ Consideration for emergency access ✦ Operation and community flood planning
Statutory Consultees	
Public exhibitions	
One to One meetings	
Timed individual communication	
Workshops	
Scheme visualisations	
Presentations	
Opinion gathering consultations	
Website updates	
Occasional Newsletter	

Community
Engagement for
Detailed Design

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Any Outstanding Business

AECOM Coastal Partners




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Find out more


AECOM Coastal Partners

Looking for more information?


Visit our Project Webpages:
<https://coastalpartners.org.uk/project/langstone-coastal-defence-scheme>



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