# Hook Lake Coastal Management Study

Shortlist Public Exhibition Report

12<sup>th</sup> & 13<sup>th</sup> July 2022







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### 1 Introduction

Coastal Partners (CP) on behalf of Fareham Borough Council (FBC) are working in partnership with Hampshire County Council, the Environment Agency and other Key Stakeholders to deliver the Hook Lake Coastal Management Study.

The professional engineering consultancy 'Binnies' have also been enlisted to help develop the study, which is likely to run for two years from April 2021 until Autumn 2023.

The study aims to better understand the Hook Lake site, explore the potential for creating new intertidal habitats, identify wider recreation opportunities and develop preliminary designs for a habitat creation scheme. The study will also identify how the potential benefits can be maximised for both local people and wildlife.

This report summarises the two initial public information events held to present the shortlisted coastal management options for Hook Lake to the local community. A summary of the feedback received from the attendees, both at the events and via returned questionnaires, is also included.

Prior to the events, working together with Binnies, the project team appraised a longlist of potential coastal management options and reduced these down to a shortlist of options. The shortlisted options, as presented at the events, will be appraised in more detail by the project team, to identify a leading way to create habitat at Hook Lake. There will be a second public information event at a later stage of the Study.

### 2 Exhibition Events

### 2.1 Overview

Two public events were held on Tuesday  $12^{th}$  and Wednesday  $13^{th}$  of July 2022 at the Warsash Victory Hall. The first was held from 4pm - 7pm and the second was held from 1pm - 4pm. The aim of the events was to present the shortlisted options to the public to allow better understanding of the Study, provide an opportunity for the community to speak to the project team and to share their views on the shortlisted options being put forward.

The Warsash Victory Hall was selected due to its close proximity to residents and the Hook Lake site, as well as being easily accessible for visitors. In total, 79 people attended the events across the two days.

Questionnaires were handed out at each event and were also made available online on the CP <u>Hook Lake Coastal Management Study webpage</u>, to gather feedback from the exhibitions and on understanding of the project itself. Details of these can be found in section 3 of this report.

### 2.2 Advertising & Publicity

### News promotion

Prior to the exhibitions, FBC issued a <u>press release</u> advertising the events, published 16<sup>th</sup> June 2022 and shown in Figure 1 below. The press release provided an update on the Study's progress, selection of the shortlisted coastal management approaches and gave details of the upcoming exhibition events and how to join them. The press release also





directed readers to the <u>Hook Lake Coastal Management Study webpage</u> on the CP website for more information and an online copy of the exhibition posters.

The press release was shared by FBC's Facebook page on 16<sup>th</sup> June.

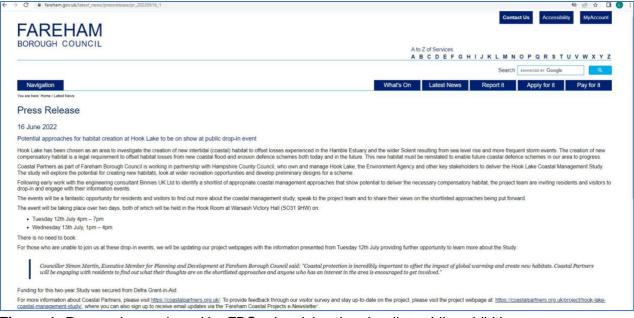


Figure 1: Press release shared by FBC advertising the shortlist public exhibitions

### Social Media

On 7<sup>th</sup> July 2022, Coastal Partners' Twitter page tweeted details of the upcoming exhibitions, with a link to the project webpage. FBC's Twitter account was also tagged into the tweet. This is shown in Figure 2.



Coastal Partners @CoastalP\_UK

We are holding drop-in events next week about the creation of new habitat for plants and animals at Hook Lake in Fareham. More info here - bit.ly/3uwsCWD

#fareham #hooklake #intertidal #ecosystem #habitat #fbc #nature #environment #ClimateAction



Figure 2: Details of the exhibition events tweeted by Coastal Partners' Twitter account

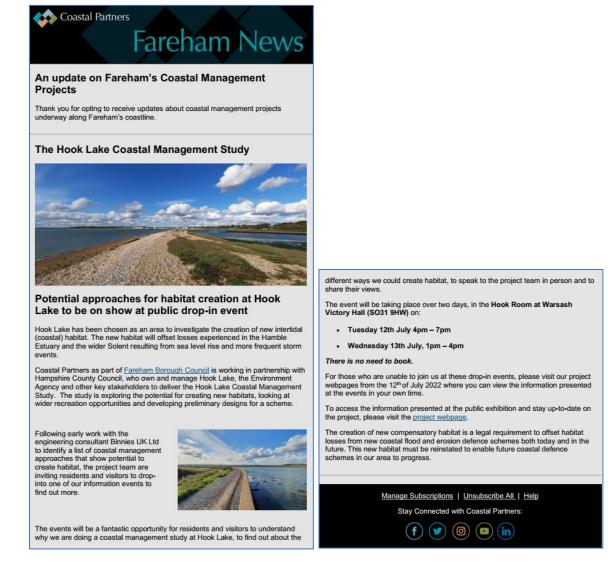
10:54 am · 7 Jul 2022 · Twitter Web App

#### e-Newsletter

On 4<sup>th</sup> July 2022, notice of the exhibitions was sent through Coastal Partners' 'Fareham Coastal Projects' e-newsletter to its over 2,200 subscribers, outlining their purpose and how to attend. This is shown in Figure 3.







### Figure 3: Coastal Partners Fareham Projects eNewsletter update

#### Website

The <u>Hook Lake Coastal Management Study project webpage</u> on the CP website was updated prior to the exhibition events.

An update to the <u>main project webpage</u> was published on 7<sup>th</sup> July 2022, advising of selection of the shortlisted coastal management approaches and providing details of the upcoming public exhibition events and how to join them.

In addition, the <u>project webpage FAQ</u> section was updated on 7<sup>th</sup> July 2022, in anticipation of key questions likely to be raised by the community. A print version of these updated FAQs was also prepared and on-hand at the exhibition events for visitors to refer to and take away.

