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PO9 2AX

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5 December 2016

Dear Sir or Madam

## **SOUTHERN COASTAL GROUP**

Date: 9 December 2016

Time: 10.00 am

Place: Hollybank Room, Public Service Plaza, Civic Centre Road, Havant, Hants  
PO9 2AX

Please see the attached location map showing Havant Station, routes to Havant Public Service Plaza and location of car parks. If you are unable to attend please contact Nicholas Rogers as soon as possible by e-mail or telephone.

Yours faithfully

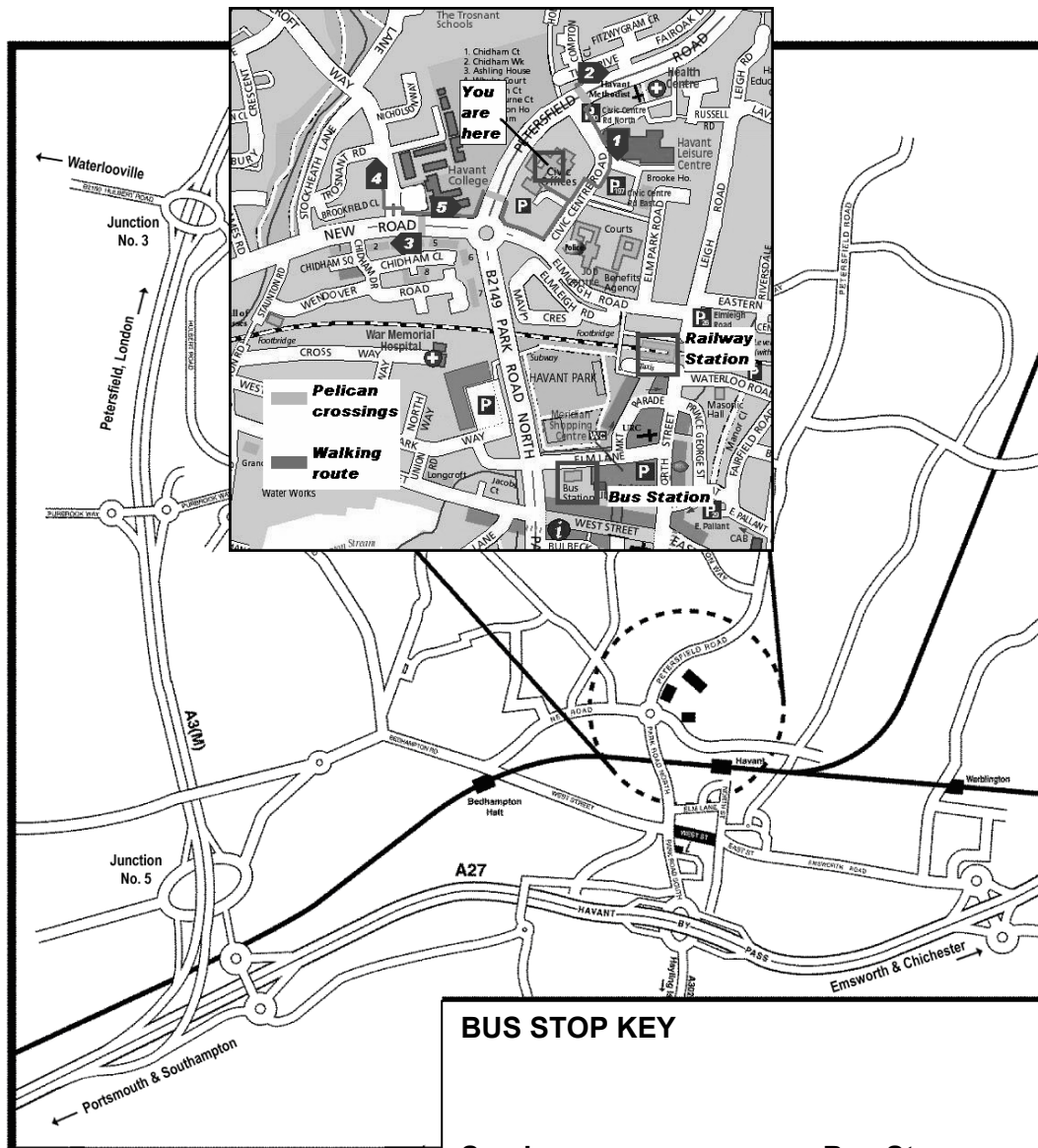
Nicholas Rogers  
Havant Borough Council

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### **AGENDA**

- |   |  |                |
|---|--|----------------|
| 1 | <b>Apologies</b>   |                |
| 2 | <b>To confirm the minutes of the meeting of the Southern Coastal Group held on 23 September 2016 (Paper A)</b> | <b>1 - 6</b>   |
| 3 | <b>Chairman's Update on Coastal Issues (Paper B)</b>   | <b>7 - 16</b>  |
| 4 | <b>HR Wallingford (James Sutherland and Emma Rendle - Paper C)</b>   | <b>17 - 22</b> |
| 5 | <b>Feedback on Business Planning Workshop, 9 November</b>  |                |
| 6 | <b>Coastal Monitoring Update (Paper D)</b>   | <b>23 - 24</b> |
| 7 | <b>Asset Coast Workshop, 16 November (Paper E)</b>   | <b>25 - 28</b> |

8	<b>Research Report (Sam Cope - Paper F)</b>	<b>29 - 30</b>
9	<b>Presentation of 'Surgewatch' (Ivan Haigh)</b>	
10	<b>SMPs and Action Plans</b>	
11	<b>Completion of the SCG Programme Management Tool</b>	
12	<b>Update from Members</b>	
13	<b>Confirmation of Dates for Next Year</b>	
	SCG:	17 March 9 June 15 September 15 December
	SCOPAC:	20 January (Workshop TBC) Site Visit – 17 May 6 October



#### BUS STOP KEY

Services	Bus Stop
20, 21, 39, 63	1
20, 21, 36**, 39	2
23, 36**	3
23, 27**, 37	4
23, 27**, 36**, 37	5



