Secretary: Havant Borough Council

Public Service Plaza, Havant,

PO9 2AX

Enquiries Nicholas Rogers

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Dear Sir or Madam

#### **SOUTHERN COASTAL GROUP**

Date: 11 March 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

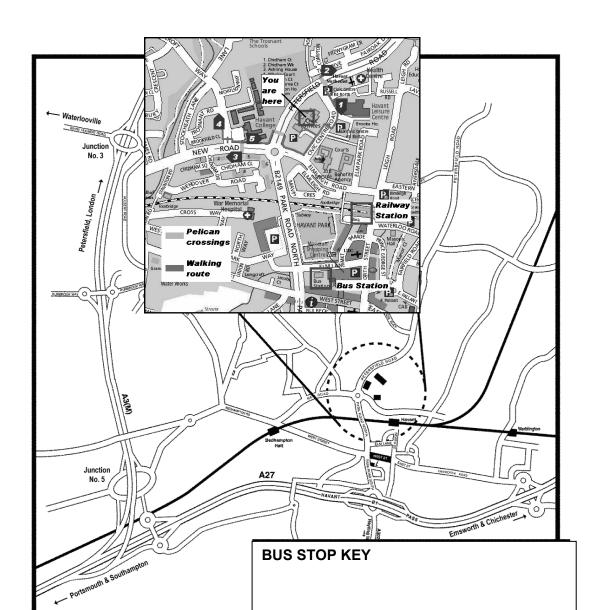
Nicholas Rogers Havant Borough Council

# **AGENDA**

- 1 Apologies
- 2 Minutes of Previous Meeting and Matters Arising (Paper A) (Pages 1 6)
- Chairman's Update & Dissemination from National Coastal Chairs (Neil Watson Paper B and C) (Pages 7 14)
  - a) Coastal Asset Systems
  - b) Climate Change Allowances
  - c) Freeboard
  - d) Agency/NE boundaries

National Coastal Monitoring Programme Update (Paper D) 4 Paper D to follow a) Update on progress (Steve Cook) R&D Programme Update (Sam Cope - Paper E) (Pages 15 - 22) 5 Storm Damage Reports from Members 6 SCG Budget Profile and Action Plan Priorities 7 a) Funding Request – Maine Consents Guide 8 Coastal Modelling & Forecasting Services To receive Presentation from Keith Nursey, Coastal Modelling and Forecasting Senior Team Leader Supporting Delivery 9 a) Capital Programme MTP Refresh (Neil Watson) b) Efficiency Targets (Matt Hosey) c) 5 Case Project Approval d) Procurement Update (Matt Hosey) e) Updating Habitat Creation Programme (Nick Gray)

- a) Section 18 Reporting
- 11 AOB





Public Service Plaza Civic Centre Road Havant Hampshire P09 2AX

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



1

SOUTHERN COASTAL GROUP 11 December 2015

#### HAVANT BOROUGH COUNCIL

At a meeting of the Southern Coastal Group held in on 11 December 2015

#### Present:

Ms Sarah Cairns

Mr Lyall Cairns, Eastern Colent Coastal Partership

Andrew Colenutt, New Forest District Council

Steven Cook, New Forest District Council

Dr Samantha Cope, New Forest District Council

Mr Bryan Curtis, Worthing Borough Council

Dr Uwe Dornbusch, Environment Agency

Dr David Harlow, Bournemouth Borough Council

Mr Matt Hosey, Eastern Solent Coastal Partnership

Mr David Lowsley, Chichester District Council

David Picksley, ESCP

Mr Stevyn Ricketts

Mr David Robson

Mr Stuart Terry

Mr Neil Watson

Mr Steve Woolard, Christchurch Borough Council

#### 52 Apologies

Apologies were received from Jenny Jakeways, Mike Goater, Andrew Gilham, James Addicott, Gordon Wilkinson, Angela Marlow and Ken Buchan

#### 53 Minutes of previous meeting and Matters Arising (Paper A)

It was RESOLVED that the minutes be set as a correct record with the following amendments

Andrew Colenutt listed as present

Minute 43 – RECOMMENDED to SCOPAC that charges for 2016/17 remain the same as 2015/16

Minute 45 – The Chairman outlined that at a meeting of the coastal chairs he was able to advise on the perceived distance between the marine plans and their adaptability to the South Coast.

Minute 46 – over 5 years, £21,500 per annum would be available to cover costs of research.

Minute 47 – South East CMP would be going to tender.