Furthermore, on 5<sup>th</sup> July 2022, a <u>news advertisement</u> was published on the CP website, announcing details of the exhibitions and signposting readers to the main project webpage for more details.

Finally, a link to both the online exhibition questionnaire and <u>PDF copy of the exhibition poster</u> booklet was added to the main project webpage on 12<sup>th</sup> July 2022.





#### Local Advertisements

To help spread further awareness of the public exhibition events, A3 laminated posters were temporarily attached to 5 key locations around the Hook Lake site, with details of the exhibitions and how to attend them. The locations of these are shown in Figure 4 below. The posters utilised a QR code to direct visitors to the project webpage for more information on the Study and to the online questionnaire and PDF copy of the exhibition posters.



Figure 4: Map of poster locations on site at Hook Lake

The posters displayed on site can be seen in Figures 5 & 6.

### Hook Lake Coastal Management Study

### Invitation to Drop-in Events

#### Summary

Coastal

Partners

Coastal Partners as part of Fareham Borough Council is working in partnership with Hampshire County Council, who own and manage the Hook Lake with Warsash Nature Reserve, the Environment Agency and other key stakeholders to deliver the Hook Lake Coastal Management Study.

The study is exploring the potential for creating new intertidal habitats, looking at wider recreation opportunities and developing preliminary designs for a scheme.

Following early work with the engineering consultant Binnies UK Ltd to identify a list of coastal management approaches that show potential to create habitat, the project team are inviting residents are visitors to drop-into one of our information events to find out more. and

The events will be a fantastic opportunity for residents and visitors to understand why we are doing a coastal management study at Hook Lake, to find out about the different ways we could create habitat, speak to the project team in person and to share views.

The drop-in event will be taking place over two days, in the Hook Room at Warsash Victory Hall (SO31 9HW) on

Tuesday 12th July 4pm – 7pm Wednesday 13th July, 1pm – 4pm

There is no need to book.

For those who are unable to join us at these drop-in events, please visit our project webpages from the 12th of July 2022 where you can view the information presented at the events in your own time.



Figure 5: Poster displayed on site at Hook Lake







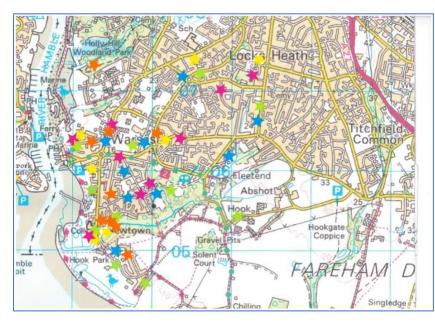
Figure 6: Example of one of the locations temporarily displaying the posters

### 2.3 Event Attendance and Content

### 2.3.1 Attendance

In total, 79 people attended the information events, with 40 of these attending the first exhibition on Tuesday 12<sup>th</sup> July 4-7pm and 39 people attending the event on Wednesday 13<sup>th</sup> July 1-4pm. The event on Tuesday 12<sup>th</sup> July was well-attended from 4-6pm, however visitor numbers tailed off after this. Attendance at the event on Wednesday 13<sup>th</sup> July was relatively even from start to finish.

An A3-sized map of Hook Lake and the surrounding area was displayed at the entrance to the exhibition events, with stickers for visitors to mark their location on to help gauge whether visitors were local to the site. The results of this are shown in Figure 7.



As shown in Figure 7, most visitors to the events were concentrated in Warsash in proximity of the Hook Lake Coastal Management Study project area, with some travelling from further afield in Locks Heath and areas not shown on the map, closer to Southampton.

**Figure 7:** Map from the exhibition events showing visitor locations





### 2.3.2 Event Content

The information on display at the events explained why the Study is needed, its considerations and constraints, work undertaken so far and the shortlisted coastal management approaches for each area, through a series of poster boards detailing:

- **Hook Lake Today** highlighting the key features of the Study area, its environment and facts on local heritage.
- **The Challenges** outlining the main challenges impacting the site, including climate change, habitat loss and coastal squeeze, increased storm events and ageing coastal defences.
- **Creating Intertidal Habitat** explaining what intertidal habitats are, their importance and the ecosystem services provided by them.
- Other Wider Opportunities demonstrating other investment opportunities to be explored throughout the Study, subject to securing additional funding, relating to recreation, health and wellbeing and environmental improvements.
- How Will We Create the Habitat? Showing the four shortlisted coastal management approaches shortlisted for the Study.
- What Could a Scheme Look Like? Showing case studies of other completed habitat creation schemes within the Solent, featuring QR codes for more information on each site.
- The Hook Lake Coastal Management Study showcasing the timeline of events that led to the Study's development, its strategic background and the approximate timescale to project completion.
- Who Is Involved? Outlining the project team, key partners, Project Steering Group and community involvement.
- What Happens Next detailing key stages of the project going forwards.

Each of the posters displayed at the event are included within Appendix A of this report.

Paper copies of the latest 'Frequently Asked Questions' were also available for attendees to take away. These have also been updated on the project webpages at <a href="https://coastalpartners.org.uk/hook-lake-fag/">https://coastalpartners.org.uk/hook-lake-fag/</a>

### 3 Survey Results, Event Feedback & Lessons Learnt

### 3.1 Survey Responses

In total, 27 consultation responses were received, 15 of which were completed online and 12 were paper copies completed at the event or sent via post afterwards. Some questions were optional and were not answered by every respondent.

It is unknown if the responses were from households or individuals as this was not asked in the survey.

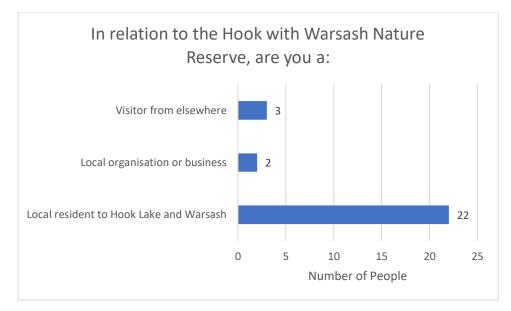
### 3.2 Survey Results & Analysis

Question 1: In relation to the Hook with Warsash Coastal Nature Reserve, are you a: visitor from elsewhere, local organisation or business or local resident to Hook Lake and Warsash?