**Havant**  
BOROUGH COUNCIL

Public Service Plaza  
Civic Centre Road  
Havant  
Hampshire PO9 2AX

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## HAVANT BOROUGH COUNCIL

At a meeting of the Southern Coastal Group held on 23 September 2016

Present: Mr Neil Watson (Chairman)

Dr Ken Buchan, Dorset County Council  
Mr Lyall Cairns, Eastern Solent Coastal Partnership  
Steve Cook, New Forest District Council  
Dr Samantha Cope, New Forest District Council  
Nick Gray, Environment Agency  
Dr David Harlow, Bournemouth Borough Council  
Mr Matt Hosey, Eastern Solent Coastal Partnership  
Mr Nick Lyness, Environment Agency  
Karen McHugh, Solent Forum  
Mr Stevyn Ricketts, Gosport Borough Council  
Mr David Robson, Borough of Poole Council  
Mr Steve Woolard, Christchurch Borough Council  
Travis Mason, Channel Coastal Observatory  
Mark Stratton, Eastern Solent Coastal Partnership  
Stuart McVey, Channel Coastal Observatory  
Jenny Jakeways, Isle of Wight Council  
Dominic Henly, Chichester District Council  
Grant Armfield, Dorset Councils Partnership

### 88 Apologies

Apologies for absence were received from Sarah Cairns, Nick Hardiman, Bryan Curtis, Tim Adams, Mike Goater, Uwe Dornbusch and Stuart Terry.

### 89 To confirm the minutes of the meeting of the Southern Coastal Group held on 24 June 2016 (Paper A)

RESOLVED that the minutes of the meeting of 24 June 2016 be set as a correct record.

### 90 Chairman's Update on Coastal Issues (Paper B)

The Chairman introduced the update papers from the Environment Agency and outlined the content. The outline included:

- An update on meetings and teleconferences that had taken place since the last meeting and the issues discussed. Officers discussed key topics that should be raised as part of the next round of coastal chair meetings and the following areas were suggested:
  - Exercise surveys and concerns over the south coast LRFs.
  - The inclusion of private assets in Coastal Asset Data.
  - Protection of landfill sites

- Concerns over the allocation of coastline and fluvial schemes - Coastline schemes were considered expensive and legacy benefits were not being considered, meaning the formula for allocation may need to be challenged to ensure a fairer distribution. Officers were asked to send any evidence of this to Lyall Cairns and the Chairman agreed to circulate these issues at the next round of coastal chair meetings.
- The future of the 6-Year Plan after 2021 - the possibility of a new 6-Year Plan following 2021 would depend on the success of the current plan.
- Maintenance and rehabilitation of promenades and waterfront walls.
- The impact of climate change on future flood risk - A report would be published on the possible extreme outcomes.
- Dorset Partnership potential - Papers would be submitted to the Cabinets at Poole and Dorset Councils shortly. The Partnership would investigate other local authorities becoming involved.
- National Flood Resilience Review. Reviews were undertaken following the floods in Cumbria / Yorkshire and stress tested forecasting models across the county with a focus on impacts to infrastructure.

## **91 Finance Update and Recommendation to Sign Last Year's Accounts (Paper C)**

The Chairman introduced the SCOPAC / Southern Coastal Group Accounts Finance Report and discussed the papers. Officers discussed the concern over the current unallocated portion of this year's budget within the business plan themes.

Officers discussed allocating funds towards the procurement of a new Minor Works Framework. The current framework was due to expire on 3 January 2017 and had previously split the costs of the framework between member authorities. The new proposal would see costs underwritten at the start of the exercise and allow for all SCG and SCOPAC members to use the framework when needed. This would be for a four-year duration.

It was RECOMMENDED to SCOPAC that these accounts be submitted for approval.

The Group RESOLVED to support the recommendation to SCOPAC to allocate £23,000 in order to give all subscribing local authorities access to the Minor Works Framework for the next four years.

**92 Presentation on Shingle-B (Travis Mason)**

The Chairman invited Travis Mason from Channel Coast Observatory to deliver a presentation to the Group on Shingle-B. Shingle-B was an online tool that could be used for the prediction of shingle beach profiles under the influence of bi-modal sea states. The presentation included a short demonstration on using the software and reminded officers of the Annual Partners Meeting on 3 November 2016.

The Group discussed sending a note through the Professional Services Framework to ensure all clients were aware of Shingle-B, as efficiency savings were possible.

**93 Coastal Monitoring Update (Stuart McVey - Paper D)**

The Chairman invited Stuart McVey to introduce the report to officers and give an update on the Southeast Regional Coastal Monitoring Programme.

Officers were informed that a small update to software programmes would be needed following the Ordnance Survey Transformation OSTN15 / OSGM15.

Officers discussed the use of laser scanners to conduct surveys of seawalls to identify any signs of movement or damage and allow for data comparison. The Group also considered the possibility of using BIM software for all coastal assets.

**The meeting was adjourned at 11.27 and reconvened at 11.37**

**94 Business Plan Update Development of Budget Themes (Presentation) (Lyll Cairns)**

The Chairman invited Lyll Cairns to introduce the item and discuss the update of the SCG Business Plan and the development of budget themes. The Group were shown a proposed format for the plan and discussed the data that would need to be included. The Business Plan Update had the ultimate ambition to prioritise tasks and assign key officers to lead on these, and promote an inclusive way of working. It was also highlighted that this would need to be cross-referenced with the relevant SMP Plans.

It was suggested that a workshop would be arranged for Wednesday 9 November 2016 to populate priorities within the plan.

**95 Workshop Proposal for 9 November**

It was AGREED that a workshop be arranged for Wednesday 9 November to consider and populate the SCG Business Plan.

**96 SMPs and Action Plans (Dave Robson)**

The Chairman invited Dave Robson to update the Group on this item. A further revision exercise had taken place to reduce the number of live actions included in the SMPs.

Officers discussed the Group's role as an overseer of the plans, with working groups and risk management authorities maintaining direct responsibility for each respective plan. It was agreed that the SMPs needed to be regularly reviewed and reported back to the Group, while officers should maintain a collective understanding of the actions.

It was agreed that consideration of the SMPs would form part of the 9 November workshop.

