

# **Southern Regional Flood and Coastal Committee**

**Main Committee Meeting  
Monday 15<sup>th</sup> July 2019**

**Environment Agency, Test & Medina, 6<sup>th</sup> floor,  
Guildbourne House, Chatsworth Road, Worthing,  
West Sussex, BN11 1LD**

**Intentionally left blank**

# Southern Regional Flood and Coastal Committee

## Agenda

**15 July 2019 – Environment Agency, Test & Medina, 6<sup>th</sup> floor, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD**

**10.30am**

### Announcements

1. Welcome
2. Declarations of interest
3. Chairman's announcements
4. RMA Updates

**Main purpose of the meeting:** To review and agree the 2020 to 2021 refresh

### General Business

5. Minutes of the full committee of 9 April 2019 for approval
6. Matters arising from the minutes
7. Action log
8. Forward Look

### For Decision

9. **10:55 – SRFCC Baseline Capital Programme 2019/20 and 2020/21 Capital Programme update and refresh**
  - Members to note the 2019/20 Capital Programme
  - Impact of 3.1% cut to the programme
  - Updates on Lydd and Southsea
  - Ambition – this is a light touch focus on GiA allocated to projects that deliver to our OM commitment.
  - Link to pipeline: what is the need outside of 2021? How do we develop it ready for SR19 and proposed new rules?
- 9a. Capital programme refresh – members to agree the projects identified for refresh to go to National for approval.
10. **11:20 - SRFCC Local Levy and 2018/19 report**

Members to note the progress of the Local Levy Programme, review and agree the letter to LLFAs regarding local levy increase for 2020/21 and approve a reprofile of Langstone (Havant) CFERM scheme and note a reprofile to the Nailbourne Schemes.
- 10a. Local Levy letter to LLFAs

### 11:45 - Break

11. **11:55 – Southern RFCC Annual Report – Draft – Martin Hurst**

For members to review the draft SRFCC annual report and comment and agree the content.

### For Discussion

12. **12:05 – National FCERM Strategy Consultation – Julie Foley, Director, Strategy & Investment**

To update members on the consultation and gather any further comments and feed these back.
13. **12:50 – Annual report of the environmental outcomes in the Capital Programme**

Members to note the outcomes in the Capital Programme.

## **Presentations**

14. **13:00 – South East Transport Network – Rupert Clubb, Director Communities, Economy & Transport, East Sussex County Council**  
To inform members of the work of the South East Transport Network.
15. **13:20 – South Downs National Park Association – Strategic plan for the Arun Valley Vision – Jeremy Burgess, Landscape & Biodiversity Lead (Water), South Downs National Park Authority**  
To update the Committee on the outcomes of the work by the Arun Valley Vision Group and the strategic plan to take these forward.
16. **13:40 – Coastal Groups update – Bryan Curtis, Chair SE Coastal Group, and Lyall Cairns, Chair Southern Coastal Group**  
To provide an update to members on coastal matters.

## **For Information**

*(Anyone wishing to raise a question for discussion on any of the items below should notify the Committee Secretary prior to the meeting).*

17. **Flood & Coastal Erosion Risk Management Stakeholder Update**

## **AOB**

18. **13:55 - Any Other Business**

**14:00 Meeting ends**

**Lunch – 14:00 – 14:30**

**Date of next full committee meeting – 15 October 2019 – CIWEM Venue, 106 – 109 Saffron Hill, London, EC1N 8QS**



## Southern RFCC – Main Committee Meeting

**Tuesday 9 April 2019, Kent County Council, County Hall, Maidstone**

<b>Chair:</b>	Dr Martin Hurst	Southern RFCC Chair
<b>Members:</b>	Cllr Michael Payne Cllr Andrew Bowles Cllr Tony Hills Cllr Steve Leggett Cllr Pieter Montyn Cllr David Edwards Cllr Robert Humby Mr Simon Cramp Cllr Geraldene Lucia-Hennis Cllr Gill Mitchell Ms Jenny Jakeways Mr Nick Claxton Miss Priscilla Haselhurst Mr Guy Mason	Kent County Council Kent County Council Kent County Council Southampton City Council West Sussex County Council West Sussex County Council Hampshire County Council Deputy for Cllr Bolton, Hampshire County Council LB of Bexley Council Brighton & Hove City Council Deputy for Cllr Hobart, Isle of Wight Council Deputy for Cllr Dowling, East Sussex County Council Deputy for Cllr Kemp, Medway Council Deputy for Cllr Mason, Portsmouth City Council
<b>Independent members:</b>	Mr Bryan Curtis Mr David Goff Mr Colin Tandy Ms Alison Thompson Mr Bill Symons Ms Henri Brocklebank Mr David Lowsley	Independent Member (Coastal Lead) Independent Member Independent Member Independent Member Independent Member Independent Member (Conservation Lead) Independent Member
<b>Environment Agency Staff:</b>	Ms Lynne Frostick Mr James Humphrys Mr Mark Douch Mr Ian Walker Mr Richard Oakes Mr Kirk Lakin Ms Diana Cook Ms Caitriona Vines	Environment Agency Board Member Area Director, Solent & South Downs Area Flood & Coastal Risk Manager, Kent & South London FCRM Programme Team Leader, Solent & South Downs FCRM Programme Team Leader, Kent & South London Advisor, Programme Team, Solent & South Downs Advisor, Programme Team, Kent & South London FCRM Officer, Programme Team, Solent & South Downs
<b>LLFA and other Officers:</b>	Mr Lyall Cairns Mr Simon Parker Mr Mat Jackson Mr Nick Bean Mr Max Tant	Chair, Southern Coastal Group Director, Commercial Wastewater Services, Southern Water Officer, West Sussex County Council Officer, Brighton & Hove City Council Officer, Kent County Council
<b>Guests &amp; Observers</b>	Mr Peter Currell Mr Darren Lewis Mr Roger Spencer Mr Ian Nunn Mr Chris Braham Mr Andrew Crates Mr Marc Pinnell	Officer, Solent & South Downs Area, Environment Agency Head of Drainage & Special Maintenance, Winchester City Council Engineering Services Manager, Arun District Council Ops Manager, Kent & South London Area, Environment Agency Wastewater Strategic Planning Manager, Southern Water Senior Specialist, PSO East Kent, Kent & South London Managing Director, JBA Consulting
<b>Secretariat:</b>	Mrs Jo Matthews	RFCC Secretary
<b>Apologies:</b>	Cllr Barry Kemp Cllr Claire Dowling Cllr Hugh Mason Cllr John Hobart Cllr Ray Bolton Dr Anthony Kimber Ms Wilhelmina Drayton Mr Simon Moody Mr Gordon Wilson	Medway Council East Sussex County Council Portsmouth City Council Isle of Wight Council Hampshire County Council Independent Member Officer, LB of Bexley Area Director, Kent & South London Area Flood & Coastal Risk Manager, Solent & South Downs

**Acronyms used in these minutes:**

Defra = Department for Environment, Food and Rural Affairs  
EA = Environment Agency  
FCERM = Flood and Coastal Erosion Risk Management  
FCERMGiA = Flood and Coastal Erosion Risk Management Grant-in-Aid  
GiA = Grant-in-Aid  
LA = Local Authority/ies  
LEP = Local Enterprise Partnership  
LLFA = Lead Local Flood Authority  
NFM = Natural Flood Management  
OWG = Officers' Working Group  
OMs = Outcome measures  
PF – Partnership Funding  
RFCC = Regional Flood and Coastal Committee  
RMA = Risk Management Authority  
SMP = Shoreline Management Plans

Item No.	Item	Action
1.	<p><b>Welcome and apologies for absence</b></p> <p>The Chair welcomed attendees to the meeting noting two new members that have recently been appointed, Ms Alison Thompson, Independent Member and Cllr David Edwards, West Sussex County Council, who is replacing Cllr Roger Elkins. The Committee thank Cllr Elkins for his service during his time as a member.</p> <p>The Chair informed members that this meeting is Cllr Gill Mitchell's (Brighton &amp; Hove City Council) last meeting. He thanked her for her contribution to the SRFC.</p> <p>The Chair thanked Cllr Payne, Kent County Council, for hosting today's meeting.</p> <p>The Chair introduced Ms Lynne Frostick, Environment Agency Board Member, to the committee.</p> <p>Apologies were noted.</p>	
2.	<p><b>Declarations of interest</b></p> <p>The Chair – On the Solent Local Enterprise Partnership (LEP) committee for their new strategy. Mr Goff – Member of the Upper Medway IDB Board Mr Tandy – Chair, South East London Flood Partnership Cllr Robert Humby – Leader of Winchester City Council and therefore has an interest in the North Winchester (Durngate) local levy bid that will be tabled for consent.</p>	
3.	<p><b>Chair's Announcements</b></p> <ul style="list-style-type: none"><li>The Chair thanked members for making time to attend March's Extraordinary meeting in order to consent the 2019/20 FCERM GiA Capital and Revenue Allocation and make recommendations to the EA Board for 2019/20 IDB Precepts &amp; levies. These have now been approved by Defra and allocation letters have been sent.</li><li>The Chair wrote to Ms Frostick and the RFCC Chairs to raise awareness of the serious issue of coastal landfill sites and is pleased to report that this is now on their agenda.</li></ul>	

	<ul style="list-style-type: none"> <li>• A reminder to members that if they wish to attend the joint Southern RFCC and Southern Water workshop on surface water and drainage issues including partnership working on the 14<sup>th</sup> June to let Mrs Matthews know.</li> <li>• As discussed at March's Programme &amp; Investment Sub-Committee meeting, the Chair will be meeting the Independent Members after this meeting to discuss the possible content for an annual SRFC report.</li> <li>•</li> </ul>	
4.	<p><b>RMA Updates</b></p> <p>Ms Frostick told members how important the RFCCs to partnership working, a touchstone for local voices and delivering what is needed.</p> <p>This is a critical time for the last two years of the current 6 year programme and meeting the 300,000 houses target for which the RMAs are a considerable contributor. It is essential that this target is met in order to allow for a new rolling 6 year programme to start in 2021/22.</p> <p>At the moment the EA are developing the FCERM Strategy and welcomes input from RFCCs to this.</p> <p>Ms Frostick is very aware of the challenge that climate change presents, particularly for coastal communities.</p> <p>Ms Frostick is available if members would like to contact her to discuss FCERM issues with her.</p>	
5.	<p><b>Minutes of the full committee meeting, 7 January 2019</b></p> <p>Declarations of Interest - Mr Goff advised that he is a member of the Upper Medway IDB Board, not the Lower &amp; Upper Medway IDB Board.</p> <p>Item 11, Action 1 – to include 'and' before 'their officer'.</p> <p>Addendum – date should be 5<sup>th</sup>, not 6<sup>th</sup> March 2019.</p> <p>Members recommend the minutes as accurate once the amendments are incorporated.</p>	<p><b>All amendments incorporated 10<sup>th</sup> April 2019</b></p>
6.	<p><b>Matters arising from the minutes</b></p> <p>No issues raised.</p>	
7.	<p><b>Action Log</b></p> <p>Members noted completed and in progress actions.</p>	
8.	<p><b>Minutes from 5 March 2019</b></p> <p><b>Extraordinary meeting</b></p> <p>Item 3, Internal Drainage Board Rates &amp; Budget Setting 2019/20 – replace "We" with the EA.</p> <p>Members recommend the minutes as accurate once the amendments are incorporated.</p> <p><b>Programme &amp; Investment Sub-Committee</b></p> <p>Agreed as accurate.</p>	<p><b>All amendments incorporated 10<sup>th</sup> April 2019</b></p>

9.	<p><b>Forward Look</b></p> <p>Members reviewed the forward look. The Chair asked members to forward any suggestions to him/Mrs Matthews</p>	<b>All</b>
	<b>For Decision</b>	
10.	<p><b>SRFCC Levy Strategy</b></p> <p>Introducing the agenda item the Chair noted that the SRFCC levy balances were very low and that individual members had alerted him/the committee to the fact that they wished to make further bids.</p> <p>The Programme &amp; Investment sub-committee had discussed options and views had been canvassed from Independent members. It had been agreed that we should seek first to identify levy spend which might not be needed, or which could be deferred to 2021. Mr Tandy was asked to undertake this exercise.</p> <p>Mr Tandy summed up the results of the exercise. He had identified with the EA a few bids which were no longer needed and had agreed that another could be partly deferred. He also stated that, as the Programme &amp; Investment sub-committee had discussed, he saw no need for an emergency reserve. As a result the levy balance had risen to c£600k, which while very tight is not so low as to require the kind of reprioritisation exercise which had previously been suggested, at least at this point.</p> <p>It was stressed that levy bids should, for the present at least, continue to be submitted as normal – and the existing requirement that levy should be seen as the last piece of a jigsaw rather than the first point of call was reinforced. In a wider discussion it was agreed that a widening of the kinds of things covered by levy bids would be sensible, given that there was a need for innovation, that small research bids such as that on coastal landfill had demonstrated good results, and the fact that we need to prepare for the next 6 year programme. The levy bids from the Southern Coastal Group, and for Natural Flood Management (NFM), later in the agenda were also cited as good examples of the kind of things we should be encouraging (without prejudice to whether they would in fact be agreed).</p> <p>Following a number of points to this effect, the Chair agreed to come back to the next meeting with a proposal for reducing the bureaucratic burden on preparing small levy bids.</p> <p>Given a tight agenda the meeting then moved on. The Chair has asked that these minutes should serve to provide an agreed direction for levy spend for the time being, but that once levy balances again fall close to zero a more formal decision about whether to undertake reprioritisation, and wider options, as sought in the paper, would return to the table.</p> <p>The Chair thanked Mr Tandy for this work.</p> <p><b>The Committee agreed to these changes.</b></p>	