# 54 Chairman's Update & dissemination from National Coastal Chairs (Neil Watson - Paper B)

The Chairman introduced the paper to the officers and outlined its content. Attention was drawn to the 'Flood Re' portion of the paper and officers were asked to consider the implications this might have on insurance and underwriting in high flood risk areas. Officers raised questions over the applicability of Floor Re in typical situations and concerns over the costs of insurance premiums.

The group discussed the FRMPs for the Southern coast and considered the possibility of inviting other Coastal Chairs to the SCG meetings for formal discussions on regional and nation FRMPs.

## **Asset Management**

Neil Watson advised that the last Coastal Chairs meeting focused on asset management. It was discussed how national assets had been affected over the last year's stormy periods. Local authorities had been consulted on the data held regarding their assets. Neil then introduced the NCERM update, along with data sources and linages.

It was advised that a variety of data sources had been used to compile asset data nationally, including Bathymetry surveys, Lidar data and local asset information. The Chairman presented to officers an overview of how this data was collected and how it fed into NCERM update. Officers discussed the possibility of a database containing asset information could replicate work unnecessarily and some pieces of information being missed from the data set, such as erosion maps. It was advised that data such as erosion maps and flood risk areas were already circulated in SMPs. Officers agreed that it was important to ensure any changes in the SMPs are forwarded to be fed into the NCERM and to focus on whether the data could be quality assured.

Officers agreed it may be worthwhile to hold an asset management workshop during 2016.

# 55 National Coastal Monitoring Programme Update (Paper C)

#### <u>Implications of funding constraints</u>

The Chairman asked Andrew Colenutt to introduce the report to officers. The update included details of:

- Increased geographical coverage
- Commencement of Lidar
- Continued success of websites
- Commencement of a review of data collected over the last 15 years.

Andrew advised that some funding constraints had led to contingencies being reduced. These contingencies had been needed, however

concern was raised that in emergency situations they would prove beneficial, such as following a significant storm event. Officers agreed that post storm surveys provided a high amount of very useful data and removal of these contingencies may have a negative impact. Officers also discussed increasing efficiencies, going forward into 2016.

#### **Bournemouth Sediment Sampling**

David Harlow advised officers on the changes to Bournemouth's Sediment Sampling.

- Sediment sampling may cease in 2016
- 42 continuous years worth of information was held on file Sediment sampling data proved very useful in the past
- May be necessary to stop the Baseline Survey due to difficulties collecting valid and applicable data samples.
- May limit the amount of shoreline profiles looked into
- May be necessary to drop the annual reporting

These would be introduced in order to achieve strategic savings. Other local authorities in the area had advised they had also employed similar strategies to achieve savings and efficiencies.

Officers agreed that in order to remain effective the SE region CMP would need constant and consistent support from officers as it enabled a common view, a collective approach and better communication.

56 R&D Programme Update (Sam Cope -Paper D)

Dr Samantha Cope, Chair of the Research Sub-Group gave an overview of the progress of the Research and Development Programme. The update included details of ongoing research projects and those that had reached completion.

The following studies were discussed:

- SCOPAC Minor projects fund
  - Coastal sediment budget project a preliminary report had been produced and once finalised, would be circulated to officers and members.
  - Establishing shingle transport pathways Church Norton Spit.
  - Beach response in front of structres on open coast.
     Testing would start in January
- SCOPAC sediment transport study
- Reducing regional flood and erosion risk from wave action on the channel coast
- Monitoring of Poole Nearshore Replenishment Trials.

Officers were invited to comment and ask questions of any of the studies included in the report and presentation. The Chairman thanked Dr Cope for her presentation.

## 57 SCG Budget profile and Action Plan Priorities (Lyall Cairns)

A report was tabled at the meeting that outlines the SCG budget profile and action plan. The report isolated both SCG strategic priorities and SCOPAC strategic priorities. Additionally the budgets and forecast expenditures for both groups were illustrated.

Lyall Cairns introduced the report and outlined the following points:

- Income and expenditure
- Shoreline Management plan contributions
- Coastal Research and the work of the Research Sub-Group
- Sharing good practice through workshops and meetings
- Communications, publications and administration fees.

The Group discussed the Importance of maintaining a detailed budget profile and action plan in order to better illustrate the priorities of the SCG and SCOPAC. The Chairman thanked Lyall for producing the action plan and encouraged officers to get in touch with Lyall with any further comments or queries.

This item was deferred.

## 59 Supporting Delivery

The Group discussed the strategic objectives of the Southern Coastal Group and how best to support these objectives.