**97 Presentation on SCG Programme Management Tool (Mark Stratton - Paper E)**

The Chairman invited Mark Stratton to deliver a presentation on the SCG Programme Management Tool to the Group. The presentation outlined the following points:

- There was no effective system in place to maintain live oversight of programme management.
- The Tool had the potential to identify links and possible efficiencies and had already produced savings when used to inform projects.
- The Tool produced images of the coastline which allowed for useful understanding of different aspects such as spacing between projects and stage of progress.

Officers agreed to populate a copy of the spreadsheet and review the maps and graphics with the data provided at the next meeting.

**98 Asset Coast Proposal (Paper F)**

The Chairman introduced a paper on Coastal Asset Data Management. The paper outlined a national business case for project to use FDGIA to enable Coast Protection Authorities to establish a consistent dataset in a nationally available system.

Officers discussed the need to use information from historic surveys and the expertise of members. Funds would go towards the acquisition, data storage and quality control of the product.

It was agreed that the Chairman would raise this at the next meeting of the coastal chairs, the Chairman would arrange a meeting with the ESCP, New Forest District Council and Isle of Wight Council to discuss further and a paper would be submitted to the next meeting of the Group.



## 99 Research Report (Sam Cope - Paper G)

Dr Samantha Cope gave an overview on the progress of the Research Programme. The update included details of ongoing research projects and those that had reached completion.

The following studies were discussed:

- Coastal Sediment Budget Project – The report was now complete and web results would be published shortly. Dr Matthew Wadey would be presenting an item on this at the SCOPAC meeting on 7 October 2016.
- Establishing shingle transport pathways – Church Norton Spit – Dr Uwe Dornbusch would be uploading a summary on the first part of the project shortly. A second student was being sourced to undertake the second part of the study.
- Beach response in front of structures in open coast – The work was due to start in the winter of 2016/17. Subject to the completion of a successful test, the ESCP would apply SCOPAC funding to further sites.
- Monitoring of Poole Nearshore Replenishment Trials – The report was being finalised with a view to publish shortly. Officers discussed a presentation on this to SCOPAC in April, following the results of a survey after the winter of 2016/17.
- Scanning of Historical Aerial Photography – The first part of the project had been delivered and photographs to be scanned for the second part of the project were being scoped.
- Maintenance of Coastal Structures – Phase 1: Timber Groynes – An updated manual entitled 'CIRIA Groynes in Coastal Management manual' will reflect use of other materials such as plastic or rock. A scoping questionnaire had been emailed to engineers investigating what information exists on various groyne fields, ahead of a national workshop before February 2017.
- Dismantling of Timber Groynes at Bournemouth Borough Council – Dave Harlow informed the Group that initial inspection of the dismantled groynes had highlighted consistent effects on the timber. A report would be published shortly with further details.
- Update on the SCOPAC Sediment Transport Study – The maps were nearing completion with a target date for before Christmas. Maps would be circulated to engineers shortly for review.

## **100 News and Announcements from Members**

The Chairman invited Karen McHugh from Solent Forum to discuss a project entitled 'Beneficial Use of Dredgings in the Solent (BUDS)'. The project aimed to establish where dredgings were coming from and where they were going, and gain a better understanding of sediment in the Solent and any potential beneficial uses. Solent Forum had allocated £5,000 to this project and Karen asked the Group for a further £5,000 of funding to enable phase one of the project to start.

It was agreed that this would be considered at the workshop on 9 November.

**The meeting commenced at 10.00 am and concluded at 1.06 pm**

## Information Note

### Tax Relief for businesses that contribute to Flood and Coastal Erosion Risk Management (FCERM) projects

#### Is tax relief available to businesses that make contributions FCERM projects?

Business contributions to Flood and Coastal Erosion Risk Management (FCERM) projects are tax deductible. The measure applies to contributions made from January 1<sup>st</sup> 2015 and was legislated in the 2015 Finance Bill.

#### What is the aim of the measure?

To encourage private sector investment in flood resilience projects, via recognised partnership funded schemes for qualifying FCERM projects.

#### What is a partnership funded FCERM scheme?

Central government provides 'Flood Defence Grant in Aid' (FDGiA) funding to FCERM projects based on the benefits they are expected to achieve. These benefits are used to calculate the percentage of the overall project costs that can be funded by FDGiA. The remaining funding required (or the 'funding gap') is secured by those managing / delivering the FCERM scheme, from a variety of sources. When the project secures at least 100% of its overall costs in total, FDGiA is then made available. Further details on the partnership funding model can be found here:

[www.gov.uk/government/publications/flood-and-coastal-resilience-partnership-funding](http://www.gov.uk/government/publications/flood-and-coastal-resilience-partnership-funding)

#### What is a qualifying FCERM project?

Qualifying projects are those for which either:

- An English risk management authority has applied to the Environment Agency for a grant under section 16 of the Flood and Water Management Act 2010 in order to fund the project. 'English risk management authority' has the meaning given by section 6(14) of the Flood and Water Management Act 2010.

**OR**

- The Environment Agency has determined that it will carry out the project.

**AND**

If the Environment Agency has allocated funding by way of FDGiA to the project. Entirely privately funded FCERM projects are not eligible for this tax relief.

#### How does the legislation work?

The deduction will be available to incorporated businesses (companies) and unincorporated businesses (partnerships, sole traders, etc.) The former pay corporation tax, the latter pay tax through the income tax regime.

The measure ensures that when a business invests in a partnership funding scheme, it can deduct its contribution from its taxable profits for corporation tax purposes (if it is incorporated) or income tax purposes (if unincorporated).

This effectively reduces the tax the business pays.

### Example:

- A company invests £500k in a partnership scheme in a year when it makes £1m profit.
- If it is unable to deduct that contribution from its taxable profits, it will have a corporation tax liability of £200k (20% of £1m).
- If it is able to deduct the contribution, its taxable profits will be £500k, so its corporation tax liability will fall to £100k (20% of £500k).
- Alternatively, the company could justify investing a greater amount, due to the reduction in its tax liability as a result.

### Are some payments deductible already?

Yes. Currently, business contributions to partnership funding schemes follow general tax principles and therefore some are tax deductible, while others are not, depending on the circumstances of the contribution. This measure expands the tax relief to ensure that virtually all contributions are tax deductible.