22 of the respondents said they were a local resident to Hook Lake and Warsash, whilst 3 identified as visitors from elsewhere. 2 respondents identified themselves as from a local organisation or business, with representation from the Solent Protection Society and the Bursledon Right of Way & Amenities Preservation Group as local organisations.





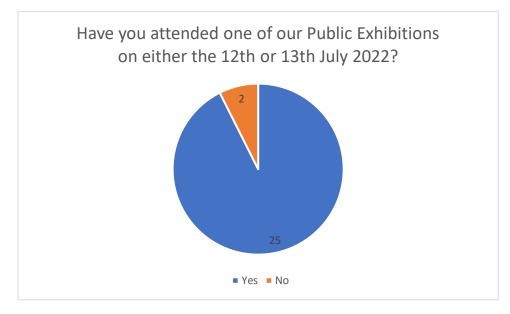


### Question 2: If you would like to, please share the first part of your postcode:

25 of the 27 respondents answered this question, with 100% of these living within the SO31 postcode area (including Hook and Warsash).

### Question 3: Have you attended one of our Public Exhibitions on either the 12<sup>th</sup> or 13<sup>th</sup> July 2022?

25 of the 27 respondents (93%) had attended one of the exhibition events, whilst the remaining 2 had not attended.

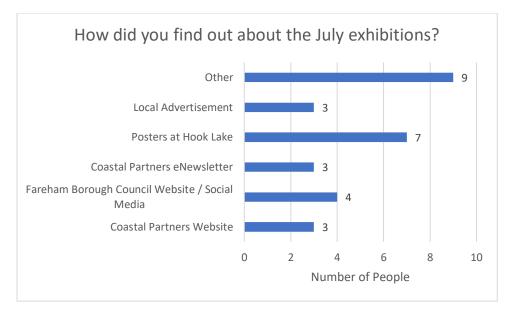


### Question 4: How did you find out about the July exhibitions?

Respondents were given the opportunity to select all the options which applied for this question. In total, 70% of respondents found out about the events through on site posters at Hook Lake, or Local Advertisement in combination with 'Other'.







The details of the local advertisements or 'other' options are shown in Table 1 below:

Local Advertisement / Other Details	Count
Warsash Residents Association	4
Other newsletter	1
Didn't hear about the event, stumbled on it out	
of luck	1
Hamble Estuary Partnership	1
Word of mouth	1
History Society & Parish Magazine	1

**Table 1:** Details of local or 'other' advertisements of the exhibition events

The Coastal Partners e-newsletter, Coastal Partners website and Fareham Borough Council website / social media accounted for a total of 37% of respondents, which perhaps correlates with a preference for paper copies of the questionnaire compared to online for the local community.

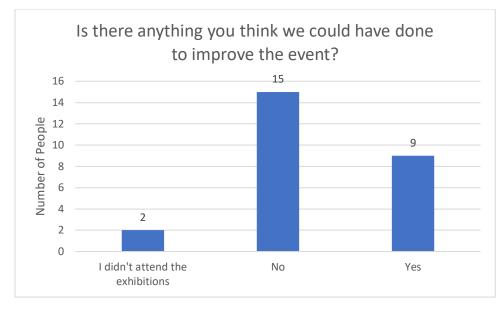
It is also worth noting that 5 out of the 27 respondents heard about the events through local organisations, which corresponds with similar results obtained from the <u>Project Launch Visitor</u> <u>Survey</u>, highlighting the significance of Residents Associations within the local community.

### Question 5: Is there anything you think we could have done to improve the event?

56% of respondents felt there was not anything to be done to improve the events, whilst 33% of people felt that the events could have been improved. 2 respondents did not attend the events.







The suggestions made for improving the events mainly focused around providing more information on future water levels, future project stages, potential impacts on footpaths and amenities, and more details on what a scheme could look like. The full list of feedback provided is shown in Table 2 below.

Things we could have done to improve the event	Count
Date the maps	1
Overall, a pretty good exhibition, but may be a simple introductory "poster" with the exhibition's "elevator pitch" for the lay person	
to more easily gain content	1
More detail about water levels, future project stages, potential impact on footpaths and amenities and what a scheme could look like	4
Have more than 1 poster of the suggested solutions. People tended to crowd round that one, so a queue formed	1
The lovely local expert was 'taken over' by one person, she needed to share her expertise with more people, i.e. move on	1

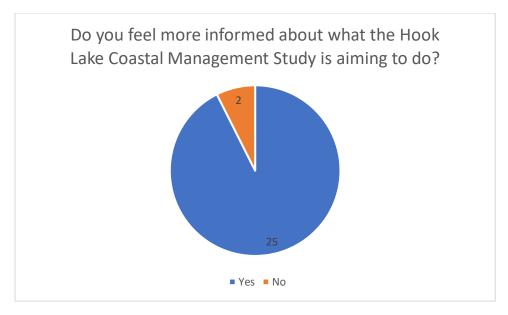
**Table 2:** Suggestions to improve the public exhibition events

### Question 6: From attending the events or reviewing the event posters, do you feel more informed about what the Hook Lake Coastal Management Study is aiming to do?

In total, 25 respondents (93%) felt better informed about the aims of the Hook Lake Coastal Management Study after attending the exhibition events of reviewing the event posters. 2 respondents did not feel better informed following the events/event material.

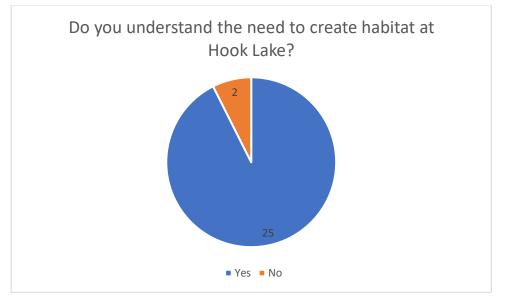






### Question 7: Do you understand the need to create habitat at Hook Lake?

Similarly to the responses to Question 6, 25 respondents (93%) felt that they understood the need to create habitat at Hook Lake whilst 2 respondents did not.