11.	<p><b>Local levy roll-overs from 2018/19 to 2019/20</b></p> <p>Members were asked to agree the roll-over requests.</p> <p>Mr Tandy endorsed this approach.</p> <p>Mr Claxton asked that in future the justifications were more consistent with the level of detail, as some had provided more information than others.</p> <p>The Chair reminded members that there is no guarantee that future requests for roll-overs would be agreed by the committee, so please spend your allocation in the year you have asked for it.</p> <p><b>The Committee approved the roll-overs.</b></p>	
12.	<p><b>SRFCC Local levy new or revised bids</b></p> <p><b>a.</b> NFM Studies – £181k across 2019/20, 2020/21 and 2021/22</p> <p>Mr Claxton asked about the modelling for the Polegate study, as he believes the fluvial modelling is out of date.</p> <p>Mr Currell said he was not aware of this but a viability assessment was done and partners agreed that was acceptable for it to go forward. However, modelling will be done at an appropriate level.</p> <p><b>Action 1:</b> To discuss this further with Mr Claxton</p> <p>Mr Tandy thanked Mr Currell for agreeing to increase the project scope from 2 years to 3 years in order to adjust the spend.</p> <p><b>Committee approved this bid.</b></p> <p><b>b.</b> North Winchester (Durngate) Flood Relief Scheme Phase II - £200k in 2019/20</p> <p><b>Committee approved this bid.</b></p> <p><b>c.</b> Peak Lane Outfall Extension and Watercourse Improvement Works – a revised bid for an additional £20k in 2019/20.</p> <p><b>Committee approved this bid.</b></p> <p><b>d.</b> Southern Coastal Group delivery of key priorities and improve links to the SRFCC - £23k in 2019/20</p> <p>Mr Cairns told the Committee that a bid had also been submitted to Wessex RFCC for the same amount and had just been approved.</p> <p>Mr Claxton asked whether this was a one-off bid or likely to be an annual bid?</p> <p>Mr Cairns said the intention is for it to be a one-off bid in the hope that alternative forms of funding are found.</p> <p><b>Committee approved this bid.</b></p>	Mr Currell
	<b>For Discussion</b>	
13.	<p><b>SRFCC Capital Programme</b></p> <p>Mr Walker gave an update on the 2018/19 programme but advised that the numbers have yet to be finalised so may change, but at the moment the programme out-turned £57.8m.</p> <p>The local levy programme out-turned £2.1m and drew down balances. The programme is now more secure due to the review carried out by Mr Tandy.</p>	

	<p>Contributions are forecasting £7.7m on top of GiA.</p> <p>Outcome measures: 12,924 houses better protected from flooding, which is more than our original target of 12,555. Southern RFCC are a significant contributor to the 300,000 houses target amongst other RFCCs. 128 hectares of Environmental habitat enhanced or created (OM4 ha).</p> <p>Claimed efficiencies are £5.5m against the target of £5.9m, so only slightly under.</p> <p>Mr Oakes gave an overview of the 2019/2019 capital programme.</p> <p>The budget of £45.8m GiA, £2.64m local levy and £8.3m contributions and a target of 11,826 houses better protected from flooding.</p>	
14.	<p><b>Maintenance Programme</b></p> <p>Mr Ian Nunn gave an overview of the maintenance programme for 2019/20 for which Southern RFCC has been allocated £11m.</p> <p>To view the programme in more detail go to  <a href="http://www.gov.uk/government/publications/river-and-coastal-maintenance-programme">www.gov.uk/government/publications/river-and-coastal-maintenance-programme</a></p> <p>Mr Nunn offered to arrange for members to visit assets so that they can see the work that is carried out for themselves.</p> <p><b>Action 1:</b> Let Mrs Matthews know if you are interested in this.</p>	All
15.	<p><b>Annual review of the risk register</b></p> <p>Mr Tandy gave an introduction to the work he and Mr Oakes did to review and refresh the risk register in order for it to be more user friendly for members to use.</p> <p>Mr Oakes outlined the key changes made:</p> <ul style="list-style-type: none"> <li>• Ambition that this is strategic risks that the RFCC influence and own rather than tactical risks controlled at a project or programme level</li> <li>• Annotated probability and impact matrix</li> <li>• Themes reduced to 8 to be clearer</li> <li>• Scoring system introduced</li> <li>• Proximity scale</li> <li>• Risk strategy <ul style="list-style-type: none"> <li>• <b>Avoid:</b> Action can be taken to ensure risk not realised</li> <li>• <b>Mitigate:</b> Risk cannot be avoided but action can be taken to manage down impacts of the risk when it occurs</li> <li>• <b>Contingency:</b> Risk cannot be avoided or mitigated but plans put in place to deal with the outcome</li> <li>• <b>Transfer:</b> Risk not within our ability to influence, risk ownership placed onto another body to plan for and mitigate</li> <li>• <b>Accept:</b> Understand the risk and accept that everything that can be done has been done</li> </ul> </li> </ul> <p><b>Action 1:</b> To provide feedback to Mr Tandy and Mr Oakes and/or suggestions for further improvements.</p> <p><b>Action 2:</b> Agree how and when risks highlighted in the risk register lead to investment from the Committee.</p> <p><b>Action 3:</b> To bring back a fully populated register.</p> <p><b>Members noted the refreshed register.</b></p>	<p>All</p> <p>All</p> <p>Mr Tandy Mr Oakes</p>

	<b>Presentations</b>	
<b>16.</b>	<p><b>Southern Water update on business and drainage wastewater plans</b></p> <p>Mr Simon Parker introduced the presentation followed by Mr Chris Braham.</p> <p>Mr Parker wants to strengthen partnerships and collaborative working and encouraged members to attend the joint SRFCC &amp; Southern Water workshop on the 14<sup>th</sup> June.</p> <p>Mr Braham referred to the Drainage and Wastewater Management Plans (DWMPs) and how they are proposing to set their level 2 plans around the 11 River Basin District catchments, which should align with Flood Risk Management Plans.</p> <p>There are three pilots in three catchments.  <b>Action 1:</b> Confirm to Mrs Matthews what these are.  <b>Action 2:</b> Return to the SRFCC to give an update on their progress.</p> <p>Ms Thompson suggested working with the Water Resources in the South East Group for collaborative working.</p> <p><b>Action 3:</b> Circulate the presentation to members.</p>	<p><b>Mr Braham Mr Parker / Mr Braham</b></p> <p><b>Mrs Matthews</b></p>
<b>17.</b>	<p><b>Lydd Ranges update</b></p> <p>Mr Crates gave a presentation on the Lydd Ranges project.</p> <p>The Chair thanked him for an informative look at the project and encouraged members to talk to Mr Crates about the lessons learnt and ways of working.</p>	
	<b>Information Papers</b>	
<b>18.</b>	The Chair encouraged Members to read these papers and note their contents as they contain information that they need to be aware of in their wider role as Committee members.	
<b>19.</b>	<b>National FCERM Update</b>	
	<b>Strategic working with water companies</b>	
	<b>Any other business</b>	
	<ul style="list-style-type: none"> <li>Ms Thompson mentioned the publication of the House of Lords report on The future of seaside towns as it refers to flood risk and coastal erosion (see pages 79-85). You can find the report here:  <a href="https://publications.parliament.uk/pa/ld201719/ldselect/ldseaside/320/320.pdf">https://publications.parliament.uk/pa/ld201719/ldselect/ldseaside/320/320.pdf</a></li> </ul> <p><b>Action 1:</b> Circulate the report</p>	<b>Mrs Matthews</b>
<b>13:43</b>	<b>Meeting ended.</b>	

**Date of next main meeting:** Monday 15 July 2019 – Environment Agency, Test & Medina, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD

**Intentionally left blank**



## SOUTHERN REGIONAL FLOOD AND COASTAL COMMITTEE

### ACTION LOG

Last updated – 12/04/2019

Meeting Date	Agenda Item No.	Action	Lead	Status
17/07/2018	11	To provide SRFCC members with a list of projects that will be included in Southern Water's PR19 submission.	Mr Parker	In progress
23/10/2018	18	To submit a new local levy bid for East Peckham project when the OBC has been completed.	Kent CC Mr Douch	In progress
07/01/2019	11	If rates and levies for the Arun IDB come to the SRFCC in January 2020 that the West Sussex County Council representatives and their officers will be provided with a briefing prior to the meeting on the figures and what they will be used for, e.g. type of maintenance work.	Mr Robinson	In progress
9/04/2019	12a	Local Levy NFM bid – Mr Claxton thinks the modelling presented for Polegate is out of date. To discuss with Mr Claxton.	Peter Currell	Completed
09/04/2019	14	Maintenance programme – Mr Ian Nunn offered to arrange for members to visit assets so that they can see the work carried out, as per the maintenance programme. Members to let Mrs Matthews know if they would be interested in this.	Members	In progress
09/04/2019	15	Annual review of the risk register – To provide feedback to Mr Tandy and Mr Oakes and/or suggestions for further improvements.	Members/Officers	In progress
09/04/2019	15	Agree how and when risks highlighted in the risk register lead to investment from the Committee	Members	In progress
09/04/2019	15	To bring back a fully populated register.	Mr Oakes Mr Tandy	In progress
09/04/2019	16	Southern Water update on business and drainage wastewater plans To confirm to Mrs Matthews what the three catchment pilots SW are running. They are the river catchments of the Test, Arun and Western Streams and the Medway, which were selected on existing or planned catchment based ways of working.	Mr Braham	Completed

09/04/2019	16	Return to the SRFCC to give an update on their progress.	Mr Parker Mr Braham	In progress
09/04/2019	16	Circulate the presentation.	Mrs Matthews	Completed
09/04/2019	AOB	To circulate the House of Lords report on The future of seaside towns.	Mrs Matthews	Completed

## SRFCC FORWARD LOOK – 2019

### SRFCC MAIN MEETINGS

#### 15 July 2019 – Worthing

- SRFCC Baseline Programme 2019/20 **(S/Di)**
- SRFCC GiA 6 year programme update 2019/21 **(S/Di)**
- SRFCC Local Levy Programme update **(S/Di)**
- Annual report on the environmental outcomes in the Capital Programme
- Arun Valley Vision Group (AVVG) **(P) (tbc)**
- Southeast Transport Network – Rupert Clubb **(P)**
- Coastal Groups update – Bryan Curtis/Lyall Cairns **(S/P)**
- National papers – to be confirmed **(D/I)**

#### 15 October 2019 – London Councils, London

- SRFCC Local Levy Setting 2020/21 and programme 2019/22 & bids for funding **(De)** – 45 mins
- SRFCC Programme 2019/20 progress update and agree local choice bids for funding, review the refresh and agree the FCRM GiA Indicative Allocation **(De)** – 45 mins
- Association of Drainage Authorities, their work and collaboration with the SRFCC (ADA) – Innes Thompson **(P)**
- Solent LEP – Anne-Marie Mountifield, CEO **(P)**
- Flooding within the Southampton Green City portfolio – Cllr Steven Leggett **(P)**
- Hampshire County Council 2050 plan **(P)**
- National papers – to be confirmed **(D/I)**

#### 21 January 2020 – London Councils, London

- SRFCC FCRM GiA 6 year programme update 2020/21 – members will be asked for their consent to the changes since the Autumn statement and the revenue allocation **(S/De)**
- Update on IDBs and setting rates for 2020/21 – if any **(De)**
- SRFCC Local Levy Programme 2019/22 – **(S/De)**
- SRFCC Programme 2019/20 Progress update – members will be asked to note the in-year progress on the programme **(S)**
- Coastal Groups update – Bryan Curtis/Lyall Cairns **(S/P)**
- National papers – to be confirmed **(Di or I)**

#### 21 April 2020 – venue tbc

- SRFCC Local Levy Programme update, review of projects wishing to roll over funds to 2020/21 and review new bids for funding **(S/De – 1 hour)**
- SRFCC Review of 2019/20 Programme
- SRFCC Baseline Programme 2020/21 **(S)**
- Maintenance Programme 2020/21 **(Di) – (20 mins)**
- Annual review of the Risk Register **(De)**
- National papers – to be confirmed **(D/I)**

## **SRFCC PROGRAMME & INVESTMENT SUB-COMMITTEE**

### **24 September 2019 – London Councils office, London**

- Update from Officer's Working Group
- Capital Programme update and in-year progress
- SRFCC Local Choices 6-year plan 2019/21
- SRFCC Local Levy setting discussion and Local Levy bids

### **March 2020 – date & venue tbc**

- Update from Officer's Working Group
- Local Levy programme review, bids for roll-over and new bids (1 hour slot)
- Capital Programme 2019/20 in-year progress & 2020/21 forward look
- Update and review of the Risk Register (30 minute slot)

## Southern Regional Flood & Coastal Committee

**Item no.** 9

**Date:** 15 July 2019

**Paper by:** Director of Flood and Coastal Risk Management (FCRM)  
- Allocation and Asset Management

**Subject:** FCRM capital and revenue programme refresh

**Appendix 1:** *Next Generation Supplier Arrangements announcement briefing*

**Appendix 2:** *Next Generation Supplier Arrangements Risk Management Authority briefing*

**Appendix 3:** *Capital and revenue allocation process overview – reference document*

Recommendations:

The RFCC Committees are asked to:

1. Support the annual refresh of the capital and revenue programmes;
2. Support delivery of the 300,000 homes target during the final 21 months of the programme, through both in-year budget management and the refresh;
3. Note the preparations for the next long term funding settlement through Spending Review 2019;
4. Note the announcement of the Next Generation Supplier Arrangements.

### Headline messages:

- This year's refresh is the final one of the current 6 year capital programme and is key to ensuring we achieve the 300,000 homes better protected target. The refresh is also important in identifying the future pipeline of schemes to inform the next programme.
- Significant work is currently taking place in collaboration with Defra to prepare for Spending Review 2019 which will set our future allocation.
- We need to maximise our outcomes and exceed our 300,000 homes better protected target. All programme changes which cannot be managed within current budgets, or any identified new schemes, must be escalated to the national Portfolio Management Office to ensure we get the best outcome across the country.
- The Environment Agency's Next Generation Supplier Arrangements are now live and available for all Risk Management Authorities to use to deliver schemes.
- An overview of the capital and revenue allocation process for the year is set out in the April 2019 National Allocation paper, appendix 2. This should be used as a reference document throughout the year, as required.