### Will the measure only apply to financial contributions?

No. The deduction will also apply to:

- Contributions of services. Therefore if a business donates labour to an FCERM scheme the cost of the labour would be deductible.
- Land, plant or machinery that is used, in the realization of the project, for the purposes of FCERM.
- A right over land that is used, in the realization of the project, for the purposes of FCERM.

### PLEASE NOTE:

- This information note is not intended to provide, and should not be relied on for, tax advice.
- Tax information and advice should be sought from a suitably qualified tax expert/consultant before seeking to apply this legislation.
- The full legislation relating to 'Relief for contributions to flood and coastal erosion risk management projects' (Schedule 5 of the Finance Act 2015) can be found here:  
[www.legislation.gov.uk/ukpga/2015/11/schedule/5/enacted](http://www.legislation.gov.uk/ukpga/2015/11/schedule/5/enacted)
- For further details please contact James Ewington at HMRC: [james.ewington@hmrc.gsi.gov.uk](mailto:james.ewington@hmrc.gsi.gov.uk); 03000 553788.

## Fact sheet

November 2016

### Coastal Research & Development activities – an update

This briefing provides you with an update on the key coastal research and development activities being delivered by the Flood and Coastal Erosion Risk Management Research and Development Programme. The briefing covers recently completed, ongoing and planned research activities.

#### Recently completed research

The outputs from the recently completed projects below can be found on the joint programme [web pages](#). To stay up to date with joint programme research outputs [subscribe to our bi-annual new letter Research News!](#)

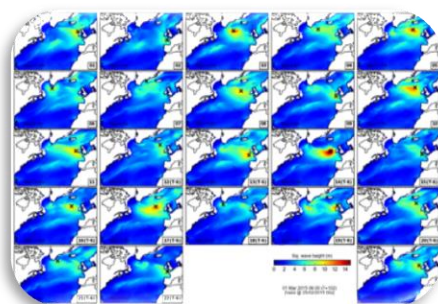


For more information contact:  
[eleonor.heron@environment-agency.gov.uk](mailto:eleonor.heron@environment-agency.gov.uk)

#### Maintenance and rehabilitation of old waterfront walls

We have worked with CIRIA and other partners to produce a new free guide to asset management of old masonry waterfront walls. This update to the well respected 1992 CIRIA guide 'Old Waterfront Walls' is available now for free download from the [CIRIA website](#). The new guide includes much of the material from the original, along with new sections on risk management, performance assessment, the influence of legislation and valuing these assets. New developments in inspection, maintenance and repair techniques are also included in this update.

A free version of the new guide is now available to download from the [CIRIA website](#).



For more information contact:

#### The creation of an operationally viable wave ensemble product

We have been working in partnership with the Met Office to trial and demonstrate the feasibility of an operational wave ensemble for UK coastal waters for use in flood forecasting. The project has been undertaken as an addition to the Met Office work in the [EU FP7 My Wave project](#). The work has demonstrated that a wave ensemble product is operationally viable and can be developed to produce useable ensemble data for flood forecasting purposes. The project report is available on the Met Office website at the following [link](#).



[eleanor.heron@environment-agency.gov.uk](mailto:eleanor.heron@environment-agency.gov.uk)

Following on from the research phase, the Flood Forecasting Centre is leading on a number of activities to operationally develop the wave ensemble. This work is being directed by our Flood Detection and Forecasting Team and will help us to make best use of the information to understand uncertainty and impacts in line with the Flood Incident Management Roadmap and Flood Forecasting Development Plan.

### Our ongoing research

Details of the ongoing research across our thematic programme can be found on our web pages. Try our [search tool](#) to search our archive of both past and current R&D



For more information contact:  
[owen.tarrant@environment-agency.gov.uk](mailto:owen.tarrant@environment-agency.gov.uk)

#### Accounting for residual uncertainty - updating the freeboard guide

We are updating our existing guide for establishing freeboard allowances. With this update we are providing clarity on how to identify residual uncertainties in appraisal and design processes. The new advice will be extended to include coastal structures and will be illustrated with case study examples that cover design, project appraisal as well as the provision of development planning advice.

The guide has been completed and will be published soon.

#### How sensitive is our coast to sea level rise?



For more information contact:  
[adam.baylis@environment-agency.gov.uk](mailto:adam.baylis@environment-agency.gov.uk)

We are working with a WSP team to derive a consistent set of coastal erosion coefficients for England and Wales that allow for accelerated sea level rise (SLR) over the next century. The coefficients will be easy to apply to known historic recession rates to account for plausible future accelerations in mean SLR.

Phase 1 of the work has completed. This phase has identified the preferred methodology for generating the coefficients and their associated uncertainties. It also examined the issue of coastal catch up following sea wall removal or failure. Phase 2 will start later this year and will apply this method Nationally, develop guidance and publicise and disseminate the findings of the research to ensure awareness and uptake of resulting products.

#### A new approach to beach replenishment



We have been working in partnership with New Forest District Council and the Borough of Poole to trial, monitor and analyse a new approach to beach replenishment in Poole Harbour. The concept is to place locally dredged sediment in the nearshore and allow the prevailing waves and tidal currents to move the material toward and along the beach. The potential cost saving of such an approach could be large, and if



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proved to be successful and could be applicable to other areas along the coast.

In February 2015 we placed ~30,000 cubic metres of sandy material offshore at the up-drift end of Poole Bay. 15 months of intensive monitoring followed.

The trial showed that there is a sediment transport connection between the nearshore and the adjacent beach i.e. nearshore deposition can replenish the beach but that it is difficult to assess the long term fate of the material. It is likely that a larger quantity of material and more time is needed for sediment dispersal at this site to demonstrate long term viability.

The report has been completed and we are currently drafting a number of summary leaflets that capture the key learning for both practitioners and regulators and environmental specialists.