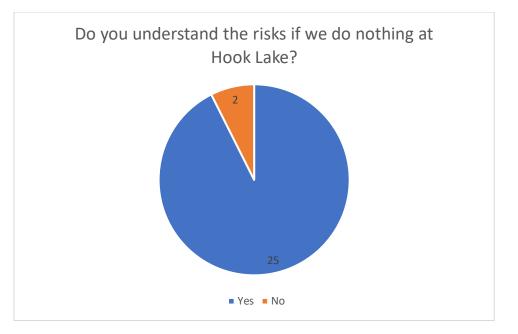


### Question 8: Do you understand the risks if we do nothing at Hook Lake?

As with the responses to both Questions 6 and 7, 93% of respondents felt that they understood the risks of doing nothing at Hook Lake, whilst 7% felt that they did not understand.



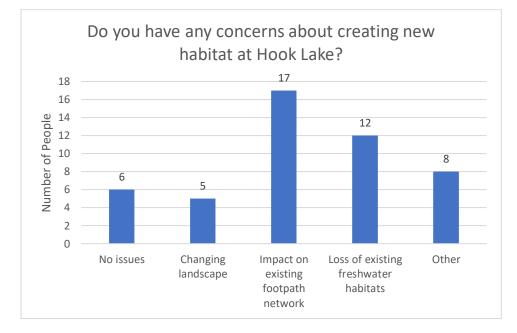




### Question 9: Do you have any concerns about creating new habitat at Hook Lake?

For this question, respondents were asked to select all issues that concerned them, and to provide more details of 'other' concerns that were not listed in the question options.

Impact on the existing footpath network was selected as the main concern, with 17 respondents (63%) concerned about this. This corresponds with feedback from exhibition visitors to provide more information on potential impacts on the footpath network and access. Loss of existing freshwater habitats was selected as the next main concern, with 12 respondents (44%) selecting this. 'Other' concerns not listed within the question options was chosen third, selected by 8 respondents (30%). 6 respondents (22%) did not have any concerns about creating new habitat at Hook Lake.







For those who selected 'other', flooding, the impact on footpaths and existing habitats were all mentioned with equal concern, which corresponds with the options selected by others in response to this question. The potential impacts on wildlife and properties were also of concern.

The full list of 'other' concerns raised in response to Question 9 can be found in *Appendix B* of this report.

### Question 10: Do you have any further questions or feedback for us on the Hook Lake Coastal Management Study and public exhibitions held in July 2022?

14 respondents answered this open question and the responses have been categorised into key themes. For each of these key themes, a selection of comments has been included to demonstrate the type of responses received. All responses to this question are available to view in *Appendix B* of this report.

- The exhibition events 3 comments including:
  - o "It was a good exhibition and questions were answered"
  - "Another exhibition (is needed) with more questions about proposals. Cost restrictions etc."
- Loss of existing habitats and impacts on species 2 comments including:
  - o "Loss of habitat for non-wading species (skylark, linnet)"
  - "Any potential new access routes should avoid the grazing marsh areas which are heavily used by feeding and roosting waders and wildfowl"
- Potential disruption caused by construction of a future scheme 1 comment:
   "Disruption caused by construction phase which would appear to be for 3 years"
- Impacts on the existing footpath network and accessibility 6 comments including:
  - "Disruption to circular walking routes"
  - "There is a need to confirm what will happen with the existing paths"
  - "How the footpaths will be maintained; the "embankment", the "causeway", the footpaths from Church Road & Cowes Lane and access to Warsash Common from Church Road."
- Water levels and flood risk 1 comment:
  - "Local residents need to know more about the projected water levels"
- **Heritage** 1 comment:
  - "I have written 3 books regarding the history of Warsash and have details of the lake and its area"
- Ideas for new habitat creation 2 comments including:
  - o "Island creation for roosting waders would be great"
  - "It will be important to try to maintain a mix of freshwater and brackish habitats in the project areas"
- Increased recreational use 5 comments including:
  - "It would be especially important that recreational access (especially waterbased) is not permitted into the new intertidal habitat created at Hook Lake"
  - "I am very concerned about any proposal to increase public access or recreational use of the site, as I cannot see how this can be achieved without causing disturbance to wildlife and devaluing the habitats."
- **Dogs** 1 comment:
  - "Nature needs to be protected by keeping dogs on leads, they disrupt wildlife and give nothing back to nature"





### Question 11: Would you like to receive further information about the Hook Lake Coastal Management Study?

In total, 23 out of 27 respondents (85%) answered "Yes" to wishing to continue to receive updates as the Study progresses, through a combination of signing up to the Coastal Partners eNewsletter for Fareham projects and using their personal details to stay in touch. The remaining 4 respondents (15%) did not wish to be kept informed of the Study's progress. Those who opted to provide their contact details will be added to the project's (GDPR compliant) stakeholder database.

### 3.3 Event Feedback on the Day

In addition to the exhibition feedback survey, any comments, questions and concerns raised by visitors on the day were also recorded in a notebook, to ensure a record of them and enable any actions to be followed up by the project team.

The questions and comments received on the day varied from specific questions about the project, in relation to ground levels, the existing habitats and impacts to the footpath network, to feedback on the exhibition events themselves.

A full list of feedback received on the day at the events is available in *Appendix C* of this report. Photos from the two events are also shared in *Appendix D*.

### 3.4 Key Findings & Lessons Learnt

### 3.4.1 Key Findings

The findings from analysis of the feedback questionnaire responses, in addition to feedback received on the day, reaffirm the importance of the existing footpath network and concerns over accessibility to the local community. There is a definite need to obtain more information as the Study progresses on any potential impacts of a future habitat creation scheme on the footpath network, and relay these to the local community, once known.

There is also some concern from the local community on the impact of intertidal habitat creation on the existing freshwater habitats and the species who rely upon them, in addition to potential disturbance and pressures which could result from increased recreational usage of the site.

Similarly, the project team could provide more information on future water and flood levels, and display these on a flood map at future public engagement events.

Overall, it is evident that the local community are highly engaged, interested and informed, who understand the need to create habitat at Hook Lake and the risks if we do nothing, and who care deeply for their local area, its environment and wildlife.