## **1.0 Background**

- 1.1 This paper provides an update on the capital and revenue refresh for 2020/21, the final year of the current 6 year programme, and confirms arrangements for in-year budget management to maximise outcomes.
- 1.2 An overview of the annual capital and revenue allocation process and what Committee members can expect at each meeting is set out in appendix 3 (as was provided in the April 2019 paper). This should be referred to throughout the year as required.

## **2.0 Latest position**

- 2.1 Over the first 4 years of the programme, both the Environment Agency and other Risk Management Authorities (RMAs) have better protected over 193,000 homes. This was against a target of 185,000 homes at this point in the programme, and is a significant achievement by all those involved. We would like to thank the RFCC committees for their role in achieving this.
- 2.2 We remain on track to achieve our 300,000 homes better protected target but cannot be complacent as risks remain in achieving this. Across the country we are working together to manage capital programme delivery and putting in place various interventions to ensure a successful outcome.
- 2.3 In terms of our revenue maintenance programme, at the end of financial year 2018/19 we were at 97.9% for our asset condition target, against an end of year target of 97.5%. Our overall target is 98% of high consequence assets being at target condition by March 2020, when the current asset maintenance programme finishes. As with the capital programme, there are risks and challenges associated with achieving this target and we are working closely with Area teams to identify these risks and put in place suitable mitigation measures.
- 2.4 We welcome the RFCC committees continued support and role in ensuring we collectively meet all our capital settlement condition targets (300,000 homes better protected, 15% partnership funding contributions, and 10% efficiency target), our revenue maintenance targets, in shaping the outcomes of Spending Review 2019, and in developing our next long term capital and revenue programmes.
- 2.5 We are aware that the focus on the current 300,000 homes target could be compromising efforts to develop a future programme and a pipeline of new schemes. To help mitigate against this we have set aside some funding to enable Areas teams to work with partners to ensure new projects are being identified and developed.

## **3.0 Spending Review 2019**

- 3.1 Work is ongoing to influence, shape and secure a future funding settlement for FCRM. We are working with all departments across the Environment Agency and with the RFCCs to develop a range of funding scenarios for consideration in Spending Review 2019 (SR19).
- 3.2 We are listening to feedback and working with Defra to seek changes to their partnership funding rules and key outcomes for the future investment programme. We are putting more emphasis on the wider benefits that flood and coastal erosion schemes achieve for people, the environment, local economy and other infrastructure such as schools, hospitals, road and rail.

- 3.3 We are expecting the settlement to be announced in the Autumn Budget 2019. We will keep RFCC committees updated as any announcements are made.

**4.0 Annual refresh of the 6 year capital investment programme**

- 4.1 The July Committee meeting is the opportunity for members to review any proposed new projects or changes to the existing programme before it is submitted to the national team – the National Portfolio Management Office. This is a key step in the development of the programme. This is for projects seeking funding in the final year of the current 6 year programme, as well as building our pipeline and future programme beyond March 2021.
- 4.2 The detail of the proposed refreshed Southern RFCC programme can be found in Item 9A which outlines the 2020/21 programme itself and the headline messages around the bid for GiA as well as an Annexe with the schemes.

**5.0 Capital programme in-year budget management 2019/20**

- 5.1 Overall we want to make sure we get the best outcomes across the country for the money available for FCRM.
- 5.2 Financial year 2018/19 was a strong year for programme delivery. As in previous years, we started the financial year with an over-allocation and Area teams were asked to over-programme. We do this to ensure we deliver on year-end targets and budgets. Whilst this strong performance was good, tough choices were needed to manage back to budget at year-end. Feedback, including that from the RFCC Chairs, was that earlier notice of year-end budget targets would make budget management easier. This is being addressed through our 2019/20 financial management.
- 5.3 The allocations for 2019/20, as set out in the April RFCC committee paper, include a degree of over-allocation that will need to be managed back during the year. In response to the feedback we have issued a revised affordable budget for 2019/20.
- 5.4 Due to the dynamic nature of the programme and inherent risks associated with projects, we know from experience that some Areas may spend less than what has been allocated, and others may have the opportunity to spend more. As a result, we want to ensure there is enough flexibility to enable the best outcomes to be achieved.
- 5.5 All Area teams have been given revised homes targets and affordable budgets for this year, along with guidelines to empower local management of agreed programmes. Where local programme pressures mean that change cannot be managed within current budgets, or new schemes are looking to come into the programme which will deliver homes within the 6 year programme, Area teams will need to escalate these to the National Portfolio Management Office to seek revisions to their targets and budgets.
- 5.6 The National Portfolio Management Office will accommodate these changes where appropriate, based on overall affordability of the national programme and ability to meet the 300,000 homes targets and other priorities.
- 5.7 The RFCC Committees will be kept informed of any proposed changes to current budget allocations and targets throughout the year.

## **6.0 Annual refresh of the revenue maintenance programme**

- 6.1 As noted in the April Committee paper, the revenue maintenance allocation for 2020/21 is subject to the results of Spending Review 2019, which is not expected until the autumn. As a result, we will prepare a range of scenarios for the RFCC committees to review at their October meetings.

## **7.0 Next Generation Supplier Arrangements announcement**

- 7.1 The Environment Agency's Next Generation Supplier Arrangements (NGSA) are now live. The new frameworks can be used by all Risk Management Authorities to deliver their FCRM projects. The briefing in appendix 1 highlights who our new delivery partners are and what each framework will deliver. Appendix 2 provides specific details for RMAs. Please contact your local Area team for any further information and how you can use these new arrangements.
- 7.2 These new arrangements and partnerships will help to deliver the final 21 months of the capital programme, and deliver our future programme beyond March 2021, more efficiently as well as providing better value for money.
- 7.3 There still remains an important programme of work that will be delivered through the legacy WEM framework, and we will continue to work with our WEM partners to deliver this commitment.

## **8.0 Recommendations**

- 8.1 The RFCC Committees are asked to:
1. Support the annual refresh of the capital and revenue programmes;
  2. Support delivery of the 300,000 homes target during the final 21 months of the programme, through both in-year budget management and the refresh;
  3. Note the preparations for the next long term funding settlement through Spending Review 2019;
  4. Note the announcement of the Next Generation Supplier Arrangements.

**Author:** John Russon, Deputy Director, Allocation and National Programme Management

**Sponsor:** Ken Allison, Director, Allocation and Asset Management

**Date:** 14 June 2019



## The Environment Agency's Next Generation Supplier Arrangements

Part of our Next Generation Supplier Arrangements (NGSA), we are pleased to announce our new Delivery Partners (see tables below) and confirm that the new frameworks are now live!

These arrangements and partnerships will help to deliver our £2.6 billion capital investment programme more efficiently, as well as providing better value for money.

The core changes include the replacement of our previous delivery frameworks. The Water and Environment Management (WEM) Framework is replaced by the Collaborative Delivery Framework (CDF). Other new National specialist frameworks include Marine & Coastal, Mapping & Modelling and Client Support.

We still have an important legacy of work that will be delivered through the WEM framework and will continue to work with our WEM partners to deliver this commitment.

The CDF runs until 2023 with the opportunity to extend to 2027. The National specialist frameworks run until 2023. They will help us mitigate climate change and reduce its impacts, whilst helping us to achieve 300,000 homes better protected from coastal erosion and flooding by 2021.

By implementing NGSA we are following the recommendations from the Government Construction Strategy. This sets out Government's plan to develop its capability as a construction client and act as an exemplary client across the industry. It includes new ways of working which will better help protect communities and the environment whilst ensuring that sustainable development is at the very core of all projects.

The new arrangements will improve our response to the threats of climate change and extreme weather. It will also lead to better long term team working with our partners and new ways of engaging with local organisations and people. This will ensure that homes, communities and businesses are receiving the best possible flood and coastal management for the challenges facing their area. At the same time flood and coastal projects will promote economic growth, social wellbeing and will seek to enhance levels of natural capital within the local community, making sure that each project brings long-lasting benefits for future generations.

### **Toby Willison, Environment Agency Executive Director of Operations:**

*"Our ambitious new arrangements will help us to continue to deliver our £2.6 billion flood and coastal defence programme in a way which ensures that sustainability, efficiency and value for money remain at the very heart of the work we do to protect people, homes and the environment."*

**Tom Brown, Jacobs Client Account Manager:** *"Our 25 year partnership in delivering flood risk management is about to go to the next level. Working closely together to create a new way of working will allow us to harness the potential of all our people and organisations to be successful."*

## Championing sustainability

Sustainability is at the heart of our new arrangements and capital delivery, which is a major drive for us as a whole. Our e:Mission plan sets out how we will continue to challenge ourselves and those involved in delivering our projects. This will not only reduce the direct negative impact on the environment but also look for opportunities to improve it.

A big part of this is reducing construction carbon and supply chain carbon. By working with our partners to look at the supply chain we can ensure it isn't transferring problems elsewhere.

We've ensured this by embedding sustainability into the new ways of working. We will:

- Develop whole-life low carbon solutions and work towards Government's commitment to reduce 80% of Carbon emissions by 2050.
- Improve the management of benefits delivered to communities to meet our sustainability objectives expressed in our e:Mission plan and, in the future, the [UN Sustainable Development Goals](#).
- Embed sustainability into how we design and deliver projects and benchmark this against industry best practice.
- Use [CEEQUAL](#), an industry recognised scheme for assessing, rating and recognising sustainability performance across the whole of our programme.

**Andrew Pearson, Jacobs CDF Framework Manager:** *"The CDF provides an opportunity for all of us to make a step change in the way infrastructure programmes are delivered. Our teams will be driving sustainable solutions, embracing a digital way of working and maximising our partnerships to deliver a cost effective and truly innovative programme. Importantly we can create a CDF culture that makes these exciting programmes for people to work in; inclusive, safe, creative, with aligned objectives and focussed on the outcomes we want to achieve to allow people to develop and benefit the communities we serve."*

**Will McBain, UKIMEA Flood Resilience Leader, Ove Arup said:**

*"The CDF means a huge amount to the Ove Arup team. Many of us joined the firm to make a difference - to do our bit to help local communities and the environment. Close collaboration with those who will benefit from, interact with, maintain and operate new infrastructure over its lifetime is so important to getting things right. NGSA provides a great framework for the development of the long-term relationships required to do this. We are confident that NGSA will leave a legacy of which we can all be proud".*

## The commercial benefits

NGSA was developed building on our knowledge of the Flood and Coastal Risk Management sector as well as learning from other leading public and private infrastructure providers. The new arrangements promote new ways of collaborative working with delivery partners and local communities from the initial planning stages of a project right through to its completion.

**Richard Neall, Jackson Framework Director:** “the new approach is a hugely positive step, not just for flood and coastal risk management, but also for the construction industry as a whole. Working together with the EA and Ove ARUP as fully integrated, long-term delivery partners, we’ll be able to provide more sustainable construction solutions to better protect communities from flooding.”

NGSA, will allow for greater efficiency, innovation and standardisation and align benchmarked costs, and priorities such as sustainability, safety, health, environment and wellbeing and incident management capabilities. Being better integrated means a closer relationship with other risk management authorities (RMAs), as well as our partners who design and deliver programmes of work

**Chris Allwork, Delivery Manager for the new Eastern Hub covering Thames and East Anglia:** *“I clearly remember the first time I visited people who had been flooded. It had been a large fluvial event and the devastation and heartbreak I witnessed stays with me even now. That was 38 years ago!! I have been very fortunate over the years working with the Environment Agency and its predecessors to have worked on projects that have significantly reduced flood risk to many thousands of people. The new collaborative delivery model will provide the building blocks for continuing this work well into the future. It offers a more joined up slicker way to make better, quicker decisions, making that difference we all strive for.”*

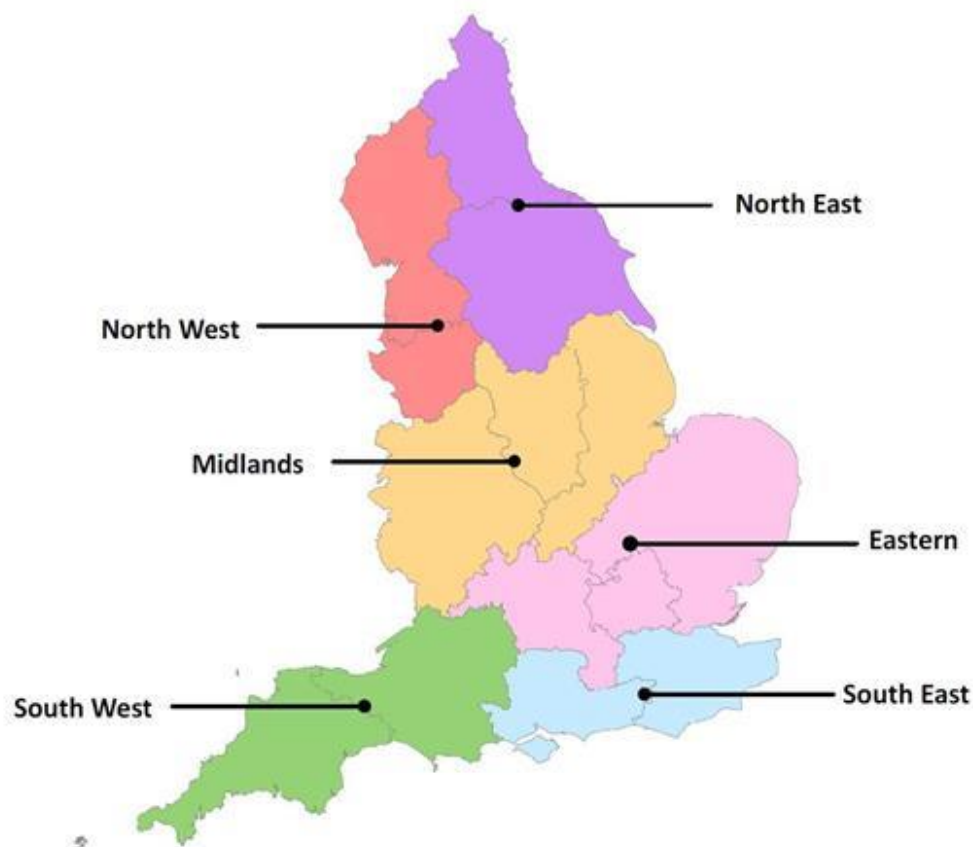
This way of working will support integrated catchment decision making benefiting the whole catchment, and wider water resources. Core to this style of working is collaboration, increased open and honest communication and shared ambition and outcomes.