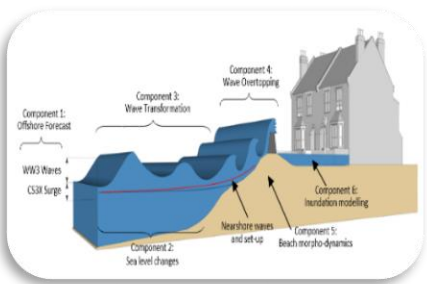
### Understanding the Impact of climate change on asset deterioration



The level of maintenance activity that may be required to future proof assets against increased deterioration associated with climate change is at present unknown. This project will improve our understanding of any additional preventative maintenance which might be necessary.

For more information contact:  
[andy.tan@environment-agency.gov.uk](mailto:andy.tan@environment-agency.gov.uk)

The work is due to finish in Autumn 2016.



### Investigating coastal flood forecasting

The key objective of this research project is to develop techniques and tools to help us understand and assess the performance of our coastal flood forecasting models against common criteria in order to inform investment needs.

For more information contact:  
[susan.manson@environment-agency.gov.uk](mailto:susan.manson@environment-agency.gov.uk)

The outcome will show us where investment needs to take place (local or national models) and if the aspirations of real time flood inundation mapping are practical and affordable for coastal risk areas given the baseline we will have established.

This work are been completed and is due to be published soon.



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## An update to EurOtop

Wave overtopping rates are a key input requirement for all coastal flood risk assessments. The EurOtop manual and calculation tools are world-leading, and broadly applicable. However it is arguable that the current guide is biased towards simple structure types, particularly embankments or vertical walls. The tools are therefore weaker for complex structures, particularly multi-element seawalls.

The aim of this research is therefore to update the manual and supporting tools through the incorporation of more empirical data to improve the applicability of the manual across a broader range of coastal asset type.

The work is due to finish in 2017.

## Developing the evidence base to support Working With Natural Processes (WWNP)

This project will develop the evidence base, and subsequently, the technical guidance and tools needed by flood and coastal risk management authorities to help them understand, justify, develop and implement FCERM schemes which include WWNP to reduce flood and coastal erosion risk.

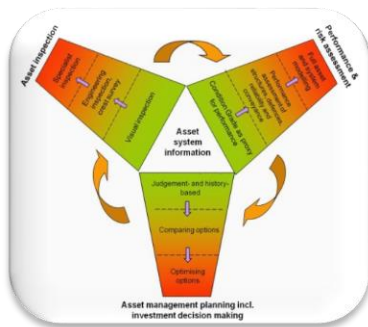
A lot of research has already been undertaken on this topic but it has never been synthesised in one location nor presented in a manner that is accessible to FCERM practitioners.

The project includes three interconnected work packages designed to bridge this evidence gap:

- Work package 1. Developing the WWNP evidence base
- Work package 2. Developing WWNP opportunity maps
- Work package 3. Identifying catchment and coastal laboratories

This work is now underway. Work to date has included a draft review of the literature and the identification of and development of a number of case studies.





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[paul.weller@environment-agency.gov.uk](mailto:paul.weller@environment-agency.gov.uk)



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[dave.hart@environment-agency.gov.uk](mailto:dave.hart@environment-agency.gov.uk)

## Asset Performance Tools

The Asset Performance Tools Programme aims to provide all FCRM practitioners with tools and guidance to provide more effective and efficient asset management, focussing on 3 key activities, 1) asset inspection, 2) performance, 3) planning. Ultimately, reducing the risk of flooding and coastal erosion by using the best available knowledge, techniques and evidence to manage our assets more effectively as well as making the best use of limited resources.

## Developing common approaches to sediment budget analysis

Despite their importance and value, sediment budgets are developed often in isolation, using a variety of methods. These methods are dependent on many factors including resource/ budget availability, the data available, sediment type, geographic scale and level of detail and accuracy required from the results. There is no consistent approach to sediment budget analysis (SBA) and presentation, yet it is central to understanding coastal processes. As a consequence, SBA is not easily comparable and results are of varying usefulness at the strategy and project scale.

We are undertaking some work with ABPmer, the Channel Coast Observatory and CH2MHill to produce practitioner focused guidance to identify common approaches in developing sediment budgets for different sediment types, temporal and spatial scales.

The project team have drafted an outline contents for the guide and aim for the work to be completed by the end of March 2017.

## Practical Approaches to transfer or decommissioning of uneconomic FCRM assets

It is important that the right people are managing the right assets the right way.

We are just starting some work that seeks to offer practical guidance and case study examples to help Flood and Coastal Risk Management practitioners within the Environment Agency, NRW and other Risk Management Authorities to transfer or decommission assets that are being maintained but where the benefits no longer justify the costs i.e. they are no longer economic.

The detailed scope for this work are currently being finalised and we will be going out to tender shortly.



For more information contact:  
[stuart.allan@environment-agency.gov.uk](mailto:stuart.allan@environment-agency.gov.uk)

### **Making use of the latest evidence in FCRM and climate change**

There is already evidence that climate change is increasing the intensity of rainfall events in the UK and causing accelerating sea-level rise globally. Existing research demonstrates that the impact of these changes depends not only on the magnitude of the change but also on the characteristics of different locations. This project extends and improves existing analyses of sensitivity to climate change for both fluvial and coastal floods to take account of the latest research. The results will be of great value in understanding, planning and adapting to changing flood risk over the rest of this century.

On the coast this work will include replacing the estimates of time-mean sea level used in UKCP09 with the state-of-the-art climate model data and methodologies used in the IPCC 5th Assessment Report.

### **Future Research**

Some of the work that we hope to deliver in the future is introduced below. If you are interested in working with us to further work in these areas please let us know. For a complete overview of the priority areas of research for the joint programme please see [the thematic areas](#).

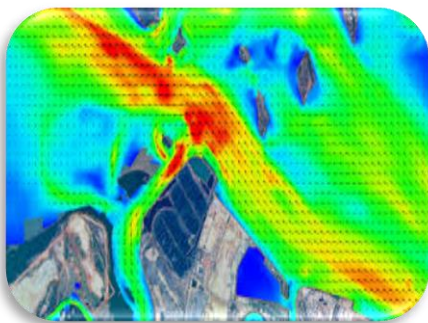


For more information contact:  
[eleonor.heron@environment-agency.gov.uk](mailto:eleonor.heron@environment-agency.gov.uk)

### **Tools for the better prediction of mixed beaches**

We spend a lot of money on beach recharge and management. Some beaches are predominantly shingle, some predominantly sand, both of which have good predictive tools, but most are mixed sand and shingle. It is widely recognised that there are no tools available for reliably predicting the behaviour and response of these mixed beaches.