### 3.4.2 Lessons Learnt

There are some key actions for the project team to follow-up on and considerations for future public engagement events. These include:

- Ensuring more information is provided on potential impacts to the existing footpath network and freshwater habitats. If practical, this could include visualisations of the footpath options at the next exhibition.
- Displaying a flood map with details of water levels.





- Including visualisations and more information on what a future scheme could look like at the site.
- Ensuring that all attendees are given equal opportunity to ask questions to the project team at the events. The discussions themselves were highly valuable, so attendance by the project team was a key component.
- Prioritising paper/hard copies of advertisements and feedback questionnaires, rather than electronic formats, as these seem to be preferable for the local community in attendance at the events. Also ensuring that a return address is printed on the paper copies of feedback questionnaires and having a designated return box for them.
- Advertising the date for the next exhibition (to promote the leading option and outline design) on the project webpage as soon as it is known.
- Formatting improvements to the exhibition posters.
- On this occasion, there were no materials available for attendees to take away such as leaflets, so these could be a valuable addition to the next exhibition for those who might like them.

### 4 Next Steps

Engagement will continue to take place throughout the Study's development, with stakeholders providing a key information source.

This report will be added to the <u>project webpage</u> and made publicly viewable. It will also be circulated to those attendees who opted to receive further updates on the Study and provided their contact details.

Our stakeholder database will be updated accordingly, with those who requested to be added to the circulation list for our Coastal Partners Fareham Projects eNewsletter added.

The project team will follow-up on and complete any actions identified throughout the exhibition events or feedback survey.

The project team are next due to meet with the established Project Steering Group, made up of professional partners, statutory stakeholders and organisations with jurisdiction around and interests in Hook Lake to support and guide the delivery of the project, to discuss the leading option and outline design stage of the Study. The project team will also continue to meet with 'Key Stakeholders' with a direct interest and influence in the project at key stages.

There will be another public drop-in exhibition event to mark the development of a 'leading option'. Further information on this event will be advertised publicly closer to the time. Invitations will also be sent to those who opted to receive them.

Wider stakeholders will be kept informed through the project website, FBC and CP newsletters and CP / FBC social media. Stakeholders will also have the opportunity to be involved as part of public information events which will take place at key stages as the project progresses.





### 4.1 How will the Study use this information?

The responses captured by the survey will give the project team a better understanding of public opinion and help steer conversations with partners and stakeholders, leading to a better Study for all.

We will use this feedback to ensure lessons learnt on community wishes and expectations, enhance the information materials displayed and improve how we organise and advertise for engagement activities.

Where possible to do so, community concerns, aspirations, opportunities and other ideas will help inform and feed into the appraisal process during selection of the leading option. Where additional threads of enquiry are highlighted, these will be investigated further by the project team as the project progresses.





### Appendix A – Posters Displayed at the Events

The below posters were displayed on boards at the exhibition events and also available in PDF form on the project webpage.









### Hook Lake Today

### **Key Features**

The Hock with Warcach Nature Receive, located at the mouth of the River Hamble, is made up of a number of important features including a chingle chore, Hock Cpit, Hock Lake, wetlands, grazing pactures and woodland.

The nature receive and its intertwining footpaths, including the Solent Way, is owned and managed by Hampshire County Council and is popular with the local community and vicitors alike.

### Environment

Hook Lake is important for its habitats and wildlife. It is protected by national and international environmental designations as a Ramsar wetland cite, Special Protection Area (SPA), Special Area of Concervation (SAC) and Site of Special Scientific Interest (SSSI).

The Hook Lake cite is made up of important natural habitats including coactal grazing march, caltmarch, coactal vegetated chingle, lowland meadowc, reedbedc and wet woodland. Thece habitato support a variety of wildlife including protected species such as breeding and overwintering birds, water vole, reptiles, bats and badgers.







### **Climate Challenges** The Solent coastline, including Ho

The Challenges

b) to facing growing challenged climate change, where sea let (sing, storms are becoming m lent and extreme, and coastal and erosion risk is increasing



### Habitat Loss & Coastal Squeeze

As sea level rises, important intertidal habitats along the coast, such as mudflats and saltmarsh, will be lost as they are constrained by hard sea defences and unable to move landwards as they would naturally do.

This process is called coastal squeeze (shown in the diagram below). where habitats are 'squeezed' against the defences which are relied upon for protection by coastal communities.

Consequently, intertidal habitat is rapidly declining in the Hamble Estuary and the wider Solent as a result of coastal squeeze. Hook Lake has been chosen as a potential area to create new intertidal habitat to compensate for these losses as it has the required characteristics for intertidal habitat to thrive. Enabling the tide to return here will allow other areas to continue to be protected.



### Storm Barra

No seawall present

Mean sea level

Natural habitat migration

iarra made landfa nd speeds of up to in 3 hours, bloc exit route for



### Ageing Coastal Defences

The main coastal defence is a man made embankment enclosing Hook Lake, which includes a seawall and sluice that drains water from Hook Lake out into the sea.

The main embankment at Hook Lake is starting to fail, meaning that it will become increasingly hard and costly to maintain into the future. If we don't address this issue now, the structure will eventually fail, health and safety will be an issue and seawater will come into the site in an uncontrolled way. Therefore, a better, longer term, sustainable solution is required for future management.

The chingle beach and cpit slop provide a natural form of defence to the area behind. This natural feature will rollback landward over time as sea evels rise.

### Did You Know?

- The landscape of Hook Lake has changed drastically over time:
- . In the Saxon and medieval times, Hook village was a thriving harbour and port.
- . In the 1800's Hook River remained a navigable estuary.
- . In the late 18th C, the 'Ships Bank' embankment was constructed across the mouth of the Hook River to create an enclosed
- boating lake (Hook Lake).