Neil Watson discussed the Capital Programme and Medium Term Plan refresh and advised the group on the progress of the plans.

Officers were invited to ask questions regarding the progress of the refresh.

Matt Hosey was invited to provide the group with an update on efficiency targets within the SCG. Officers discussed the difficulties in achieving efficiency targets, in addition to the successes each local authority had experienced. Officers discussed holding a workshop to further discuss efficiency targets and how to achieve these.

Additionally officers were advised on the progress of the procurement of the New Professional Services Framework. It was advised officers would be updated with any progress as it happened.

## 60 SMP Action Plan Progress (Stuart Terry)

Stuart Terry from the Borough of Poole provided a general update to the group regarding the SMP action plan.

Officers discussed that the SMPs were a useful data source for the group however much of the data was under utilised and needed refining. There would be more attention bought to using the data held within the SMPs to better inform the SCG strategic objectives.

The group thanked Stuart for his work as theme lead for the SMP action plans.

#### 61 Summer 2016 Field Trip ideas (All)

The group discussed potential sites for the SCOPAC Summer Field visit to view works within the SCG region. Officers were invited to make any proposals and comment on other proposals put forward.

Officers agreed that there were several potential sites they could visit. In light of the timber groyne working taking place on the Bournemouth Coastline, this was the preferred option.

#### 62 Confirmation of dates for 2016 SCG meetings (Jack Caine)

The group agreed to set the following meeting dates for 2016:

- 11 March 2016 10am
- 24 June 2016 10am
- 23 September 2016 10am
- 9 December 2016 10am

In addition to the dates discussed, officers agreed that it would be beneficial to hold a 5 Case Project approval workshop in March 2016 and an Efficiencies Workshop in June 2016.

#### 63 AOB

There was none

## 64 David Lowsley Presentation

The group were advised that David Lowsley, Senior Coastal Engineer for Chichester District Council, would be retiring.

The group gave thanks to David Lowsley for his considerable hard work and dedication to the work of the Southern Coastal Group.

The meeting commenced at 10.00 am and concluded at 1.20 pm

# Coastal Group Report: 13<sup>th</sup> April 2016 – Coastal Group Chairmen's Summary

#### SUMMARY

- This summary provides an update on key developments in coastal work areas and developments related to the Standing Conference on Problems Associated with the Coast (SCOPAC), the South East Coastal Group (SECG) and Southern Coastal Groups (SCG).
- The summary is for information only.

**Introduction** - The aim of this summary is to provide an outline of the salient outcomes, issues and progress on the main items discussed at the last meetings of the Coastal Groups for its members, Councillors and the Regional Flood & Coastal Committee. Where possible it will update items to present day. But, please note, it is not a substitute for the minutes of each Coastal Group meeting. Acknowledgement of some items captured from the National update for Coastal Groups.

During December a succession of storms (including Desmond Eva and Frank) caused damage to beaches on the South coast. Analysis of wave buoy data demonstrates that during December 2015 the sea was as nearly as energetic as in February 2014 although large damaging waves were less prevalent. The constant presence of high energy waves led to the attrition of beach levels and volumes in many exposed locations. Emergency works were required at locations where sea walls and promenades collapsed.

**Summary of the Coastal Group Activities** – Priority for the group's members in the last quarter has been completing outstanding works and preparing for the next financial year including grappling with the ever changing requirements of the Agency in the following:

- Adapting to Climate Change: Advice for Flood and Coastal Erosion Risk Management (Update of 2011 version)
- 5 Case Business Model for all new applications for funding and scheme development
- Meeting the needs of the new Efficiency Registration system brought in immediately before Christmas and
- Updating and development of schemes in the 6 year programme

Whilst it is understood that change is needed the above are considered to be significant extra demands on both Agency staff and RMAs at a busy time of year. The RFCC must acknowledge these major new extra demands and new guidance of this when considering the inevitable delay likely for some schemes. It is recommended that in the future the introduction of significant changes to how work is done are phased in and not introduced all at the same time.