Work is needed to scope out what future research activities are needed in this area to best address the questions of practitioners.



For more information contact:  
[susan.manson@environment-agency.gov.uk](mailto:susan.manson@environment-agency.gov.uk)

## The Use of Coastal Flood Models for FCERM purposes

There are numerous models on the market and being used in industry for elements of coastal flood modelling. The modelling train for coastal modelling is very complex and consists of several elements from the deep sea to overtopping of flood defence structures and inundation. To date each of our flood modelling projects has used the recommended models from our consultants which may have been commercial, in-house or a mixture. The modelling train is certainly not consistent across coastal FCERM work and we are often left accepting models and outputs that we cannot properly review or easily re-use

Practitioner guidance is required on choice, suitability and applicability of coastal flood models.



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[eleonor.heron@environment-agency.gov.uk](mailto:eleonor.heron@environment-agency.gov.uk)

## Increasing the accessibility of Futurecoast

The Futurecoast product was commissioned by Defra and developed by CH2M Hill in 2002 at a cost of £1.2 million.

It contains a wealth of information about our coasts and how they might change in the Future.

Despite its importance the only way to access the Futurecoast information is directly from the CD. Data is not downloadable nor can the CD be copied. There is a rapidly increasing risk that all of this data will disappear.

We would like to reproduce the Futurecoast CD and associated aerial imagery on a web platform with functionality equivalent to the present application.

## Groyne management

Groynes often form significant elements of coastal protection and flood defence schemes around our coasts.

Groyne management techniques continue to evolve as research develops, sources of funding change and practical experience is shared.

Research is therefore required to develop new tools and new guidance to help groyne management and maintenance in this area.

We are currently exploring how we work together with Ciria and other partners to address this need.

We will be holding a workshop in early January to help finalise the scope.



For more information contact:  
[susan.manson@environment-agency.gov.uk](mailto:susan.manson@environment-agency.gov.uk)

## Key academic research initiatives we are supporting

We are actively involved in a number of academic research projects which seek to improve the way we manage flood and erosion risk on our coasts. One of our roles in these projects is to ensure that the research outputs have practical applicability to coastal research stakeholders.



For more information contact:  
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### Integrating COASTal Sediment Systems (iCOASST)

**Consortium lead:** University of Southampton (Prof Robert Nicholls)

**Lead funder** - NERC

**Programme** - 2012 - 2016

**Aim** - To provide the next generation of modelling tools to help quantify how our coastline will evolve over the long term in response to our management activities and due to climate change. These new tools will be open source and available to the practitioner community

We are leading on a two year package of work which aims to identify, demonstrate and provide guidance on how the iCOASST outputs can be used routinely to deliver operational shoreline management benefits to the Environment Agency and coastal maritime authorities.

This is due to complete in 2017.

### The EU RISC-KIT project (Resilience Increasing Strategies for Coasts - toolKIT)

**Consortium lead:** Deltares (Dr. Ap van Dongeren)

**UK partners:** University of Cambridge (Dr Tom Spencer and Dr Anna McIvor) and Flood Hazard Research Centre (Middlesex University)

**Lead funder** – European Commission

**Programme** – 2013 - 2017

**Aim** - The project aims to create methods, tools and management approaches that can help reduce risk and increase resilience to major coastal flooding events. One of the key outputs is a toolkit for coastal managers and decision-makers, which will be open source and freely available. The UK case study for the work focuses on the North Norfolk coast.



For more information contact:  
[eleanor.heron@environment-agency.gov.uk](mailto:eleanor.heron@environment-agency.gov.uk)

## How to get involved

Please get in touch if you would like to find out more; would like to get involved in shaping our research; to share any local research initiatives you are involved in or any research needs you have.

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07887822311



## Coastal management

Delivering sustainable strategies and solutions



# Coastal management

HR Wallingford has an international track record of achievement in applied coastal research and specialist consultancy. We use our detailed knowledge of coastal environments and processes to deliver sustainable strategies and solutions.

Our world-renowned experts work with a wide range of clients, from consultants and contractors to developers, local and regional governments, regulators, NGOs and private landowners. We provide input at all stages of a project: from initial high level advice, to the specification and supervision of field survey work and onto detailed computational and/or physical modelling for engineering design and environmental impact assessment.



## Planning guidance

- > Coastal strategy studies.
- > Integrated coastal zone management.
- > Coastal defence and scheme design.
- > Asset management and monitoring plans.
- > Support for Shoreline Management Plans (SMP).
- > Project appraisal reports (PAR) and environmental impact assessments (EIA).
- > Beach Management Plans.

## Physical processes

- > Investigation of complex physical processes, such as waves, water levels, surges, flows and sediment transport.
- > Use of state-of-the-art numerical and physical models.

## Morphological assessment

- > Advice on morphological change.
- > Application of appropriate top-down / bottom-up modelling approaches.

## Sedimentation

- > Assessment of sedimentation regime within navigation channels and basins, such as ports, harbours and marinas.
- > Advice on potential infill rates to inform maintenance dredging requirements.

## Scour

- > World-leading advice on scour around coastal structures and at landfalls of cable and pipeline routes.
- > Guidance on scour protection design and installation.
- > Scour management plans.



## Engineering design

- > Integrated, optimum engineering solutions to ensure that the schemes assessed are appropriate, buildable and cost effective from feasibility through to completion.
- > World-leading expertise in performance and function of coastal structures.

## Beach design and management

- > Appropriate level of assessment to advise on the processes affecting beach management to maintain existing and create new safe, sustainable beaches.
- > Development of beach management plans.
- > Development of effective beach designs to provide sound defence solutions including consideration of bather safety and aesthetics.
- > Advice on beach nourishment and recharge including sediment quality, frequency and methodology for placement.
- > Establishment of monitoring programmes and review of monitoring data.

## Coastal impact

- > High-level desk assessments.
- > Coastal characterisation.
- > Numerical modelling of changes in near-shore wave conditions, tidal currents and sediment transport patterns.
- > Internationally recognised authority on release of sediment and subsequent plume dispersion from dredging activities.
- > Assessment of cumulative and in-combination effects.