3

- South of Hock Lake was once a golf links.
   The remains of a rare World War II Bofors Tower can be found on the shingle beach.

fareham.gov.uk coastalpartners.org.uk





























### FAREHAM BOROUGH COUNCIL

fareham.gov.uk coastalpartners.org.uk







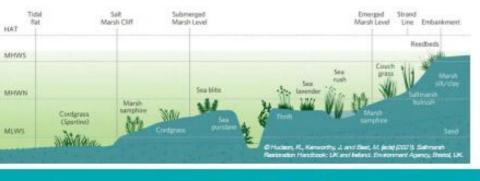




### **Creating Intertidal Habitat**

### What Are Intertidal Habitats?

At the coact, in areac where land meets the sea, intertidal habitats form between the low and high tide linec. They are exposed at low tide and are covered by seawater at high tide. This twice daily variation In molecture, temperature and calinity means that the plants and animals that live here are adapted to harch extremec.



Some species live further up the chore and clocer to the high tide line, while others live further down the chore clocer to the low tide line.

### Why Are They Important?

Intenidal areas rich in sediments, like those at Hook Lake and the Hample Ectuary, are populated by plants such as califmarch and animals such as worms, clams and crustaceans. The plants and animals living here are a vital food cource for the water birds that breed and over-winter here in the Solent.

The health of our intertidal habitats is declining. They have been harmed by human activities including climate change, development, construction of hard engineered coastal management structures and poor water quality from agriculture and water treatment works. deterioration in the health of our intertidal habitato reduces their ability to provide the benefits that we rely on, with knock-on effects for human health.

Creating new places for coastal habitats and wildlife to thrive is essential to ensure that they are resilient to the challenges of climate change and will provide a variety of benefits to help restore the health of the Hamble Estuary. It will also ensure that local communities can continue to enjoy our treasured coastlines for many years to come.

Intertidal habitats provide a range of ecosystem services, shown in the infographic below



#### FLOOD AND COASTAL RECREATION & IMPROVED BIODIVERSITY FOOD PROVISION WATER QUALITY sapping sediment an sorbing contaminant DEFENCE s tidal & wave oner ect land and reduc WELLBEING Attracts tourism to area through bird outching and waiking ENHANCEMENT nul gracing and plan esting can contribute to local economy Provides complex ubitat for a range es water out cies e.g. reisting bird ٥ Aeguisting so

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### Ecosystem Services

Thece are the direct and indirect contributions of ecocyctemp to human wellbeing, and have an impact on our curvival and quality of life.





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# **Other Wider Opportunities**

During the study we will explore other investment opportunities to allow us to deliver wider placemaking benefits relating to recreation, amenity, education, health and wellbeing and environmental enhancements, alongside habitat creation, subject to securing additional investments.







# Education



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Approach 3



### How will we create the habitat?

We are exploring different ways to create intertidal habitat at Hook Lake, and have identified a shortlist of potential approaches alongside a baseline option, to which all other approaches are compared. In selecting these approaches we have considered four key criteria:

Technical Is it technically possible to build? Is it safe? How does it affect flood risk to other areas? How does it impact on coastal processes? Environmental Can we create the habitat needed? What is the carbon footprint? How does it impact on ecology, landscape and heritage?

Economic Is it cost effective? Is it low maintenance? How long will the design last? Social what is the impact on recreation? Does it meet community

needs?

#### The 4 Shortlisted Approaches are:



Maintenance is reactive. Once at the end of its design life the main embankment will fail. Seawater will come into the site in an unmanaged way following defence failure. Habitat will be created in an unmanaged way.



Remove tidal flags to enable sea water into Hook Lake and create a breach in the causeway. Reactive maintenance of main embankment. Once at the end of its design life the main embankment will fail. Habitat will be created in a managed way.

Create a breach in the main embankment and causeway. reinforce the remaining main embankment and maintain. Habitat will be created in a managed way.

Approach 2

Create a breach in the main embankment and causeway. Reactive maintenance of main embankment. Once at the end of

its design life the main embankment will fail. Habitat will be created in a managed way.

Charles and a state of the state of the			1.5 YEAR 7 THE REPORT
Main Embankment	Main Embankment	Main Embankment	Main Embankment
Facebox Petition SSE Unreged Unreaded mattername Spin + Nation Selatili Selatit - Society - SSE well fadow Salititation	Residue Reservation Georgeal University and States Advances States States States States	Nachar Novan Kal nationality antibility Rate-reactor Manager Interference antibility	President Particle Kall mathematic Right matches well blane Right matches in fall
Causeway	Causeway	Causeway	Causeway
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Spit and Shingle Beach	Spit and Shingle Beach	Spit and Shingle Beach	Spit and Shingle Beach
Start	Respect	Rained albeet	Return
Habitat Creation Potential	Habitat Creation Potential	Habitat Creation Potential	Habitat Creation Potential
0-30 pass 30-80 pass 80 pass-	0-33 years 30+60 years 20 years-	0-20 years 20-80 years 80 years-	D-10 years 20-10 years M years
Umangel Nampel	Unintegral Manageri	Linangel Kanapel	Unintegel Managed

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# What could a scheme look like?

Here are come imaged of other intertidal habitat creation ochemed that have been completed in the Solent region to give an imprection of what new intertidal habitato could look like once seawater ic returned to the cite.







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### Medmerry, West Sussex

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302 hectares site Created a large mocalo of habitato to include around 183 ha of intertidal habitat that is regularly inundated by the tide through a large breach in the chingle beach. 









### Cobnor Point, Chichester Harbour

#### 8.5 hectares site

A mix of mudifiat and saltmarsh habitats were created when the cite was reopened to the tide. To do this the sea wall was breached in two placec. These breaches were protected with rock armouring to keep then stable. This was required because bridges were placed across both of them to precerve a footpath.