Whilst the new ways of working will be collaborative, the business relationship will continue to maintain the right level of commercial tension ensuring the best value for money. The new commercial model provides the perfect platform for the Environment Agency to meet its ambition to deliver flood and coastal risk management in an efficient and effective manner.

## Delivery partners

Our new frameworks are live and our new framework delivery partners are named in the tables below.

**Figure 1: Environment Agency FCERM capital Delivery Hubs and CDF delivery partner geographies**



### **North East Hub**

Lot 1: Ove Arup & Partners Ltd  
Lot 2: BAM Nuttall Ltd

### **North West Hub**

Lot 1: Jacobs UK Ltd  
Lot 2: VolkerStevin Ltd

### **Midlands Hub**

Lot 1: Ove Arup & Partners Ltd  
Lot 2: Jackson Civil Engineering Group Ltd

### **Eastern Hub**

Lot 1: Jacobs UK Ltd  
Lot 2: BAM Nuttall Ltd

### **South West Hub**

Lot 1: Atkins Ltd  
Lot 2: Kier Integrated Services Ltd

### **South East Hub**

Lot 1: Jeremy Benn Associates Ltd  
Lot 2: VolkerStevin Ltd

## National specialist frameworks

<b>Marine and Coastal Framework delivery partners</b>	
<i>Lot 1 - Major Marine and Coastal Work projects with a total value of between £5 million and £50 million</i>	<i>Lot 2 - General Marine and Coastal Works will cover projects with a total value not exceeding £5 million</i>
BAM New Wave Solutions Joint Venture	BAM Nuttall Ltd
Van Oord	Van Oord
VBA Joint Venture Limited	VBA Joint Venture Limited
	JBA Bentley Ltd

<b>Mapping and Modelling framework delivery partners</b>
--

AECOM infrastructure and Environment UK Ltd.
--

JBA Consulting
----------------

Jacobs UK Ltd.
----------------

<b>Client support framework delivery partners</b>
---

<i>Framework commencement expected June 2019</i>
--

<i>Delivery partners to be confirmed: June 2019</i>
---

# The Next Generation Supplier Arrangements in Flood and Coastal Erosion Risk Management

Our Next Generation Supplier Arrangements (NGSA) can be used by all Risk Management Authorities (RMAs) to deliver their Flood and Coastal Erosion Risk Management (FCERM) projects. Read on to find out more. Speak to your local Environment Agency contact to find out how you can deliver through these new arrangements.

## What are the new frameworks?

The majority of the capital programme will be delivered through the Collaborative Delivery Framework (CDF), across 6 Delivery Hubs (see Appendix A). These will consist of client, contractor and consultant staff, operating in an Integrated Delivery Team. Having one consultant and one contractor will give greater surety of programme to their teams, and will help ensure that they provide the right level of resource to meet our programme needs.

We will continue to use the locally based Operations FCRM frameworks (formerly minor works frameworks) for low risk low value work. For very large, complex projects we will look at all procurement options, including tendering to the open market (i.e. bespoke buying).

In addition we have three supporting national specialist frameworks; Client support, Marine and coastal, Mapping and modelling. See appendix A to find out more about these frameworks and the supporting delivery partners.

## Why use the NGSA Suite of Frameworks?

We have worked closely with a range of RMAs from across the country to evaluate the commercial tenders and shape our NGSA proposals. The benefits to RMAs include:

- No need to tender every project as the tendering process has happened at framework level.
- Access to all of our supporting performance and reporting systems. Increased efficiency and project viability by working with one supplier geographically.
- Access to Delivery Partner and Environment Agency resources to ensure resource is available to progress projects.
- Early engagement with Delivery Partners to help identify future projects and build a pipeline of future work.
- The terms and conditions have been reviewed by partner RMA's legal specialists and they are satisfied that they meet the appropriate standards and legal requirements.

**Intentionally left blank**

## Do the new arrangements meet procurement rules when there is a single supplier in each delivery hub?

Supported by our RMA working group and some of their procurement specialists, the working group is satisfied that the new arrangements are suitable for all RMAs.

- The procurement of the CDF has been undertaken using the Competitive Procedure with Negotiation process, as detailed in the Public Contracts Regulations (PCR) 2015.
- Suppliers identified to deliver the CDF have been selected through a staged competitive process and evaluated on Most Economical Advantageous Tender (MEAT) criteria.
- For an RMA to access the CDF, a User Agreement will be required to be signed between the commissioning authority and the Environment Agency which will enable the release of any sensitive commercial information and any other requirements between both parties. Significant changes have been made to the previous framework (Water and Environment Management framework) User Agreement in discussion with the RMA working group to make it accessible to more RMAs.
- RMAs will work with their local Delivery Hub team to develop the scope, method of delivery and costs of a project based on the Five Case Business Model, detailed in the Government's Green Book.

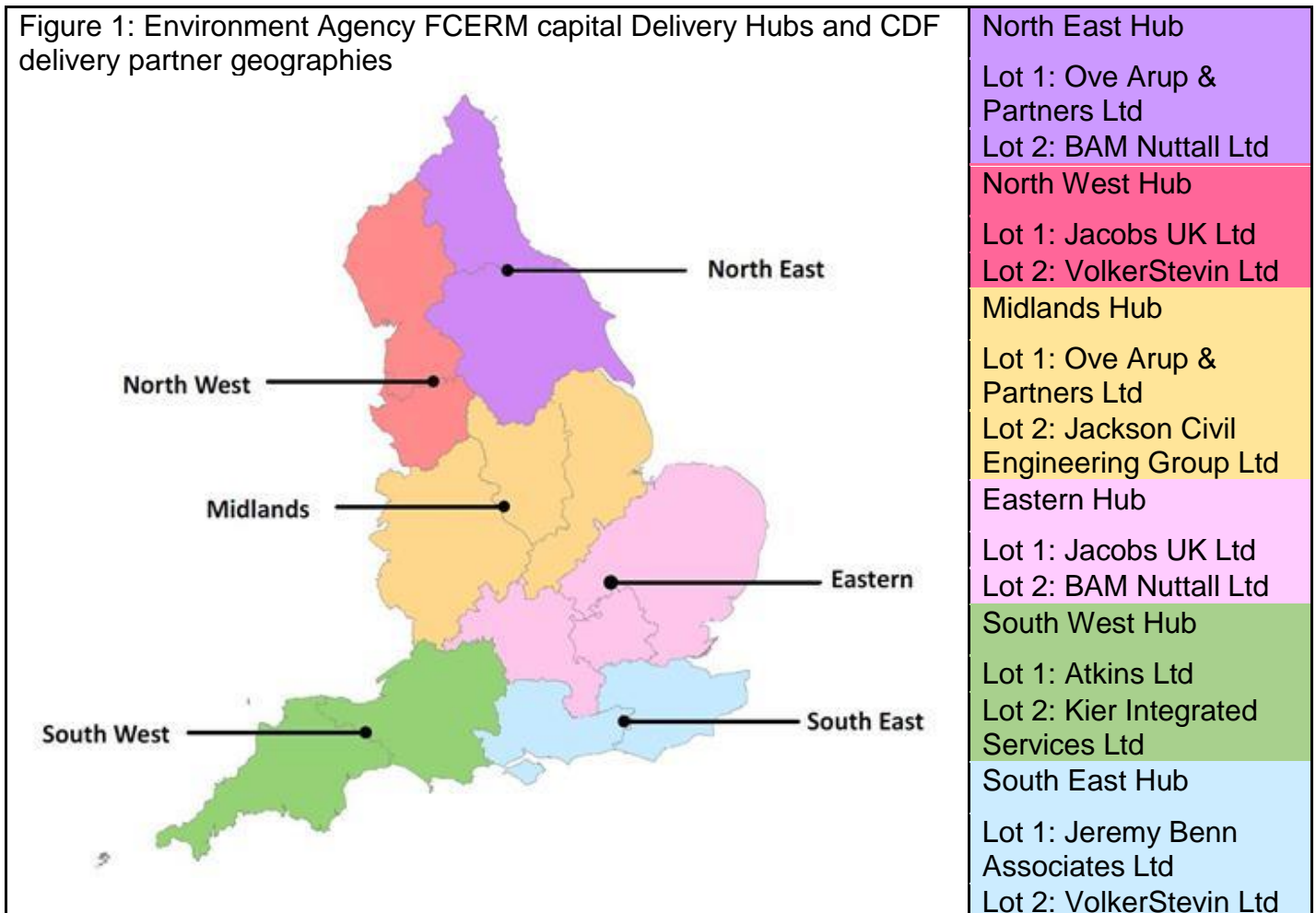
## How can I find out more?

- We are running an initial 'Introduction to NGSA' WebEx on 3 July 2019, 13:00 - 14:00 where you can find out more about the suite of frameworks. These will be followed by a more detailed session on how to access the new arrangements for those who are interested. To register your interest in the above WebEx's please contact the [NGSA project team](#).



## Appendix A: Collaborative Delivery Framework and supporting National Frameworks

Figure 1: Environment Agency FCERM capital Delivery Hubs and CDF delivery partner geographies



### National specialist commercial frameworks

#### Mapping and Modelling Framework (MMF)

MMF supports non-capital asset management and capital delivery related projects, i.e. forecasting and flood risk assessments. This includes all modelling, survey and mapping services, incident management and emergency planning and information management support.

Work may be directly awarded under £25k and competitively tendered above this value. The appropriate strategy for each project will be determined on a project or package-specific basis.

#### Mapping and Modelling framework delivery partners

**AECOM infrastructure and Environment UK Ltd.**

**JBA Consulting**

**Jacobs UK Ltd.**

## Marine and Coastal Framework (MCF)

The MCF supports projects

- requiring the use of specialist marine equipment, or
- where at least 80% of the works are below Mean High Water, or
- where there is the possibility of inundation from seawater

Our new MCF partners will deliver a range of services including: design and build solutions, information management, mapping, survey and Environmental Impact Assessments.

Delivery Partners	
<b>Lot 1 - Major Marine and Coastal Work projects with a total value of between £5 million and £50 million</b>	<b>Lot 2 - General Marine and Coastal Works will cover projects with a total value not exceeding £5 million</b>
<b>BAM New Wave Solutions Joint Venture</b>	<b>BAM Nuttall Ltd</b>
<b>Van Oord</b>	<b>Van Oord</b>
<b>VBA Joint Venture Limited</b>	<b>VBA Joint Venture Limited</b>
	<b>JBA Bentley Ltd</b>

## Client Support Framework (CSF)

The CSF is the last remaining National specialist framework. It is due to complete the procurement process late June 2019. Once complete, we will update you with the names of successful CSF delivery partners.

The CSF will provide a range of services including: technical delivery support (e.g. project review, safety management support), bought in services (e.g. project and programme management and commercial advice) and contract, cost and carbon management support service. CSF is available to other RMAs and IDBs.

## Appendix

### FCRM capital and revenue allocation process – a reference document

This section provides an overview of the annual capital and revenue Grant in Aid allocation process. It should be used as a reference document throughout the year. A glossary of key terms is provided in section 6. The RFCC Members Handbook should also be referred to for clarity on RFCC Committee roles and responsibilities.

#### 1.0 FCRM capital and revenue funding allocation overview

- 1.1 RFCCs play a critical role in the allocation and approval of the Environment Agency's capital and revenue programmes for FCRM. These two separate programmes contain a number of projects which are led and delivered by Risk Management Authorities – the Environment Agency, Local Authorities and Internal Drainage Boards, and in some cases Water Companies and Highway Authorities, or in partnership with each other.
- 1.2 Within the capital programme, projects will be new schemes (eg new defences), improvements to existing schemes (eg capital maintenance of existing defences), support schemes (eg mapping and modelling), or other activities (eg property level resilience). Revenue allocation projects will be maintenance works to existing assets to ensure they do not fall below their target condition, and Environment Agency day to day costs including, salaries, specialist resources, maintaining mapping, modelling and telemetry systems.
- 1.3 In simple terms, the capital programme focuses on the building of new assets or reinstating failing assets, while the revenue programme supports day to day operational activities and the maintenance of existing assets.
- 1.4 RFCC Committees should scrutinise these programmes, hold the Environment Agency, Local Authorities and others to account to ensure delivery, and consent all final capital and revenue programmes. RFCCs should ensure local priorities are addressed through local choices, and raise local levy which can be used to fund additional FCRM works in the local area. The RFCC Members Handbook sets out the statutory functions and roles of RFCCs.
- 1.5 RFCCs have a role to play in helping to ensure the targets associated with this funding are achieved. The number of homes better protected and the percentage of Environment Agency owned assets in required condition are set out at the start of each financial year. These targets, otherwise known as Outcome Measures (OMs) or Key Performance Indicators (KPI) are set by Defra and their delivery is a requirement of the Environment Agency's funding settlement.

#### 2.0 Annual FCRM capital Grant-in-Aid allocation process for 2020/21

- 2.1 We are currently in the penultimate year of our 6 year capital programme with confirmed funding up until March 2021. Work is currently underway to secure another long term funding settlement for FCRM, taking us beyond the 2020/21 financial year.
- 2.2 Before Government committed to a 6 year funding period, our programmes were substantially revised and changed each year as part of the annual funding process. With the 6 year programme, we now largely expect all Risk Management Authorities to stick to the approved programme as far as possible, and we undertake an annual

refresh of the programme to allow projects to be removed or added where priorities or deliverability has changed.