## Environment

- > Scoping of environmental studies, surveys and data requirements.
- > Consultation with regulators and stakeholders.
- > Environmental Impact Assessment (EIA) and preparation of Environmental Statement (ES) chapters.
- > Numerical modelling of coastal, estuarine and fluvial processes.
- > Ecological modelling.
- > Noise modelling.
- > Establishment of monitoring programmes.

## Field data collection

- > Extensive experience of the scoping, planning and execution of field data collection.

## Data analysis and management

- > Management, analysis and interpretation of data.
- > Peer review of all forms of monitoring data.



## Specialist expertise in



Beach processes  
and behaviour



Coastal and  
estuarine  
process studies



Coastal structures



Climate change  
adaptation studies



Coastal erosion  
mapping and  
investigations



Environmental  
Impact  
Assessment  
and Appropriate  
Assessment



Flood and coastal  
erosion risk  
management



Managed  
realignment and  
habitat creation



Offshore  
development



Waterfront  
developments



HR Wallingford is an independent engineering and environmental hydraulics organisation. We deliver practical solutions to the complex water-related challenges faced by our international clients. A dynamic research programme underpins all that we do and keeps us at the leading edge. Our unique mix of know-how, assets and facilities includes state of the art physical modelling laboratories, a full range of numerical modelling tools and, above all, enthusiastic people with world-renowned skills and expertise.





## Report to Southern Coastal Group

December 2016

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### 1. SURVEYS

#### 1.1 Topographic Surveys

To date, all spring, summer and autumn surveys have been completed.

#### 1.2 Bathymetric Surveys

The swath bathymetry survey from Shoreham to Pagham Spit has been completed by EGS (international) Ltd. and is currently available on the CCO website.

#### 1.3 Lidar Surveys

Surveys for the forthcoming flying season will cover Pagham, Medmerry and Dungeness. Data for the last flying season is undergoing QC, except for the Isle of Wight which is now available.

#### 1.4 Aerial Photography

Aerial photography capture is complete, currently undergoing QC.

#### 1.5 Ordnance Survey Transformation OSTN15 / OSGM15

On 26<sup>th</sup> August, Ordnance Survey switched to the new transformation OSTN15/OSGM15 which is used to convert from ETRS89 to OSGB36 co-ordinates. CCO have converted survey control coordinates derived using OSTN02/OSGM02 via the new transformation and there is a general increase of 25mm in height on most points while positional change is minimal (<10mm). CCO have conducted some test static surveys on existing control for post processing to check against converted values, report to follow. All surveys from January 2017 to use OSTN15/OSGM15.

### 2. HYDRODYNAMICS

At the time of writing, all Waverider buoys are operational.

### 3. WEBSITE

Data available from the CCO website can now be used directly in GIS software (ArcMap, QGIS) via a Web Map Service (WMS). WMS layers request georeferenced images from a server and display them, but do not download or store the data they are displaying on the computer. This means you can use [www.coastalmonitoring.org](http://www.coastalmonitoring.org) data directly in a GIS and overlay it with your own data, without having to download individual tiles first. All that is needed is an internet connection and an account on the CCO website.

For more details please see Newsletter Issue 44, October 2016, link below.

### 5. GENERAL

For further information and latest developments please check the newsletters on the CCO website <http://www.channelcoast.org/southeast/newsletter/>

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## **Report on Asset Data Workshop 16/11/16**

**Present:** Steve Cook NFDC, Travis Mason CCO, Luke Ellison IoW, Neil Watson EA, Grant Armfield and Henry Middleton Dorset Councils, Matt Hosey ESCP.

### **Purpose of Workshop:**

At the September meeting of Southern Coastal Group we discussed the opportunity to formulate a bid to Environment Agency for gathering and storage of coastal asset data. This meeting was established to assess current data requirements and ways of working amongst coastal authorities for internal management purposes and which technical systems were currently employed. Further, it was an opportunity to consider what baseline data already exists and discuss consistent acquisition and storage to meet the requirements of the AIMS database and asset condition appraisal.

### **1. Current data requirements**

Local authorities may have an obligation to use bespoke software systems for insurance liability inspection records or property and estates terrier systems. There was a clear distinction made between the need for evidence of monthly checks on hazard or condition as opposed to the strategic need to record an asset system performance or residual life. The systems are more useful if they assist in the generation or administration of maintenance and repair programmes.

Authority	Hardware/software	Outputs
WDDC/W&PBC	Trimble hand-held devices 'K console' software feeds Excel spreadsheet	Export inspection data to terrier system. Manual work ticketing. Photo records
IoW	Based around SMP2 Defence Appraisal. GIS map with tables on condition and residual life. Photo of each element. Monthly visual inspection.	Strategic assessment of condition and life against SMP. Word document on inspection for liability (and maintenance) purposes.
NFDC	No routine inspection, post storm and works under investigation. Exploring systems such as 'Asset Coast'	Compatible with estate management and public liability requirements.
ESCP	PDA Trimble's are used to inspect against a pre-populated template. Each asset has been allocated an ID number. Records kept on ARC-GIS online. Public/staff app for defect reporting.	Asset Plan generated live from maintenance reports. GIS reports on condition.

## **2. Recommendations for consistency in data collection**

- a. Use compatible asset registration fields
- b. Adopt common conventions in inspection recording
- c. Distinguish strategic from tactical data needs
- d. Capacity to inspect and flag for liability purposes
- e. Maintain photographic records
- f. Capacity to generate a maintenance programme
- g. Use common standards of inspection and condition assessment
- h. All third part assets should be included in order for risk to be fully understood.
- i. Preference for a universal coastal frontage collection including harbours

## **3. Coastal Monitoring Programme Structure Surveys**

Every beach which is easily accessible is subject to a full baseline structure survey within the 5 year programme which would include beach profile and associated structures and toe levels. It would be practical to extend the survey specification to laser-scan all asset locations and extract key data on levels and type. A baseline laser scan could also be the foundation for Building Information Modelling (BIM). It is current practise to obtain photographic images to accompany laser-scans so these could be added to the baseline survey.