#### Refreshing the Coastal Strategic Overview

This informal programme of work is being co-ordinated by the Environment Agency national Strategy Delivery team and Bryan Curtis, Chairman of Coastal Group Network. There are many strands which reflect a variational Strategy Delivery team and Bryan Curtis, Chairman of Coastal Group Network.

main work areas that reflect the key concerns of coastal Risk Management Authorities and key roles of Coastal Groups:

- 1) **Understanding of Risk**: developing a more systematic national picture of risk in SMPs, including risk 'hotspots' which are particularly notable, and places where there is a particular risk of SMPs being unachievable; developing an improved national coastal asset data record, whether using NCERM (erosion) and State of the Nation (flooding) or other systems, to ensure we have a more representative picture of coastal erosion and flood risk; reviewing data, modelling and mapping to ensure the information underpinning SMP policies and actions the best it can be.
- 2) **Governance**: developing a more coherent coastal community within the Environment Agency to ensure greater common understanding of coastal work priorities across teams, and improved staff resilience; reviewing the achievements of Coastal Groups and their ongoing challenges (especially regarding capacity and changing priorities)with reference to the Terms of Reference developed for them by Defra in 2008.
- 3) **Incident Management**: ensuring systems are in place to improve the way we plan for and respond to coastal incidents, and that those involved are able to access clear information on procedures connected with emergency works.

The over-arching aim is to ensure the Environment Agency's Strategic Overview is fit for purpose in terms of the information we have, and the governance and relationships that enable that information to be used for everything from strategic planning to monitoring, scheme delivery, communications and incident response.

In 2015/16 achievements include: - this refresh work being defined and priority work set out and communicated at Coastal Group Chair meetings and at Coastal Groups themselves, as well as at the Stakeholder Forum and elsewhere; - Coastal Groups consulted on risk hotspots and information collated; - asset information been improved in 'State of the Nation' and NCERM (see below); - a new five year investment phase of coastal monitoring has been agreed and approved, led by the team at Channel Coastal Observatory; - a review with Coastal Group Chairs of the Terms of Reference, currently being drawn into a report, which will be shared with Coastal Groups in Spring; - a new coastal community established in the Environment Agency with existing networks strengthened and formalised, and a new cross-cutting Head of Business for the Coast (Pete Fox).

This work will continue into 16/17, including a focus on SMP governance in Coastal Groups.

## **SMP Action Plan Updates**

The Environment Agency reports annually to Defra on the progress of SMPs as part of the statutory reporting on the national FCRM Strategy under S 18 of the Flood & Water Management Act. Environment Agency Area teams have been asked to use the usual template for submitting information on SMP action plan progress, with added comments on overall progress during the past five years and particular challenges going forward: this year's S 18 Report will be a special report giving more of a narrative covering the first five years or so operating under the Act itself. The deadline for EA area staff to provide this

information is 22nd April 2016, and are likely to require help from local authority partners to inform the exercise: assistance is gratefully received.

# **National Coastal Monitoring Programme**

The National Coastal Monitoring Programme allocation for 2016/17 has now been approved by RFCCs, with the StAR business case and indicative allocation (£23 million to 2020) approved by the Environment Agency Executive Director of Operations and Director of Finance respectively. Letters were sent in January 2016 to each regional programme lead authority confirming approval and the allocation.

## **Habitat Creation Programme**

The Environment Agency's Regional Habitat Creation Programme has been discussed at FCRM-Water Land & Biodiversity Joint Board in February to agree an approach given the lack of a regional structure in the Environment Agency and the 'Defra Steer' on environmental delivery and FCRM. The Board followed the recommendation that the programme be re-invigorated to ensure continued confidence in scheme delivery, using a flexible structure that could still draw on the expertise of staff outside FCRM and work to a broadly 'regional' model, but with accountability for habitat creation resting ultimately with Area FCRM Managers. This structure and associated 'habitat creation leads' are being finalised in March and contacts will be supplied. The Defra Steer means the new Habitat Creation Programme will need to achieve more habitat delivery through FCRM schemes (as opposed to separately from them), and more explicitly link habitat creation to the FCRM scheme driving it in the Investment Programme.

## **NCERM Updates**

In December we issued a data request to local authorities via Coastal Groups with the aim of running the first annual NCERM update. Due to resource issues and the preference to align this with a similar request for the 'State of the Nation' project (see below), this request came with a limited window of opportunity to respond and was done on a 'best endeavours' basis. The deadline for returns was 19th January and we received over 30 responses from Local Authorities - a positive response given the timescales. The information supplied is now being analysed by CH2M and outputs will be provided in April for validation by local authorities in May prior to updating the information online in the summer (subject to approval by the local authorities concerned). Environment Agency Area staff will be arranging these validation meetings and contacting you soon if you submitted a return.

The next annual update will begin in September, and work to the originally planned schedule, giving local authorities more time to engage with the process.