- 2.3 This annual refresh of the programme and subsequent approval by RFCCs is a constant cyclical process. The process for allocating Government Grant-in-Aid capital funding and refreshing the programme is summarised below. It sets out where RFCCs input and approve the programme as part of the annual cycle of Committee meetings. This is also set out in the table and diagram in section 5.
- 2.4 Quarter 1: The annual refresh process starts in March and April with the production and publication of new and updated guidance to support the next cycle of the refresh. This is put together by the National Portfolio Office within the Environment Agency. During April and May we invite all Risk Management Authorities to submit any new projects and any changes required to existing projects in the programme. This year we will again be focusing on schemes beyond 2021 to strengthen the pipeline of projects and the future programme.
- 2.5 Following submission of these changes, local Area teams will put together a new and 'refreshed' local programme, which is shared with RFCC Committees prior to and at their July meetings for support and endorsement.
- 2.6 Quarter 2: Following the July RFCC Committee meetings, local Areas Teams, on behalf of their RFCCs, will submit all project changes required to the national team (the National Portfolio Office). The National Portfolio Office will then collate all the changes and bids for additional or reduced funding for individual projects and nationally prioritise the required changes to ensure the programme remains affordable, on track to deliver its outcomes, and meet any wider national funding changes. They will then produce a revised investment allocation programme for the whole country for the next financial year. The national priorities for allocating funding are agreed with the RFCC Chairs.
- 2.7 The updated and refreshed programme, which is affordable within the current indicative allocation and shows which projects are eligible for funding, is then returned to local Area Teams to share with RFCC Committees.
- 2.8 Not all requested changes made during the refresh process will be able to be accommodated. These changes have to be balanced against other competing demands and priorities across the country and the programme must remain affordable.
- 2.9 Quarter 3: During September, where sub-groups exist, and in October for the main Committee meetings, the 'local choices' meetings take place. These are where RFCCs can make choices about their allocation programme based on local priorities. If further contributions are identified, from third parties or local levy, RFCCs may be able to increase their programme and deliver more projects. Additional Partnership Funding contributions often mean more projects can go ahead, or become viable for Grant-in-Aid funding.
- 2.10 During November and December the national team will collate and review all Committee returns. All local choices, as long as they meet the required criteria and are within budget, are approved and included in the production of the final draft allocation.
- 2.11 In January, the final allocation for capital Grant-in-Aid for the next financial year is shared with RFCCs for their review and consent.
- 2.12 Quarter 4: Following consent by the RFCCs, the allocation programme is shared with the Environment Agency Board for approval in February, and published on gov.uk in

March. Once this programme has been approved, the refresh process for the next financial year starts again.

### **3.0 FCRM revenue Grant-in-Aid allocation process for 2020/21**

- 3.1 Funding for revenue maintenance runs out at the end of 2019/20, the current Spending Review period. With no current funding settlement currently agreed for 2020/21 and beyond, this year's allocation process will prepare a number of scenarios. This will ensure we are prepared for a funding announcement when it is made. If an emergency budget is put in place the timescales set out below may change. This will be communicated to the RFCCs as required.
- 3.2 The Asset Information Management System (AIMS) IT system is used to produce the funding allocations for the revenue maintenance programme. The system was first used to produce the 2017/18 allocation and is an improvement on the previous approach as it enables more targeted allocation of maintenance funding to individual assets based on their flood risk benefits, using nationally consistent maintenance standards.
- 3.3 We are in the process of upgrading the AIMS IT system to a new Asset Management System. To create capacity for the upgrade we intend to ask Area teams to provide data to allow for 2 years' of allocation to be generated during this year's refresh. This will allow us to run the 2021/22 allocation as normal without drawing on Area resources, should we need to, and create capacity for the system upgrade.
- 3.4 Quarter 1: During the first quarter guidance for the maintenance programme refresh and update to the 5 year maintenance programme will be provided.
- 3.5 The 'frequent' maintenance programmes for each operational Area will be automatically copied forward within the AIMS IT system. This will be generated at the start of April.
- 3.6 Throughout April, May and June local Area teams will be asked to review their baseline programmes. Work that is no longer required will need to be removed and additional work can be identified within the AIMS system. This will include both 'frequent' activities (eg grass and weed cuts, operational checks) and more 'intermittent' activities (eg dredging, tree work, asset repairs).
- 3.7 It will be important that all maintenance needs are properly identified and this review is complete by mid-July.
- 3.8 Quarter 2: Throughout August the national team (the National Portfolio Office), working closely with local Area teams, will quality assure the identified needs programme.
- 3.9 By the end of August a nationally prioritised indicative maintenance allocation will be produced within the AIMS system. Following a national review, the indicative maintenance programmes for each Environment Agency Area and RFCC will be provided to local Area teams in early September for use in their October RFCC papers.
- 3.10 Quarter 3: At the October RFCC meetings (and in September where sub-groups exist) local Area teams will share indicative allocations with their RFCCs. For the next financial year (2020/21) local choices can be undertaken if there are additional funding opportunities available locally (for example local levy, general drainage charges, Internal Drainage Board precepts).

- 3.11 The RFCCs will also be shown the indicative 5 year maintenance programme at the October meeting.
- 3.12 Between September and November local Area teams will undertake a 'programming' task within the AIMS system. This will enable any locally funded work approved at the October meetings to be allocated funding, generate the work programmes within the system to enable efficient work allocation to delivery teams, and also produce the published programme information. This must be completed by the end of November.
- 3.13 In early December the 'programmed' reports are generated which will provide the final indicative allocation at an Area and RFCC level. These will be made available to local Area teams for inclusion in their January RFCC papers.
- 3.14 Quarter 4: At the January meetings RFCCs will be asked to consent to the 2020/21 maintenance programme and endorse the 5 year maintenance programme. This will enable the Environment Agency Board to allocate the funding for the following financial year.
- 3.15 Throughout February and March the 2020/21 refreshed maintenance programme and 5 year maintenance programme will be prepared for publication in April.

#### **4.0 Support programmes**

- 4.1 We allocate funding to support the delivery of wider FCRM activities that are integral to the delivery of our whole FCRM business. Our support schemes and programmes include reconditioning existing assets, strategies, flood resilience activities including telemetry, coastal monitoring, works on bridges that provide access to our assets, and flood modelling and forecasting.
- 4.2 The Environment Programme is one of the support programmes. We seek to integrate environmental outcomes in to all our schemes where possible. Where this is not possible, this programme helps the Environment Agency to fulfil its environmental responsibilities to protect and enhance the water environment. It specifically helps meet legal requirements such as the Water Framework Directive.
- 4.3 In November 2016, the Secretary of State announced £15million of funding for Natural Flood Management (NFM) projects. This funding is spread over the remainder of the 6 year capital programme, and is intended to reduce FCRM risk, improve habitats and increase biodiversity and increase our overall learning and understanding of the contribution natural flood management can make to our work. This programme is separate to the Environment Programme and support programmes.

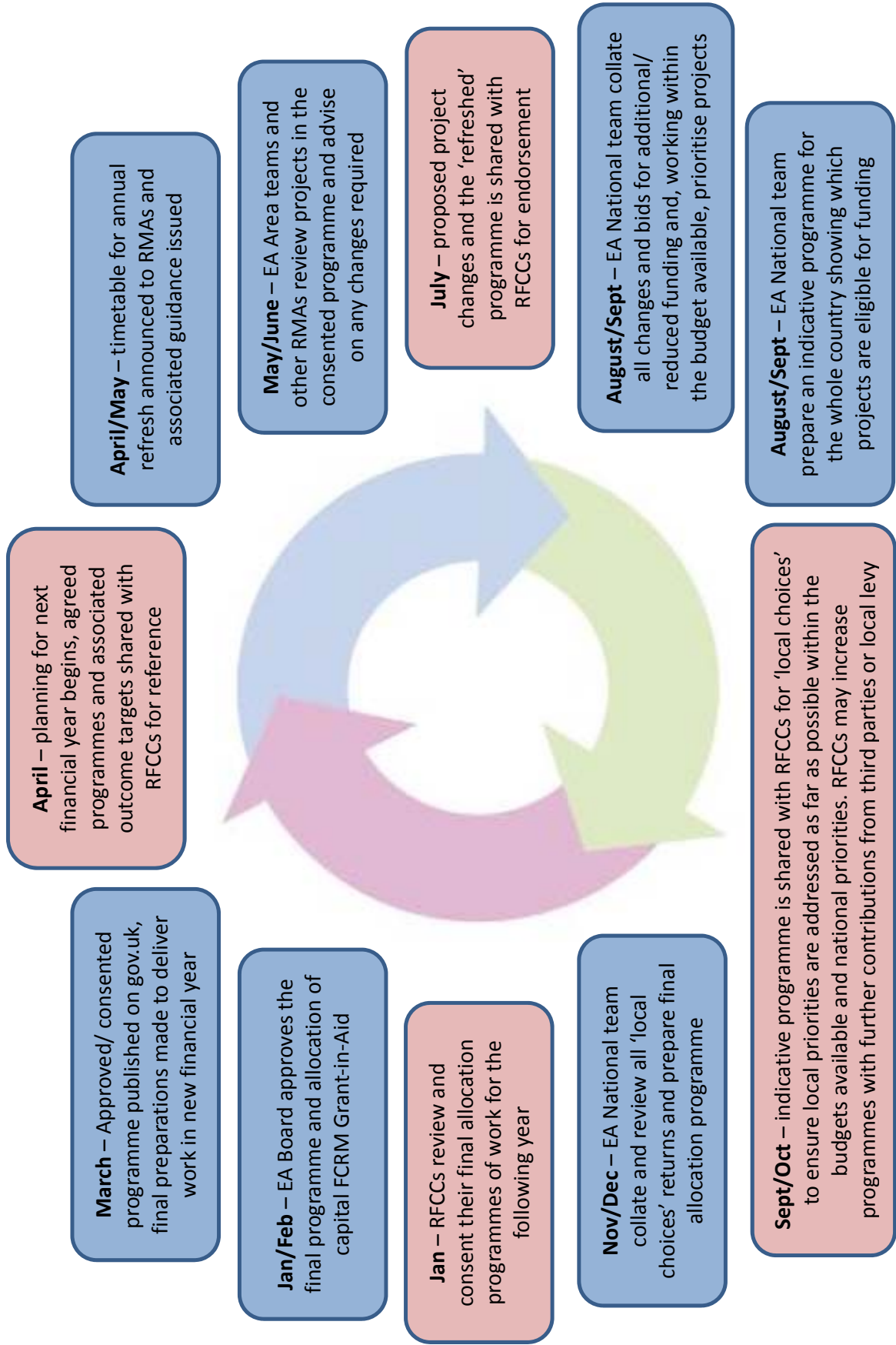
#### **5.0 What RFCC Committees can expect and when**

- 5.1 The following table summarises what the RFCC Committees can expect to receive at each of the 4 Committee meetings and what they will need to do:

<b>Committee Meeting</b>	<b>What to expect</b>	<b>Actions required</b>
<b>April</b>	<b>Capital:</b> <ul style="list-style-type: none"> <li>Confirmation that the programme for the financial year has been approved and published.</li> <li>Details of the outcome targets to be achieved for the year – number of homes better protected.</li> <li>Outline of the refresh process for the next financial year.</li> </ul>	No formal action required – RFCCs to note targets to be achieved and support refresh.
	<b>Revenue:</b> <ul style="list-style-type: none"> <li>Confirmation that the programme for the financial year has been approved and published.</li> <li>Details of outcome targets to be achieved for the year – percentage number of high consequence assets at required condition.</li> <li>Outline of the refresh process for the next financial year.</li> </ul>	No formal actions required – RFCCs to note targets to be achieved and support refresh.
<b>July</b>	<b>Capital:</b> <ul style="list-style-type: none"> <li>Copy of the refreshed programme for review, following changes submitted by all Risk Management Authorities.</li> </ul>	Review and endorse the draft refreshed programme.
<b>October</b>	<b>Capital:</b> <ul style="list-style-type: none"> <li>Copy of the affordable indicative programme for local choices.</li> </ul>	Decide local choices based on local needs.
	<b>Revenue:</b> <ul style="list-style-type: none"> <li>Copy of the draft indicative allocation for 2020/21 for local choices.</li> <li>Copy of the draft indicative 5 year maintenance programme.</li> </ul>	Decide local choices based on local needs.
<b>January</b>	<b>Capital:</b> <ul style="list-style-type: none"> <li>Copy of the final draft allocation for the next financial year.</li> </ul>	Consent final allocation.
	<b>Revenue:</b> <ul style="list-style-type: none"> <li>Copy of the final indicative maintenance allocation for the next financial year.</li> <li>Copy of the final indicative 5 year maintenance programme</li> </ul>	Consent final allocation. Endorse final indicative high level future programme.