### Chalkdock Marsh, Chichester Harbour

Caltmarch habitat was created and is now well ectablished at the site, after Regulated Tidal Exchange was implemented by opening the existing



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age









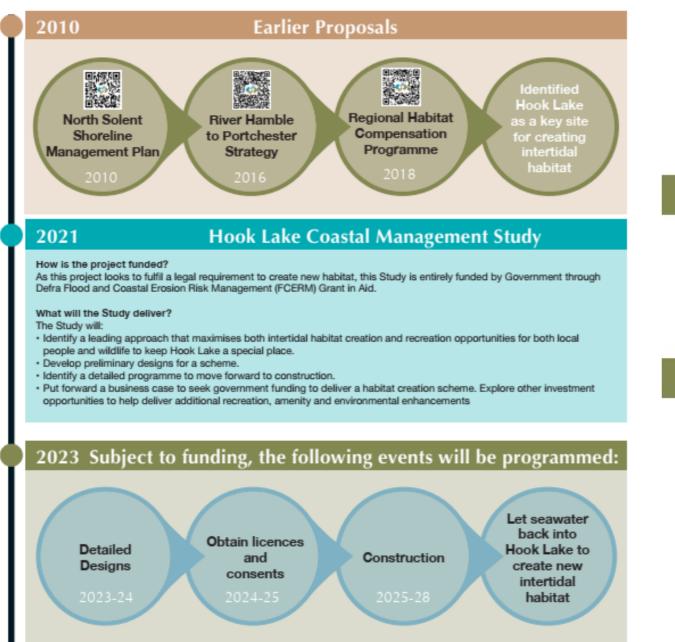
## The Hook Lake Coastal Management Study

# Who is Involved?

### **Project Team**

A Timeline of Events:

Coastal Partners



### **Scheme Completion**

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Partners

We are a team of opecialist coastal officers and engineers who deliver a comprehensive coastal management service across 162km of coastline. As part of Fareham Borough Council we are managing the delivery of this project.



### **Key Partners**

County Council

Fareham Borough Council is responsible for delivering local projects and essential services throughout the Borough. Fareham Borough Council has permissive powers for sea defence and coast protection.

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Hampshire County Council own and manage the Hook Lake with Warsash Nature Reserve. Other interests within the study area include Public Rights of Way, and Hook Park Road.

### Project Steering Group

The Hook Lake Coastal Management Study Project Steering Group consists of representatives from organisations with a significant interest in the Study as it progresses

The role of the Steering Group is to guide the delivery of the project; share knowledge, particularly regarding local issues, opportunities and constraints, best practice, and provide feedback and input to decision making at key milestones in the Study.



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Binnies, part of the RSK group of companies, are an engineering consultancy, helping us deliver the more technical elements of the study. Binnies are experts in this field, having developed designs for similar habitat creation projects around the country.





The Environment Agency is legally obliged, under the Habitat Directives, to create new intertidal habitat to compensate for the losses resulting from coastal squeeze.

Agency

Environment

### Community

#### You've told us what's important to you...

In June 2021, we conducted a visitor survey to understand how the site is valued and to gather visitors' views on their aspirations for the current and future management of Hook lake.

We received responses from 183 participants, the majority of whom were local residents to Hook Lake and Warsash, and almost three quarters of whom visited daily or weekly

What do you value most about Visitor feedback report: this location?

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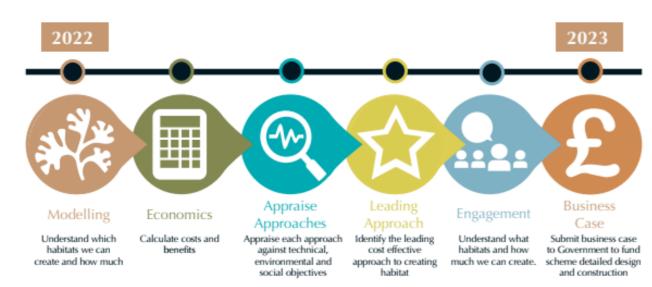


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# What happens next?



### We need your help

### Share Your Thoughts

We'd like to hear from you about this exhibition and the project itself.

We would really appreciate your help by completing a chort quectionnaire with multiple choice quections to help us improve our future events.

You will also have the opportunity to leave us feedback and questions if you wich.

### **Exhibition Surve**

Use this QR code to get a link directly to the Curvey to share your thoughts on the proposals shown at this exhibition.



### We need your help



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### Appendix B – Questionnaire Results (redacted)

The comments included here are those submitted as part of Question 9 of the survey ("Do you have any concerns about creating new habitat at Hook Lake?")

They are copied as submitted, in the order of submission. Any personal information has been redacted.

Subsidence to local properties which border the edge of the 'drop' into Hook Lake, as this "cliff edge" has eroded over the years, and trees fallen, without water being involved. If water is added to the equation, residents would need evidence that there would be no damage to properties. 2) Wildlife in the "cliff edge" of new Hook Lake (badger setts).

No issues as long as final outcome is based on good science

Possible loss of islands in scrapes for nesting and resting birds

Risk of freshwater flooding due to loss of the current floodplain at high spring tides

Will footpath maintenance be allowed in the plan?

Ship Bank footpath is a great asset and needs to be always retained or bridged I believe nature will win out. A constantly evolving man-managed scheme merely prolongs man's desires, unlike what nature intended.

I am concerned about the in-combination impact resulting in the loss of freshwater habitat at Hook Links as a result of breaches along the beach/ shoreline, as well as your scheme. Both sources of coastal inundation need to be considered if designing the migration of freshwater habitats.

The comments below are those that were submitted as part of Question 10 ("Do you have any further questions or feedback for us on the Hook Lake Coastal Management Study and public exhibitions held in July 2022?") of the survey.

They are copied as submitted, in the order of submission. Any personal information has been redacted. The project team will take forward these comments in preparation for the next exhibition.

It was a good exhibition and questions were answered.

Another exhibition (is required) with more questions about proposals. Cost restrictions etc. Footpaths

Concerns - loss of habitat for non wading species (skylark, linnet), disruption to circular walking routes, disruption caused by construction phase which would appear to be for 3 years, potential damage to/loss of Reed beds, affecting rare species such as bearded tit which live here

Any scheme should retain access of some sort to retain a coastal path around the nature reserve, so as views of over marshes created and flooded areas/sea shore spit area - would object to scheme which does not include maintaining access for walkers in some form.

There is a need to confirm what will happen with the existing paths.

Local residents need to know more about the projected water levels and how the footpaths will be maintained; the "embankment", the "causeway", the footpaths from Church Road & Cowes Lane and access to Warsash Common from Church Road. Obviously, a large budget will be needed to maintain vehicular access to Hook Park (many wealthy & influential residents!) but most Warsash residents will be more concerned about maintaining the footpaths despite the managed breaches

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Approach 2 with a bridge over the breach in the embankment would maintain the route for the Solent Way and Coastal path especially if footpath 11 will be underwater at high tide.