## State of the Nation - Coastal Asset Data Improvement

The December data request to Local Authorities also aimed to improve coastal asset data in the 'State of the Nation' National Flood Risk Assessment project. The data request focussed on improving data held on coastal asset type, height and condition. The information provided will feed into the Continuous Defence Line (CDL) and inform pilots currently being run to validate outputs. If these pilots are successful a new national overtopping dataset will be generated for England that will be used in the National Flood Risk Assessment.

Many thanks to local authorities who provided information to us on this and the related NCERM request.

#### Flood & Coast Conference 2016 and launch of Project Excellence Awards

Following the successful relaunch of the Flood and Coast Conference 2016 in Telford between 23<sup>rd</sup> – 25<sup>th</sup> February 2016 it is worth noting that at the award ceremony at the conference dinner the following projects in this area received awards:

- Littlehampton Arun East Bank Tidal Walls Scheme Category Community Action and Partnership
- Littlehampton Arun East Bank Tidal Walls Scheme Category Customer Service
- Broom Hill Sands Coastal Defence Scheme Category Innovation
- Newhaven Flood Alleviation Scheme Category- Special award to recognise the important contribution of project development

**Dates of last meetings** – SECG 3<sup>rd</sup> March 2016, SCG 11<sup>th</sup> March 2016, and SCOPAC 15<sup>th</sup> January 2016.

**Future meeting dates**: SECG 26<sup>th</sup> May 2016, 1<sup>st</sup> September 2016 and 1<sup>st</sup> December 2016 and SCG 24<sup>th</sup> June 2016, 23<sup>rd</sup> September 2016 and 9<sup>th</sup> December 2016. All meetings, where possible, are arranged to be before RFCC meetings in a bid to advise of current issues.

#### **Future Conferences and Events which may be of interest**

There are a number of upcoming Coastal workshops and events which coastal practitioners may be interested in (NB this is not a definitive list):

- Asset Coast Seminar/workshop 7<sup>th</sup> April 2016 ICE London
- SIG AGM and Knowledge sharing event at Blakeney, North Norfolk 15<sup>th</sup> and 16<sup>th</sup> June 2016

B Curtis Chairman South East Coastal Group <a href="www.se-coastalgroup.org.uk">www.se-coastalgroup.org.uk</a>
N Watson Chairman Southern coastal group <a href="www.southerncoastalgroup.org.uk">www.southerncoastalgroup.org.uk</a>
M Penfold Chairperson SCOPAC <a href="www.scopac.org.uk">www.scopac.org.uk</a>
March 2016

# Environment Agency

# **National Coastal Overview Update**

March 2016

# **Refreshing the Coastal Strategic Overview**

This informal programme of work is being co-ordinated by the Environment Agency national Strategy Delivery team and Bryan Curtis, Chairman of Coastal Group Network. There are many strands which reflect a variety of needs, but they broadly fit under three main work areas that reflect the key concerns of coastal Risk Management Authorities and key roles of Coastal Groups:

#### 1) Understanding of Risk:

- developing a more systematic national picture of risk in SMPs, including risk 'hotspots' which are particularly notable, and places where there is a particular risk of SMPs being unachievable;
- developing an improved national coastal asset data record, whether using NCERM (erosion) and State of the Nation (flooding) or other systems, to ensure we have a more representative picture of coastal erosion and flood risk;
- reviewing data, modelling and mapping to ensure the information underpinning SMP policies and actions the best it can be.

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- developing a more coherent coastal community within the Environment Agency to ensure greater common understanding of coastal work priorities across teams, and improved staff resilience;
- reviewing the achievements of Coastal Groups and their ongoing challenges (especially regarding capacity and changing priorities)with reference to the Terms of Reference developed for them by Defra in 2008.

#### 3) Incident Management:

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Many thanks to local authorities who provided information to us on this and the related NCERM request.

# LGA Coastal SIG - Succeeding through coastal partnerships seminar - 11th March 2016

The LGA Coastal Special Interest Group is inviting members and non-members to attend a free seminar on Friday 11th March 2016 at LGA House, Smith Square, London, SW1P 3HZ - 11am - 1pm to share learning and experience on partnership working at the coast.

Places are limited. To book your place, please contact Coastal SIG Co-ordinator, Lucy Williams by email at <a href="mailto:lucy.williams@eastsuffolk.gov.uk">lucy.williams@eastsuffolk.gov.uk</a>. For further information see: <a href="mailto:http://lgacoastalsig.com/news-2">http://lgacoastalsig.com/news-2</a>

# Staff changes at the Environment Agency

Last but not least, Eleanor Blundell will be leaving her secondment to the national FCRM Strategy Delivery team at the end of March to join the Cumbria Flood Partnerships work. Thanks to Eleanor for all your hard work, and good luck in the new role! Nick Hardiman will remain the coastal contact in this team.