## **4. Managing and storing Data**

The issues discussed under this topic included: networks, scale of licencing, Arc GIS, SWIM, Local View, computer specifications and firewalls, minimising future licence commitments. (See diagramme overleaf)

## **5. Plan of Action**

5.1 Develop a baseline structure survey specification.

5.2 Consistency of identifying component assets and interpretation of condition assessment.

5.3 Confirm numbering and cross referencing for export protocols

5.4 Canvass opinion on all systems available

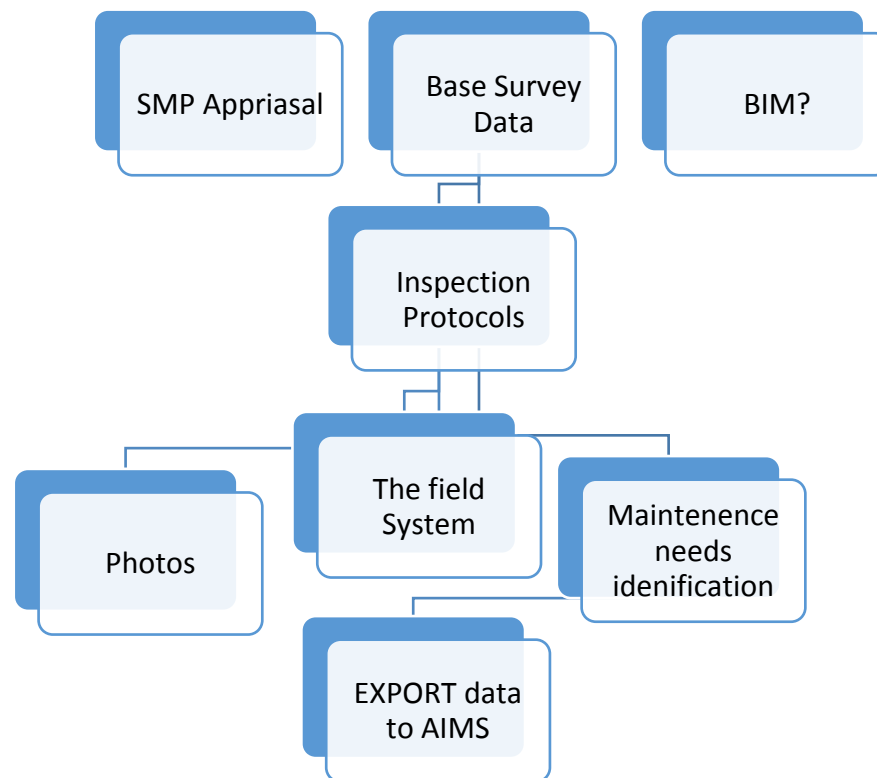
**5.5 Hold further workshop to develop a system specification 11 or 12 January**

5.6 Link up with other Coastal Groups for best practice

5.7 Test the market place for bespoke systems

## 5.8 Obtain EA asset survey and condition assessment protocols.

### Key data for defence appraisals



Neil Watson 2 December 2016  
Southern Coastal Group Chair

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## PAPER F

Purpose : For Discussion

Committee: **SOUTHERN COASTAL GROUP**

Date: **DECEMBER 2016**

Title : **RESEARCH PROGRAMME**

### REPORT OF THE CHAIRPERSON OF THE SCOPAC RESEARCH SUB-GROUP

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#### **1 CURRENT RESEARCH PROGRAMME**

The 5 year SCOPAC Research Programme is presented in Figure 1. The Programme was prioritised by the Southern Coastal Group at the meeting on the 4<sup>th</sup> September 2015 and approved by SCOPAC at the meeting on the 18<sup>th</sup> September 2015. The annual cost of allocated research is approximately £21,500 per year.

Research/project	Financial Yr					TOTAL
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	
Andy's Maintenance of Timber Groyne Guide						£15,000.00
BBC Dismantling Timber Groynes						£10,000.00
Historical photography scanning						£11,000.00
Contaminated land						£15,000.00
Preston tracer study - minor fund 2017/18						£ 5,000.00
Design guidance for mixed sand and shingle beaches						£10,000.00
Vegetated shingle project						£ 5,000.00
Low height seawalls						£13,500.00
Ebb deltas						£15,000.00

Figure 1: SCOPAC 5 year research programme

Following the SCOPAC Research Sub-group meeting on the 25<sup>th</sup> November, re-allocation of existing funds from the 5 year SCOPAC research programme was discussed. The recommendation from the meeting will be presented to the Southern Coastal Group on the 9<sup>th</sup> December for a decision before being taken to SCOPAC for endorsement on the 20<sup>th</sup> January 2017.

Recommendation: For decision at meeting

#### **2 NEW STUDIES**

Following the SCOPAC Research Sub-group meeting on the 25<sup>th</sup> November, the following new studies were discussed as to their priority for SCOPAC. The recommendation from the meeting will be taken to the Southern Coastal Group on

the 9<sup>th</sup> December for a decision before being taken to SCOPAC for approval on the 20<sup>th</sup> January 2017.

- SCOPAC wide tracer study – high priority
  - SCOPAC co-ordinates study at a cost of £5k per annum
  - Local Authorities and the Environment Agency commission the Eastern Solent Coastal Partnership to undertake individual studies using FDGiA.
  - SCOPAC to consider a study in 2019/2020 to calibrate computer models with findings.
- SCOPAC wide storm analysis – high priority
  - Cost and scope to be investigated by SCOPAC Research Chair
- Design Guidance for mixed sand and shingle beaches – high priority
  - This potential FCERM R&D project is currently not being funded
  - SCOPAC Research Chair to liaise with Eleanor Heron and Owen Tarrant as to alternative funding options.
- SURGEWATCH ([www.surgewatch.org](http://www.surgewatch.org)) - medium priority
  - SCOPAC to fund website domain name renewal (approximately £500 per year).
  - Dr Ivan Haigh to keep SCOPAC up to date on storm surge and sea level rise research.
- Solent Forum BuDS – medium priority
  - SCOPAC to offer support but not funding. Refer to MMO project.

Recommendation: For decision at meeting