Difficult to have questions till they make final decisions on exactly what's going to happen

Please consider displacement of visitors to other nearby wildlife sensitive areas of you loose footpaths. Island creation for roosting waders would be great.

I have written 3 books regarding the history of Warsash and have details of the lake and its area. WW2 rifle range, pumping station

Nature needs to be protected by keeping dogs on leads, they disrupt wildlife and give nothing back to nature. This should be a law in certain sensitive areas! I am privileged to enjoy walking this area regularly admiring the birds and wildlife. I am also a local conservation volunteer.

I don't totally understand the risks of doing nothing at Hook Lake. I couldn't understand why opening the fresh water area behind the sluice gate will reduce the coastal squeeze.

See separate document submission e-mailed last week. If possible, I think the preferred option would be to flood Hook Lake (N of the causeway path) independently from Hook Links (S of the causeway), allowing Hook Links to flood periodically as and when the shingle beach is over-topped. A permanent, un-bridged breach in the seawall at the existing Hook Lake outfall sluice would perhaps help reduce public access/disturbance to Hook Spit roost sites. Any potential new access routes should avoid the grazing marsh areas which are heavily used by feeding and roosting waders and wildfowl. It would be especially important that recreational access (especially water-based) is not permitted into the new intertidal habitat created at Hook Lake. This would be a good opportunity to upgrade and raise the road bridge at Hook Park Road so that it is above flood level and then enable the new habitat creation to extent upstream from the bridge where non-native invasive species have degraded the SSSI. It will be important to try to maintain a mix of freshwater and brackish habitats in the project areas.

Yes, the FAQ document you sent referred to the fact that the scheme could improve access, without saying how this could be done? There is also reference in the 'How is the project funded? Section to exploring other funding opportunities to help deliver things including recreation. I am very concerned about any proposal to increase public access or recreational use of the site, as I cannot see how this could be achieved without causing disturbance to wildlife and devaluing the habitats. I have provided additional feedback in the document attached to my email.





# Appendix C – Feedback, Questions and Comments Received on the Day

Any actions will be followed up with individually by the project team. Answers shown below were provided on the day.

#### **Questions, Concerns & Considerations**

Q: How high above AOD is Hook Park Road?

A: We have undertaken a topographic survey of the Hook Park road bridge, and it shows deck levels between 1.3mODN (south end/ minimum) 1.47mODN (centre/maximum).

Q: What about ground instability in Hook River if bringing higher water levels into Hook Lake and river?

A: Once we have identified the 'leading option' we will have greater certainty of the water levels and any other potential secondary impacts.

Q: What will happen to the road bridge?

A: The road bridge is relatively low lying and already at risk of flooding (as seen during Storm Barra in 2021). We will be working to understand the future flood risk under the shortlisted options and present projections at the next public exhibition.

Q: Can the public see future high tide/low tide levels at next exhibition?

A: Yes, we didn't have this information at the time of the first exhibition, but expect to present it at the next exhibition.

A visitor shared concerns regarding loss of existing special freshwater habitats on the site (e.g. reedbeds and birds) which will be replaced by intertidal habitat which is already prevalent in the local area.

A visitor shared concerns regarding loss of footpaths for recreation and in particular viewing the special wildlife and rare bird species

Q: Can we have a low tide footpath?

A: We will need to look at a variety of options for the existing footpath, including whether a low tide footpath could be used. This may depend on whether we need to include a breach and whether this breach occurs naturally or intentionally as to whether footpaths can still be classified / regulated.

A visitor shared their interest in trees (impact on big old oak trees) and highlighted that FBC have a Tree Officer.

A: The project team are in contact with the FBC Tree Officer.

A visitor was disappointed about how HCC have managed (lack of) the existing habitats over the last few years within the nature reserve.

Q: Why are we creating new saltmarsh at Hook Lake when we could restore area being eroded at Bunny Meadows?

A: The restoration of areas of erosion at Bunny Meadows (further north up the River Hamble) would not generate the areas of compensatory habitat that we are investigating at Hook Lake. Bunny Meadows faces the same challenges of coastal squeeze, so we are trying to create more space for these valuable intertidal habitats. Another interesting point is that the low-lying areas at Hook Lake were previously intertidal habitats, before the construction of the main embankment around the lake c1790 so we are essentially reclaiming this intertidal landscape and returning it to its natural state.

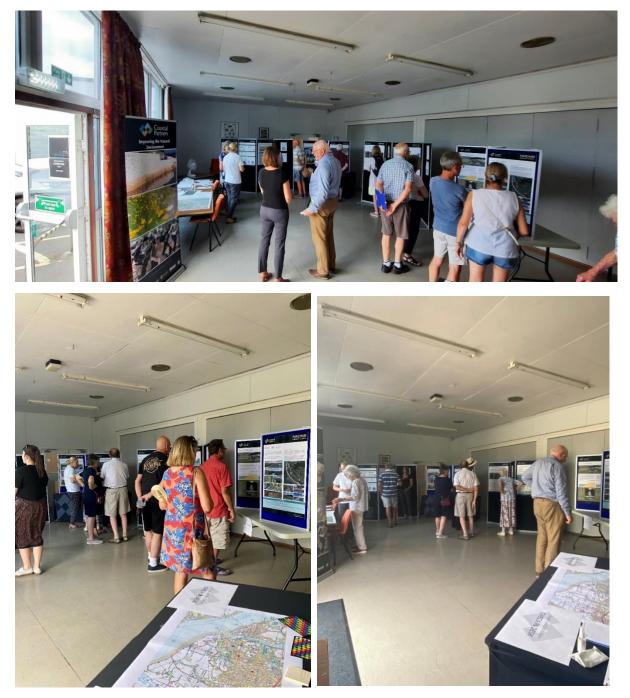




### Appendix D – Photos Taken at the Events

Signs were displayed to inform visitors that photography was taking place at the event and to ensure their consent to this. All photos were taken to ensure that no visitor faces were shown.

### Photos taken at the Warsash Victory Hall on 12<sup>th</sup> July 2022







### Photos taken on 13<sup>th</sup> July at the Warsash Victory Hall