# Agenda Item 5

# PAPER D

Purpose: For Discussion

Committee: SOUTHERN COASTAL GROUP

Date: MARCH 2016

Title: **RESEARCH PROGRAMME** 

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

#### 1 CURRENT RESEARCH PROGRAMMES

## 1.1 SCOPAC MINOR PROJECTS FUND (2013/2014 AND 2014/2015)

Following the Southern Coastal Group meeting in July 2013 it was agreed the following Minor Project would be funded for 2013/2014 and 2014/2015.

# **University of Southampton – coastal sediment budget project** Minor contribution of £4,000

The University of Southampton was awarded £4,000 as a contribution towards a project focusing on sediment sources and transport pathways across the Dolphin Bank and Dolphin Sand, within the context of the much larger sediment cell of Poole and Christchurch Bays.

## Key questions are:

- 1. Are Dolphin Sand and Dolphin Bank fed by the same sediment source?
- 2. What are the sediment transport pathways over and around the banks?
- 3. Are these banks largely relict, or are they sinks or sources of sediment to the coast?

During October 2014, 60 sediment samples were collected from the Dolphin Bank and Dolphin Sand in Poole Bay. These have been sieved in the lab and grain size trend analysis run on the samples to establish net sediment transport. This, along with analysis of Regional Coastal Monitoring data, will add new information to establishing sediment transport directions and sources around Poole and Christchurch Bays. This will inform the update of the SCOPAC Sediment Transport Study.

The report has now been submitted and will be circulated to the SCOPAC Research sub-group for comment before being uploaded onto the SCOPAC website.

Recommendation: For information

## 1.2 SCOPAC MINOR PROJECTS FUND (2015/2016 AND 2016/2017)

Following the Southern Coastal Group meeting in December 2014 it was agreed that SCOPAC would benefit from funding the following two Minor Projects for 2015/2016 and 2016/2017.

# Dr Uwe Dornbusch (Environment Agency): Establishing shingle transport pathways from the sub-tidal to the beach: Church Norton Spit $Minor\ contribution\ of\ \pounds 4.000$

Church Norton Spit at Pagham Harbour, West Sussex has accreted by approximately 100,000m<sup>3</sup> of material in the past 10 years, making it one of the largest accreting features across the SCOPAC region.

The origin of the material is unknown; therefore this study will investigate whether the material is transported from the sub-tidal across the nearshore bedforms to the shore. The sub-tidal area fronting the Pagham frontage is very shallow and covered with gravel. Some of this is visibly moving onshore as landforms (Inner Owers) but there are some peculiar shingle features at right angles to the beach that are thought to act as transport corridors.

SCOPAC has awarded £4,000 as a contribution towards the project to establish offshore to onshore shingle transport pathways at Church Norton Spit. Investigation of the nearshore bedforms will be achieved using two approaches:

- 1) A desktop GIS approach using South-east Regional Monitoring Programme data to capture changes over the last 10 to 15 years.
- 2) Sediment tracing using the methods developed by the Eastern Solent Coastal Partnership to document shingle movement under different conditions.

The project was instigated by Dr Uwe Dornbusch of the Environment Agency, Arun DC and Chichester DC and is being led by Dr Cherith Moses from the University of Sussex with input from Professor David Sear from the University of Southampton. The Eastern Solent Coastal Partnership is providing the tracer study retrieval equipment.

Lucy White from the University of Sussex has collected the native pebbles from the beach. These pebbles have been drilled and the Radio Frequency Identification Tags fixed in place. The plan is to undertake four deployments, of which the first has taken place.

# Dr Andy Pearce (Eastern Solent Coastal Partnership): Beach response in front of structures in open coast

Minor contribution of £4,000

Lowering of beaches in front of coastal structures is widely accepted as a leading cause of failure. Beach lowering and toe scour is difficult to detect as the receding tide and storm waves tend to bury this evidence and any damage to structure foundations.

The SCOPAC region includes numerous beach structures at risk of scour, with foundations of poorly known depth and condition. Improved understanding of the scour risk at these structures will help SCOPAC members to better manage the scour risk and to design scour resistant replacements.