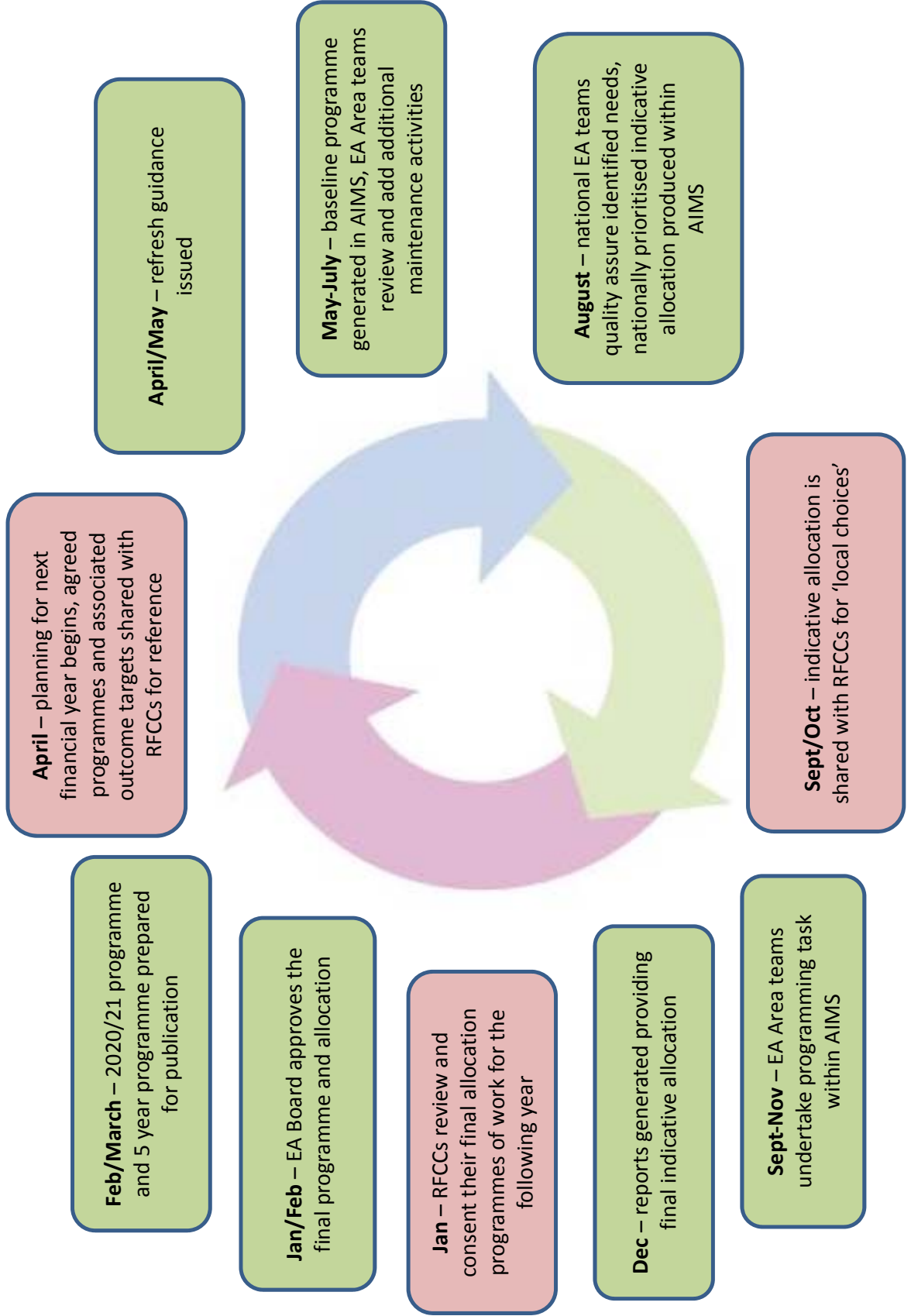
5.2 The following diagram also shows the activities throughout the year and at each of the Committee meetings:

# Annual process for allocating capital funding





# Annual process for allocating revenue funding



## **6.0 Glossary**

The following should be used as a reference guide to help explain some of the key terminology used when describing the capital and revenue programmes and the allocation process:

### **AIMS System**

The Asset Information Management System (AIMS) is a computer based IT system used to produce the funding allocations for the revenue maintenance programme. It enables more targeted allocation of maintenance funding to individual assets based on their flood risk benefits, using nationally consistent maintenance standards.

### **Assets**

Within FCRM these are usually categorised as either structures (eg sluices, pumping stations, etc) or defences (eg channels, walls, embankments, etc).

### **Capital**

In general, capital funding is money spent on the construction, creation, purchase and improvement or replacement of assets.

### **Consented programme**

The indicative allocation, or indicative programme, becomes the consented programme once the RFCCs give their consent in January and the Environment Agency Board approves in February. Only the programme for the next financial year is consented, future years within the 6 year programme (and longer term maintenance programme) remain indicative.

### **Funding codes**

These are used in managing the programme to understand the type of works that the project is undertaking. Some of the more commonly used codes are:

- BRG – works to bridges which enable FCRM activities, such as widening to increase flow rates.
- CM – capital maintenance – works to reinstate an assets standard of service and preserve its design life.
- DEF – works to change the current standard of service/protection of a defence or asset, or to create a new defence.
- REC – recondition work – projects to maintain the standard of protection of existing assets as capital maintenance projects but are only corrective, infrequent and one-off activities which restore the standard of service of failing assets.
- PLP – property level protection

### **Grant-in-Aid (FCRM GiA)**

The Government, through Defra, provides the majority of funding for FCRM activities in England in the form of Grant-in-Aid administered by the Environment Agency. FCRM Grant-in-Aid is either capital or revenue funding.

- Capital funding is generally used for new assets, or extending the life of existing assets, and is available to all Risk Management Authorities.
- Revenue funding is generally used for 'day-to-day' Environment Agency activities and maintenance activities.

### **Indicative allocation**

The indicative allocation, or indicative programme, is the initial and draft financial allocation (both capital and revenue) for the forthcoming financial year following national prioritisation. It is presented at the October meeting for review and/or amendment, and at the January meeting for approval. The allocation remains indicative until it is approved and becomes the consented allocation or programme.

### **Key Performance Indicators (KPIs)**

These are the Environment Agency's corporate performance measures against which targets are set. They reflect our progress and demonstrate we are meeting our commitments to deliver. We report our position to the RFCCs on the 2 main indicators for FCRM – KPI 962 and KPI 965.

- KPI 962 reports on the percentage of assets that are at or above their target asset condition. The Environment Agency reports on all FCRM assets on Main Rivers, regardless of who owns or manages them.
- KPI 965 reports on the number of households that are at increased flood risk from assets that are not at their target flood defence condition (are failing assets).

### **Local choices**

Funding bids are prioritised and allocated initially by the Environment Agency's National Portfolio Office according to agreed principles. Following this, RFCCs are invited to make adjustments to this programme within their allocated budgets and with any additional local funding they may have. This takes place during the October RFCC Committee meetings.

### **Local levy**

Levy raised by the Environment Agency from Lead Local Flood Authorities (LLFAs). LLFAs are unitary authorities for an area, or if there are no unitary authorities, the county council for the area. The level at which the local levy is set is voted on annually by LLFA members on the RFCC. Levy is used to fund FCRM activities within the RFCCs region and supplements FCRM Grant-in-Aid funding.

### **National Portfolio Office**

The Environment Agency's national programme and allocation team is otherwise known as the National Portfolio Office. It is the hub for managing the capital and revenue programmes and overseeing changes.

### **Outcome measures**

Similar to KPIs, Outcome Measures (OMs) are a suite of performance measures for flood and coastal erosion risk management. Outcome Measures 1 to 4 are used to help prioritise projects within the programme, and are used as part of the Partnership Funding score to calculate the amount of FCRM Grant-in-Aid available to a project.

- OM1 reports on the overall benefits of a scheme and Grant-in-Aid investment, taking into account whole life costs and benefits.
- OM2 (also known as KPI 930) reports on the number of households benefiting from a reduced risk of flooding from schemes which create new assets or reinstate an asset's standard of protection.
- OM3 (also known as KPI 933) reports on the number of households benefiting from a reduced risk of coastal erosion from schemes which create new assets or reinstate an asset's standard of protection.
- OM4 – is linked to the environment programme and reports on the hectares of habitat created and kilometres of protected rivers improved.

### **Project Application and Funding Service (PAFS)**

This is the new system for submitting proposals for new projects or project changes requiring Grant-in-Aid funding. This replaces the current project proposals process and the FCERM1 form. It requires all Risk Management Authorities to submit project proposals online. This service "submit a proposal for flood and coastal erosion risk management project funding" is accessible through gov.uk.

### **Partnership funding**

Defra's current policy. It provides a system of funding which applies to all FCRM projects seeking Grant-in-Aid (GiA) funding. It is a way of increasing overall investment in FCRM by encouraging external contributions as a means to unlock GiA funding. GiA is capped based on the number of outcome measures a project will deliver, with each project having a Partnership Funding score as a means of prioritisation. RFCCs play a key role in working with partners and communities to maximise contributions, and to raise and allocate local levy which can be used as an external contribution.

### **Pipeline**

The 'pipeline' refers to those projects which are included in the 6 year capital programme with a partnership funding score below 100% and therefore require some external contributions before they can go ahead. It also refers to those projects which are planned for beyond 2020/21. As part of the annual refresh process, and in looking to develop a future long term investment programme, we look to strength our pipeline of projects.

### **Project Status**

This refers to the Gateway that a project has achieved so far. As part of good project management key milestones are identified within a projects lifecycle and progress is tracked. Key milestones or Gateways are:

- Gateway 0
- Gateway 1 – Business case and financial approval
- Gateway 2 – Detailed design
- Gateway 3 – Contract award
- Gateway 4 – Readiness for service
- Gateway 5 – Contract complete
- Gateway 6 – Project closure

### **Refresh**

This is the annual opportunity for all Risk Management Authorities to review their capital and revenue programmes and to update project information and add new projects into the programme.

### **Revenue funding**

In general, revenue funding is money spent by the Environment Agency on day to day activities. These include staff salary costs, revenue projects (eg inspections, maintaining hydrometric and telemetry systems), and revenue maintenance (eg preventing assets falling below target condition). Revenue funding also pays for the Environment Agency's response to flooding.

### **Risk Management Authorities**

The collective name for the following organisations: the Environment Agency, Lead Local Flood Authorities, District Councils (where there are no unitary authorities), Internal Drainage Boards, Water Companies and Highway Authorities.

### **Spending Review 2019 (SR19)**

This is our opportunity to build on the success of the current funding settlement and negotiate a long term programme that fits the needs of the future beyond 2020 (revenue) and 2021 (capital).

## Southern Regional Flood & Coastal Committee

**Item no:** 9a  
**Date:** 15 July 2019  
**Paper by:** Programme Managers  
**Subject:** FCRM Capital Programme refresh and pipeline development  
**Appendix 1:** Capital Programme allocation cycle  
**Appendix 2:** Southern RFCC 2020/21 Programme Bid

### Recommendations:

The Southern RFCC Committee are asked to:

1. Approve the unconstrained bid for funding for the final year of the Capital Programme
2. Note the work being undertaken to develop the next settlement period

### 1.0 Background

- 1.1 This paper provides a brief update on the capital refresh for 2020/21, of the current approved 6 year programme. It also covers the process that is being undertaken to develop the next 6 year programme for conversations with Defra and Ministers around a potential next settlement period.
- 1.2 The overview of the annual capital allocation process and what RFCC Committees can expect at each Committee meeting is set out in Appendix 1 at the back of this paper.

### 2.0 Annual refresh of the 6 year capital investment programme

- 2.1 This year's refresh is the final of the current approved 6 year programme and will be critical in achieving our National 300,000 homes better protected target and the Southern RFCC target of 72,395 properties by the end March 2021 as set out in our original consented programme in March 2015 that we are expected to overachieve on.
- 2.2 At a National level by the end of 2018/19 we had achieved 193,604 Houses better protected from Flood and Coastal Erosion, leaving us 106,396 homes to achieve the National target in the final 2 years. The forecast for 2019/20 nationally will hopefully achieve 256,985 houses better protected, with a predicted out-turn for the 6 year programme of over 318,000 houses better protected.
- 2.3 As such the intention for the 2020/21 programme refresh is to protect GiA allocation to schemes that deliver towards the houses protected target by 31 March 2021. Then assigning any spare allocation to prioritise funding to schemes in construction; those that are bringing in time limited contributions; and using some sort of ranking by partnership funding score. As this is a continuation of the previous allocation round principle the theory is this will enable a light touch refresh process and promote stability where possible to RFCC allocations.

- 2.4 The National timeline that the Programme Managers are working to is a light touch high level need submission on the 5<sup>th</sup> July for high level planning and a detailed formal submission, after RFCC approval, by the 31<sup>st</sup> July. Bids for funding from all Risk Management Authorities for new and existing schemes in the Southern RFCC were collated on the 21<sup>st</sup> May. The bids are reviewed by local Partnership and Strategic Overview teams to provide a level of assurance before being provided to Programme teams who quality assure the bids. They then build the relevant area programme before bringing this together as an RFCC programme. The complete Programme will be presented to the Southern RFCC at the July meeting for endorsement and while the quality checking is happening at an Area level, we will show the headline numbers to the committee to understand the trends as they are emerging, as there may be some variation at the project level.
- 2.5 To ensure we can meet RFCC and National targets, we want to make sure the Southern RFCC existing programme is robust as well as looking for opportunities to start some projects earlier than currently planned and identify new ones. The programme refresh will look at our programme from 1 April 2020 to 31 March 2021 and beyond to give a longer view of the Programme. This pipeline of projects after 31 March 2021 will also be used to inform discussions with The Government on the next long term funding settlement for 2021 and beyond. It will also be used to set the expectations.
- 2.6 An initial high level overview of the programme refresh is found below,

**Table 1. Southern RFCC forecast homes better protected refreshed bid comparison**

Homes better protected	2020/21
19/20 programme	13,940
Refresh Bid	13,355
Difference	-585

The refreshed Southern RFCC programme bid shows that the Programme has a slight reduction of 585 Properties at reduced risk from flooding and coastal erosion (OM2 & 3's). This reduction is due to several schemes re-profiling their delivery. Some of the big changes are Thames Estuary Phase 1 Programme Southern which has pulled some OM delivery forward into 2019/20 but pushed some back in the programme, meaning it is down 265 OM's in 2020/21 and Portchester Castle to Paulsgrove Tidal Defence is down 361 OM's due to issues with gaining planning permission delaying delivery. These schemes still plan to deliver their flood risk and coastal reduction benefits but it will now be in the next spending review. It is important to note that even with this reduction at the tail of our programme the RFCC are still forecasting to provide reduced risk to 3,496 properties more than our original 6 year target of 72,395 properties.

**Table 2. Southern RFCC GiA refreshed bid comparison**

GiA £m	2020/21
19/20 programme Allocation	62
Latest refresh	78.4
Difference	12.4

The Southern RFCC programme unconstrained GiA refresh shows that we are requesting £12.4m more GiA to the Programme to achieve the Properties at reduced risk from flooding and coastal erosion (OM2 & 3's) shown in Table 1 above. This increase covers a number of factors such as:

- Re-profiling schemes back to their optimum delivery profiles after having artificial gaps introduced to their funding through last year's allocation process.

- Some project slippage and acceleration opportunities impacting their funding need.

Some examples of this are we've accelerated some pipeline opportunities into 2020/21 such as the River Itchen (Tidal) Flood Alleviation Scheme requesting £1.5m of GiA. Hythe Ranges needs £7m more, profiling the same total project expenditure into a shorter construction timeframe to fit in with restrictions on site access due to a MOD live firing range, this is balanced by a £7m reduction on Lydd Ranges Scheme to keep within the agreed GiA profile for the two schemes.