The Eastern Solent Coastal Partnership (ESCP) will undertake a scoping study to develop a cost effective method to determine maximum scour depth in front of coastal structures during a storm event. The first stage of the project is to conduct a test deployment at the ESCP's own risk to confirm the most effective method for installing scour monitoring equipment into a beach. Subject to a successful test, the ESCP will apply the SCOPAC funding to undertake a deployment at a seawall structure in winter 2016/17 to measure changes in storm beach levels and maximum scour depth.

The ESCP have commenced the scoping stage of the project, building on the experience of Amanda Holland, a Ph.D student studying short term beach level changes at Hayling Island. The ESCP have scoped appropriate sites within the Partnership frontage to undertake the pilot deployment. Stokes Bay west is the preferred test site given the frequent beach lowering. The scour monitor deployment methodology will be developed for testing during March 2016.

Recommendation: For information

#### 1.3 MONITORING OF POOLE NEARSHORE REPLENISHMENT TRIALS

Channel Coastal Observatory: £15,000 from SCOPAC and £116,000 from EA R+D fund (2015 – 2016)

SCOPAC are contributing £15,000 towards the monitoring of a trial which has placed 30,000 m³ of sand on the seabed, allowing natural processes to push it onshore to replenish the beaches in Poole Bay. This technique has not been tested in the United Kingdom to date.

The project commenced in February 2015, and involved the Borough of Poole working in partnership with Poole Harbour Commissioners, the Environment Agency, University of Southampton and the Channel Coastal Observatory. Poole Harbour Commissioners provided the sand from maintenance dredging of Poole Harbour entrance, thereby recycling the sand back into the system, rather than dumping it offshore.

The works were undertaken between the 9th and 14th February 2015, when 30,000m³ of sand was placed on the sea bed approximately 450m offshore at Canford Cliffs Chine in Poole Bay. Six survey sets have been completed since the material was placed on the sea bed. Each set consists of a topographic survey of the beach and a bathymetric survey of the sea bed. The tracer searches have been completed and the Channel Coastal Observatory (CCO) has received the final results.

The Acoustic Doppler Current Profiler (ADCP) is still in position. This measures the speed, direction and turbidity of water currents using sound waves. With the ADCP installed, any turbidity difference between the trial and conventional beach recharge can be assessed. Further analysis of the silt traps is in progress.

A topographic and swath bathymetry survey will take place in March 2016 to identify how the material has moved during the winter months.

Analysis of the results is on going by the CCO and will be published as soon as they are available. A leaflet has been produced, outlining preliminary results <a href="http://scopac.org.uk/29%20July%20Poole%20Bay%20Nearshore%20Trial%20LOW/20RES%20Final%20%20inc%20EA-CCO%20comments.pdf">http://scopac.org.uk/29%20July%20Poole%20Bay%20Nearshore%20Trial%20LOW/20RES%20Final%20%20inc%20EA-CCO%20comments.pdf</a>

Funding provided is as follows:

- \* Environment Agency: £130,000 for the placing of sand on the seabed
- \* Environment Agency Research & Development Fund: £116,000 for monitoring
- \* SCOPAC: a further £15,000 towards monitoring costs

Recommendation: For information

#### 1.4 SCANNING OF HISTORICAL AERIAL PHOTORGAPHY

Environment Agency: £11,000 (2015 - 2017)

Analysis of historical aerial photography is fundamental to understanding coastal evolution and change. The Environment Agency has now scanned almost all Annual Beach Monitoring Survey aerial photography negatives in collaboration with the National Collection of Aerial Photography and Blom. A number of Local Authorities hold historical aerial photography from the 1960's, 1970's, 1980's, 1990's and the millennium. Post 2002, aerial photography is captured across the SCOPAC region as part of the South-east and South-west Regional Coastal Monitoring Programme for 2002, 2008 and 2013.

This project is in the process of producing a record of the historical aerial photography held by each council within the SCOPAC region and will focus on scanning aerial photography for years not previously scanned. The scanned images will be made freely available where copyright permits.

Recommendation: For information

# 1.5 BOURNEMOUTH BOROUGH COUNCIL: DISMANTLING OF TIMBER GROYNES

Bournemouth Borough Council: £10,000 (2015 - 2017)

Bournemouth Borough Council is planning to deconstruct 13 timber groynes over the next two years which were built in 1985 to 1987.

8 groynes in early 2016: #25, #26 Greenheart #27, #28 #29 #30 #31 Ekki #32 Balau and Jarrah

5 groynes in early 2017: #33 Jarrah & Balau #34 Greenheart #35 Opepe + 2 more Greenheart

All other groynes along the frontage are greenheart.