Thames Estuary Phase 1 Programme has requested £1m more after having its profile artificially reduced last refresh to fit in with affordable budgets, this brings it back to the optimal delivery amount for the asset maintenance plan. Newhaven Flood Alleviation Scheme £1.5m increase, Portsea Island - Flood Cell 1: Southsea Coastal Flood and Erosion Risk Management Scheme £1.3m decrease, Portsea Island - Flood Cell 4: North Portsea Island Coastal Flood and Erosion Risk Management Scheme £2.5m increase and Romsey Flood Alleviation Scheme £1m have all seen cost increases with increased construction costs, that have either been profiled into 2020/21 or future years. The large majority of our additional GiA funding request is to pull back in schemes that deliver their properties at reduced risk beyond March 2021 and therefore not benefiting our current programme Properties at reduced risk target.

- 2.7 Programme Managers will continue to work with partners and the National Allocation team to enable our Programme to fit the required National GiA profile. We will endeavour to smooth out the variance on the Southern RFCC need, working with partners wherever we can to fit into the National GiA position while optimising our own Programme. However the ambition is to draw in additional GiA to the Southern RFCC programme should any be available. More detail on the SRFCC bid for funding in 2020/21 can be found in Appendix 2. Please note this schemes list only contains projects requiring funding in 2020/21.
- 2.8 Programme Managers will continue to work with EA Partnership and Strategic Overview teams, Asset Performance Teams, partner Risk Management Authorities, Programme Delivery Units and the Collaborative Delivery Framework (new EA Supplier arrangement) to continue to optimise the Programme. The opportunity to do this extends until the formal submission of the bid to the National Allocation team at the end of July.

### **3.0 Pipeline development and the next long term FCRM funding settlement**

- 3.1 Although we are just starting year 5 of the approved 6 year programme, National Teams have been working with Defra and HM Treasury for over a year to identify funding needs beyond the end of the current 6 year Programme (in 2021) to start the negotiation process around any future settlement. The long term investment scenarios prepared by the Environment Agency demonstrate the need for continued investment, particularly in light of climate change predictions. More information on this can be found at [www.gov.uk/government/publications/flood-and-coastal-risk-management-in-england-long-term-investment/long-term-investment-scenarios-ltis-2019](https://www.gov.uk/government/publications/flood-and-coastal-risk-management-in-england-long-term-investment/long-term-investment-scenarios-ltis-2019)
- 3.2 The current ambition is to achieve another 6 year settlement period, however the current settlement runs until March 2021, but work is well underway to secure funding beyond that so there isn't a "cliff edge" in how the National Programme is operated. The National Allocation Team are making decisions on how they allocate funding to the Programme, assuming there is the same levels of allocation for the Capital investment Programme beyond 2021.
- 3.3 The National Allocation Team are looking to learn lessons from the current 6 year Programme to improve any future Programme; what at National, RFCC and local levels went well and what can be improved? Feedback will be requested at a future date.
- 3.4 As part of the next settlement request the National Team are reviewing potential changes around the Partnership Funding calculator. These might potentially include:

- Updated Defra payment rates to reflect inflation and new evidence on flood damages since 2011 – including people impacts such as mental health.
  - New intermediate risk band to help with surface water schemes in particular.
  - Improved payment rates for environmental benefits in line with the Natural Capital approach set out in the 25 Year Environment Plan – a new and better Outcome Measure 4.
  - Recognising the benefits of schemes for properties that will become at risk in the lifetime of defences due to the impacts of climate change.
  - Proposed asset replacement fund- £180m to £240m over 6 years for end of life assets with low partnership funding score.
- 3.5 The National team are also developing proposals on better recognising the importance of local economy benefits and aligning to the latest climate change projections. They are working with other Government Departments to explore how they can make flood resilience a part of their Spending Review 19 bid. Any change will require a transition period to complete current works and embed new rules.
- 3.6 Work is still ongoing with Defra and Ministers on what exactly will be put forwards to Treasury before an initial submission detailing the scope and scale of a potential programme is made but, full submission likely by summer recess in July.
- 3.7 The ambition is to secure a longer term settlement for both Capital and Revenue (up to 6-10 years for Capital). While National Teams are planning for a longer term Spending Review period there is also the realisation that other factors such as Brexit might mean a much shorter settlement period, potentially as low as 1 year in a worst case scenario and this is part of the planning scenarios.
- 3.8 With the above options in mind Environment Agency teams and other Risk Management Authorities' have spent the last year and a half generating, developing and improving our confidence in the programme pipeline to put the Southern RFCC in a good position of clearly identifying those needs.
- 3.9 The previous programme refresh asked for more focus to be placed on pipeline development and within the Programme there are a number of projects seeking funding beyond 2021. Teams have supplemented this by adding in the next generation of new schemes and capital maintenance projects. Programme Managers will need to ensure that the pipeline is continually improved for robustness and that as an RFCC we continue to add projects where funding may be required.

#### 4.0 Current pipeline programme overview

- 4.1 The indicative pipeline programme for Southern RFCC is outlined below. Table 3 below shows a potential programme of £815m of total spend for 104,797 properties at reduced risk over a 6 year period. However under the current PF rules we are only expecting 65% of this need being funded by GiA and securing this will be depending on bringing in the forecast £282m of contributions

**Table 3. Southern RFCC High level Pipeline indicative numbers**

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Total
<b>Total spend £m</b>	137.3	152.9	118.2	160.6	142.8	103.3	<b>815.1</b>
<b>Indicative GiA</b>	117	116.1	97.9	87.9	66.4	47.7	<b>533.1</b>
<b>Indicative Contributions</b>	20.3	36.7	20.3	72.7	76.4	55.6	<b>282</b>
<b>Properties better protected</b>	9,946	9,863	17,758	10,236	7,993	15,274	<b>104,797</b>

These numbers are generated from multiple sources using knowledge from existing schemes such as works on the Tidal Thames Estuary, Lydd Ranges (delivery of the Foces strategy) and the Portsea schemes which continue to deliver outside of the current 6 year Programme. There



are less accurate costings of future replacement of existing assets and estimated catchment ambitions. These figures are created using existing funding rules and are indicative of several themes.

- At a National and local level will need to invest significantly larger sums of money on our Capital Programme to achieve the numbers of properties at reduced risk of flooding we have seen in the past. Often the easy schemes have been completed and we are left with complex and costly solutions.
- Partnership Funding will become more important, as only two thirds of the above need is currently forecast to be met by GiA.

Clearly more work will be needed to be undertaken on the Programme by all RMA's to refine these numbers to a realistic and deliverable Programme ahead of the next Spending Review. The current unconstrained programme would have an average spend of £135m per year across the 6 years which is beyond our current resource level to deliver, the current average for our 6 year programme has been just over £55m per year.

As we see the details of the next spending review we will endeavour to share this with project teams

## **5.0 Recommendations**

5.1 The Southern RFCC sub Committee are asked to:

- Approve the unconstrained bid for funding for the final year of the Capital Programme
- Note the work being undertaken to develop the next settlement period

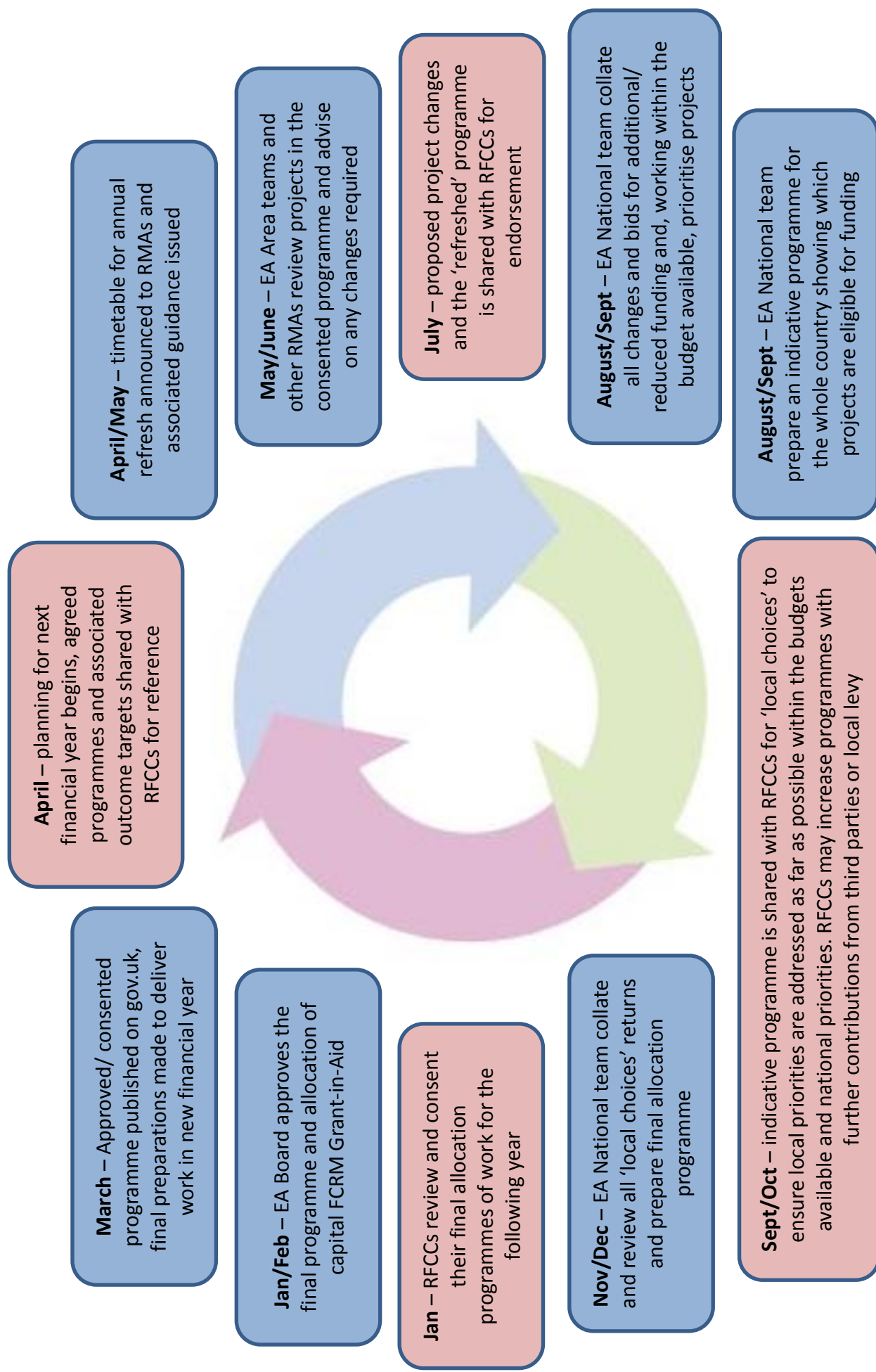
**Name: Rich Oakes and Ian Walker**

**Title: Programme Managers**

**Email:** [Richard.oakes@environment-agency.gov.uk](mailto:Richard.oakes@environment-agency.gov.uk)

**Date: July 2019**

# Annual process for allocating capital funding



**Appendix 2. Southern RFCC Programme bid for funding and properties at reduced risk for 2020-2021 only**

National Project Number	Project Name	Lead Risk Management Authority - Name	Raw Score (%)	Adjusted PF Score (%)	Total Project Spend	GIA	Public Funding	Private Funding	All Other Funding	OM2	OM3
SOS003E/001A/015B	Lydd Ranges Schemes	Environment Agency	119%	121%	3,800,000	3,800,000	0	0	0	300	0
SOS004E/001A/009A	Newhaven Flood Alleviation Scheme	Environment Agency	221%	221%	1,870,000	1,870,000	0	0	0	117	0
SOS003E/002A/003A	PEVENSEY BAY SEA DEFENCES PPP	Environment Agency	143%	208%	1,744,733	1,479,733	0	265,000	0	2,117	0
SOC006E/000A/005A	North Street & Talbot Terrace, Lewes, Flood Alleviation Scheme (Sussex Ouse Strategy)	Environment Agency	13%	4753%	1,220,000	10,000	0	1,210,000	0	0	0
SOS004C/011A/002A	Works from Brighton Marina to River Adur Flood and Coastal Erosion Risk Management Strategy	Brighton and Hove City Council	39%	100%	675,687	456,074	108,117	111,496	0	0	0
SOC500E/000A/162A	Pett Level Beach Management 2020/21 - 2021/22	Environment Agency	120%	120%	620,000	620,000	0	0	0	357	0
SOS004C/000A/010A	Seaford Beach Shingle Recycling 2018/19 - 2023/24	Environment Agency	214%	214%	529,700	529,700	0	0	0	92	0
SOC005E/000A/011A	Star Inn Gates (Pevensey Levels SSSI Asset Replacement)	Environment Agency	111%	111%	500,000	500,000	0	0	0	0	0
SOS003C/004A/002A	Eastbourne Beach Management - 6 yr Plan (2015/16 - 2020/21) (Yrs 1 to 6)	Eastbourne Borough Council	1058%	1076%	400,000	300,000	100,000	0	0	1,494	55
SOC500E/000A/291A	Pevensey Gates (Pevensey Levels SSSI Asset Replacement)	Environment Agency	Blank	Blank	350,000	350000	0	0	0	0	0
SOC005E/000A/007A	Tumblers Bay, Michelham Priory Reservoir Works	Environment Agency	5%	5%	250,000	250,000	0	0	0	0	0
SOS004E/001A/008A	Southease Parish and Southease to A27 Tidal Embankment Rebuilds	Environment Agency	8%	8%	225,000	225,000	0	0	0	4	0
SOS003E/001A/023A	Rother Tidal Walls East	Environment Agency	119%	121%	184,500	184,500	0	0	0	0	0
SOC501E/000A/020A	Malling Brooks Desilting	Environment Agency	26%	26%	180,000	180,000	0	0	0	0	0
SOC999/000/093A	Peacehaven Sea Walls Capital Maintenance and Improvements to take into account climate change	Lewes District Council	9%	12%	84,800	66,800	18,000	0	0	0	0
SOC004E/000A/004A	River Rother Restoration Study	Environment Agency	Blank	Blank	65,000	0	0	0	65,000	0	0
SOC500E/000A/165A	Broomhill Sands Beach Management 2018/19 - 2022/23	Environment Agency	119%	121%	50,000	50,000	0	0	0	20	0