This is a golden opportunity to assess the relative merits of 5 timber types after a 29-year field test. Bournemouth Borough Council plan to carefully dismantle each groyne, numbering each plank to record its original location in terms of distance from seaward end & level. Any planks that are "unworn" will be set aside for re-use in new groynes and will not require further assessment.

Any "worn" planks will be assessed as to the degree of Gribble infestation and the degree of abrasion; and relate both factors to location on the groyne. The SCOPAC funds will be used for the scientific analysis which will be undertaken by Jon Williams of TRADA, starting March 2016.

Recommendation: For information

# 1.6 MAINTENANCE OF COASTAL STRUCTURES - PHASE 1: TIMBER GROYNES

Update to be discussed at the meeting.

Recommendation: For information

#### 1.7 UPDATE OF THE SCOPAC SEDIMENT TRANSPORT STUDY

Channel Coastal Observatory: £150,000 (2013 - 2016) – funded by the Environment Agency with contributions from SCOPAC

The SCOPAC Sediment Transport Study (2004) is being updated by the Channel Coastal Observatory (<a href="http://www.scopac.org.uk/sediment-transport-update.html">http://www.scopac.org.uk/sediment-transport-update.html</a>). The last update was undertaken in 2004 by the original authors, Dr Malcolm Bray, Dave Carter and Prof Janet Hooke. Since 2004 a wealth of data has been collected by the South-east and South-west Regional Coastal Monitoring Programmes. This data, along with new literature is being incorporated into the update. The following has been completed to date:

- Where data have been available, sediment budget calculations have been completed for Start Point to Straight Point and Isle of Wight, and reviewed and completed for Hurst Spit to Beachy Head to ensure a consistent approach. A number of other units are in progress.
- For these units, maps have been revised to reflect updates to sediment transport arrow directions, volumes, types, legend, title and labels, etc.
- A 'final' draft map for these areas have been produced, in readiness for discussion with the steering group and subsequently review by the relevant Coastal Engineers.
- Topographic, bathymetric, lidar and aerial photography data have been compiled for the remaining areas (between Exmouth and Portland) and Digital Terrain Modelss produced in preparation for analysis.

- Further to the review of the literature already undertaken, additional amendments and comments have been drafted for the unit descriptions with respect to data sources, quantification of sediment transport, etc.
- A summary narrative has been compiled for each unit documenting procedure, queries, technical issues and other supplementary notes, which will aid future discussions.
- The existing maps have links to a number of photographs. These photographs (and links) have been reviewed, descriptions and copyrights amended, and additional supporting photographs and attributions have been identified for consideration for inclusion in revised versions of web-based maps; these include both plan shape and oblique photographs.
- All available swath bathymetry data have been collated along with substrate/seabed interpretation mapping. Descriptions of the substrate type, bedforms and information relating to mobility of sediments, and areas of exposed or partially exposed bedrocks have been drafted for the units covering Beachy Head to Newhaven, Shoreham to East Head and the Isle of Wight.

Once all units have been progressed to a consistent level of assessment, the revised maps and descriptions will be sent to each Coastal Engineer for comment.

Recommendation: For information

# 1.8 REDUCING REGIONAL FLOOD AND EROSION RISK FROM WAVE ACTION ON THE CHANNEL COAST PROJECT

Channel Coastal Observatory and HR Wallingford: £250,000 (2014 - 2017) – funded by the Environment Agency with contributions from SCOPAC

A region-wide assessment to examine the impacts of combined swell and storm (bimodal) waves on the shingle beaches of the SCOPAC region is being undertaken by the Channel Coastal Observatory. The three year study is investigating improvements to definition of standards of service for coastal schemes, improved flood forecasting, and improved definition of design wave conditions.

The test facility at HR Wallingford was used to undertake the modelling. Initial tests on a standard beach profile demonstrated a correlation between an increase in the storm berm elevation and landward migration of the storm berm, with increasing swell. Site specific modelling was undertaken for Hurst Spit, Chesil Beach and Hayling Island, whereby actual storm events were tested on a measured profile. Analysis of the generic results are on-going to establish exactly what spectra were achieved at each wave probe compared to what was being generated at the paddle (due to wave interactions/breaking/shoaling etc.). HR Wallingford are analysing the measured profiles to find generic equations to describe them.

The project is nearing completion: the bulk of the analytical work is complete, work has begun on the model framework and a draft of the accompanying report. The final model will be launched at a workshop to be held at the National Oceanography Centre on the 28<sup>th</sup> June 2016.

Recommendation: For information

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