National Project Number	Project Name	Lead Risk Management Authority - Name	Raw Score (%)	Adjusted PF Score (%)	Total Project Spend	GfA	Public Funding	Private Funding	All Other Funding	OM2	OM3
SOS500E/000A/029A	Eastbourne and Pevensey Coastal Defence (2025-2030)	Environment Agency	103%	103%	50,000	50,000	0	0	0	0	0
SOC501E/000A/003A	Eastbourne Beach Management - 5 yr Plan (2021/22 - 2024/25)	Eastbourne Borough Council	468%	500%	30,000	30,000	0	0	0	0	0
SOS003E/000A/016A	Bulverhythe Capital Maintenance 2018/19-2022/23	Environment Agency	489%	489%	20,000	20,000	0	0	0	32	0
SOC500E/000A/292A	Honeycrock Pumping Station (Pevensey Levels SSSI Asset Replacement)	Environment Agency	178%	178%	15,000	15000	0	0	0	0	0
SOC500E/000A/078A	Newbridge Pumping station pump replacement (Pevensey Levels SSSI Asset Replacement)	Environment Agency	114%	114%	15,000	15,000	0	0	0	0	0
SOC500E/000A/290A	Rickney Bridge Sluice (Pevensey Levels SSSI Asset Replacement)	Environment Agency	Blank	Blank	15,000	15000	0	0	0	0	0
THE001E/000A/012A So	Thames Estuary Phase 1 Programme (So)	Environment Agency	43%	100%	9,522,000	9,522,000	0	0	0	86	0
SOS005F/004A/002A as	Portsea Island - Flood Cell 1: Southsea Coastal Flood and Erosion Risk Management Scheme	Portsmouth City Council	81%	85%	10,965,000	9,965,000	1,000,000	0	0	810	0
SOS005F/004A/006A	Portsea Island - Flood Cell 4: North Portsea Island Coastal Flood and Erosion Risk Management Scheme	Portsmouth City Council	100%	100%	6,878,084	6,878,084	0	0	0	152	0
SOC010E/000A/012A	Romsey Flood Alleviation Scheme	Environment Agency	64%	128%	1,704,969	1,004,000	700,969	0	0	0	0
SOS005C/000B/002A	River Itchen (Tidal) Flood Alleviation Scheme	Environment Agency	45%	100%	1,500,000	1,500,000	0	0	0	0	0
SOC010F/000A/009A	Outer Winchester Flood Alleviation	Hampshire County Council	6%	48%	1,435,000	0	80,000	0	1,355,000	0	0
SOC010E/000A/011A	Winchester (R. Itchen) Fluvial Flood Alleviation Scheme	Hampshire County Council	45%	104%	1,145,800	564,800	581,000	0	0	0	0
SOO002E/000A/120A	Itchen and Test River Restoration Remedy	Environment Agency	164%	202%	865,000	400,000	100,000	365,000	0	0	0
SOC500E/000A/061A	Alverstoke Coastal Flood & Erosion Risk Management Scheme	Gosport Borough Council	144%	144%	420,489	420,489	0	0	0	99	0
SOS005F/001A/006A	South Hayling Island Beach Management Activities (Including Eastoke Drainage Improvements CFERM Scheme)	Havant Borough Council	168%	168%	418,000	418,000	0	0	0	311	0

National Project Number	Project Name	Lead Risk Management Authority - Name	Raw Score (%)	Adjusted PF Score (%)	Total Project Spend	GIA	Public Funding	Private Funding	All Other Funding	OM2	OM3
SOC500E/000A/038A	Forton Lake (Gosport) Coastal Flood and Erosion Risk Management Scheme	Gosport Borough Council	56%	101%	385,482	111,716	0	0	273,766	66	1
SOS005E/005A/001A	Portchester Castle to Paulsgrove Tidal Defence	Fareham Borough Council	Blank	Blank	353,644	0	0	353,644	0	0	0
SOS005C/016A/003A	Hill Head to Portsmouth Harbour Entrance Beach Management Plan	Gosport Borough Council	22%	22%	342,705	19,141	0	0	323,564	9	3
SOS000F/005A/014A	Langstone (Havant) CFERM scheme	Havant Borough Council	11%	80%	300,000	0	300,000	0	0	0	5
SOC002E/000A/187A	Manor Farm, River Test - Regional Habitat Creation Programme	Environment Agency	43%	49%	254,000	254,000	0	0	0	0	0
SOS005C/006A/002A	Managed Realignment / Regulated Tidal Exchange at Hook Lake	Fareham Borough Council	21%	21%	200,000	200,000	0	0	0	0	0
SOC500E/000A/084A	Hayling Island FCERM Strategy	Havant Borough Council	0%	0%	180,000	50,000	130,000	0	0	0	0
SOS005C/011A/013A	Hurst Spit Beach Management Plan 2018/19 to 2022/23	New Forest District Council	46%	46%	170,680	40,000	0	0	130,680	0	0
SOC999/000/081A	Bourne Rivulet Groundwater Alleviation	Hampshire County Council	2%	93%	165,000	0	115,000	0	50,000	5	0
SOS005C/000A/015A	Old Portsmouth Tidal FCRM Scheme	Portsmouth City Council	136%	136%	75,900	75,900	0	0	0	0	0
SOS005C/011A/021A	Hurst Spit to Lymington FAS	Environment Agency	17%	17%	66,000	66,000	0	0	0	0	0
SOC500F/000A/034A	Totton Surface Water Flood Alleviation	Hampshire County Council	70%	70%	10,000	0	0	0	10,000	0	0
SOS006C/000B/001A	East Cowes Flood Risk Management scheme	Environment Agency	112%	112%	20,000	20,000	0	0	0	0	0
SOS003E/001A/001A	Hythe Ranges Scheme	Environment Agency	119%	121%	20,731,000	20,731,000	0	0	0	746	0
SOS500C/000A/012A	Hythe to Folkestone Beach Recharge 2019-21	Folkestone & Hythe District Council	433%	433%	5,005,000	5,005,000	0	0	0	0	2,190
SOC003E/001A/020A	Leigh Expansion and Hildenborough Embankments	Environment Agency	66%	122%	2,000,232	1,566,232	434,000	0	0	0	0

National Project Number	Project Name	Lead Risk Management Authority - Name	Raw Score (%)	Adjusted PF Score (%)	Total Project Spend	GIA	Public Funding	Private Funding	All Other Funding	OM2	OM3
SOC500E/000A/083A	Middle Medway Flood Resilience	Environment Agency	63%	100%	1,400,000	0	1,400,000	0	0	163	0
SOC500E/000A/148A	Romney Marsh Pumping Stations Refurb	Environment Agency	119%	121%	550,062	550,062	0	0	0	0	0
SOC500E/000A/166A	Denge (Lydd Ranges) Beach Management 2019/20 - 2020/21	Environment Agency	137%	137%	550,000	550,000	0	0	0	1,724	0
SOC500E/000A/174A	Deal Beach management 2020-2025	Dover DC	216%	216%	350,000	350,000	0	0	0	1,035	108
SOS003E/001A/012A	Romney Sands Coastal Defences	Environment Agency	119%	121%	273,779	273,779	0	0	0	27	0
SOS500C/000A/008A	Hythe to Folkestone Beach Management 2020 - 2025	Folkestone & Hythe District Council	507%	507%	252,000	252,000	0	0	0	0	438
SOC500E/000A/099A	Leigh MIOS 17 – 21	Environment Agency	Blank	Blank	200,000	200,000	0	0	0	0	0
SOC500E/000A/098A	NFM - Medway	Environment Agency	Blank	Blank	165,000	0	80,000	0	85,000	0	0
SOC500E/000A/156A	Northern Sea Wall Beach Management 20/21 to 21/22	Environment Agency	116%	121%	115,000	115,000	0	0	0	28	0
SOC500E/000A/057A	Leigh FSA Improvements	Environment Agency	100%	100%	107,500	107,500	0	0	0	0	0
SOC001E/000A/097A	Upper Westerham Flood Alleviation Scheme	Environment Agency	167%	167%	100,000	100,000	0	0	0	8	0
SOC500E/000A/168A	Littlestone Beach Management 2020/21-2021/22	Environment Agency	120%	120%	80,000	80,000	0	0	0	59	0
SOO004E/000A/048A	Elmley Managed Realignment and Habitat Creation	Environment Agency	223%	223%	30,000	30,000	0	0	0	0	0
SOO004E/000A/083A	Great Bells Farm - RHCP	Environment Agency	BLANK	BLANK	16,085	16,085	0	0	0	0	0
SOC500E/000A/072A	Greatstone Dunes Management (2017 - 2021)	Folkestone & Hythe District Council	2378%	2378%	15,000	15,000	0	0	0	155	0
SOS001E/006A/015A	Sandwich Town Tidal Defences	Environment Agency	BLANK	BLANK	5,000	5,000	0	0	0	0	0
SOC500E/000A/055A	Appledore Pumping station	Environment Agency	100%	108%	2,000	2,000	0	0	0	0	0
SOS004E/002A/002A	Shoreham Adur Tidal Walls Scheme	Environment Agency	0%	0%	2,986,000	2,986,000	0	0	0	0	0
SOS004C/002A/017A	Shoreham Western Harbour Arm Flood Defence - Development and construction	Adur and Worthing Councils	10%	105%	977,000	249,000	728,000	0	0	0	0

National Project Number	Project Name	Lead Risk Management Authority - Name	Raw Score (%)	Adjusted PF Score (%)	Total Project Spend	GIA	Public Funding	Private Funding	All Other Funding	OM2	OM3
SOS004C/003A/008A	Aldwick Groyne Replacement Scheme Ph 10	Arun District Council	85%	105%	750,000	597,000	0	0	153,000	24	30
SOC999/000/104A	Project Marker - Thorney Island Coastal Habitat Creation Scheme	Environment Agency	20%	38%	500,000	250,000	0	250,000	0	0	0
SOS004C/002A/012A	Worthing - Goring Development, delivery and construction of replacement groynes	Adur and Worthing Councils	104%	104%	500,000	200,000	300,000	0	0	0	0
SOC008E/001A/013A	Arundel Tidal Defence Improvements Phase 1	Environment Agency	71%	100%	480,000	30,000	300,000	0	150,000	118	58
SOS500C/000A/009A	Implementation of the Selsey, Bracklesham and East Wittering Beach Management (5yrs 2016/17 to 2020/21)	Chichester District Council	152%	152%	280,000	280,000	0	0	0	85	15
SOO002E/000A/299A	Angmering FAS	Environment Agency	29%	65%	267,000	20,000	100,000	60,000	87,000	22	0
SOS004C/000A/020A	Shoreham and Lancing Coastal Defences Beach Management Plan	Environment Agency	183%	183%	250,000	250,000	0	0	0	136	22
SOO002E/000A/292A	River Ems, Westbourne FAS	Environment Agency	29%	94%	218,000	148,000	0	0	70,000	0	0
SOC500E/000A/020A	Climping (Legal Frontage) Beach Management	Environment Agency	31%	31%	113,000	113,000	0	0	0	0	0
SOC007E/000A/015A	Hassocks Surface Water Management Plan and Actions	West Sussex County Council	145%	145%	90,000	90,000	0	0	0	0	0
SOS004E/003A/009A	Elmer Beach Management Works	Environment Agency	101%	102%	76,000	76,000	0	0	0	0	0
SOO002E/000A/296A	Ferring Rife FAS	Environment Agency	179%	179%	75,000	75,000	0	0	0	0	0
SOS004C/003A/010A	Arun to Pagham Beach Management Plan	Arun District Council	198%	214%	61,000	51,000	10,000	0	0	0	27
SOC500E/000A/073A	Sustainable Arun Flood and Environment Risk Management	Environment Agency	0%	0%	30,000	30,000	0	0	0	0	0
SOS005E/009A/001A	Medmerry Managed Realignment	Environment Agency	0%	0%	12,000	12,000	0	0	0	0	0
SOO004C/000A/062A	Southeast Regional Coastal Monitoring Programme - South East Coastal Group - Southern RFCC	New Forest District Council	Blank	Blank	450,362	450,362	0	0	0	0	0

**Intentionally left blank**



## SOUTHERN REGIONAL FLOOD & COASTAL COMMITTEE

**Item no.** 10  
**Meeting date:** 15 July 2019  
**Paper by:** Programme Team  
**Subject:** Local Levy Programme Update 2019/20

Committee are asked to note:

1. In Year progress of the SRFCC local levy programme
2. Nailbourne scheme options

Committee are asked to agree:

3. Langstone Project Re-profiling

### 1.0 Background

- 1.1 The Committee's principles and guidance on levy investment is the foundation for continuing to build the six year levy programme, which is subject to review at the October and April committee meetings.

### 2.0 Approach to the use of levy

- 2.1 A longer term approach to levy investment is at the heart of the Committee's strategy for flood and coastal risk management. This is to enable levy to be used as: seed-funding to attract future national funds and contributions into the Southern RFCC area, increase efficiency and build a balanced programme for managing risks.
- 2.2 The overarching principles agreed by the Southern RFCC previously is that levy should be used to deliver the greatest benefit (OM2 and OM3) through the programme and we should seek to fund the following types of project:
- Small schemes with balanced geographic spread
  - Pipeline and project development work (irrespective of RMA)
  - Detailed design to get projects spade ready
  - Projects that lead directly to risk reduction
  - Ensure that levy is not over committed into the future
- 2.3 The Southern RFCC levy strategy builds in flexibility to ensure that both existing and emerging priorities are able to be brought into the programme with the use of levy where appropriate throughout the six year plan period. This approach is especially valuable for local authorities who have not yet had the opportunity to assess all of the needs arising from their Local Strategies. It has previously been agreed that we should aim to draw down existing Levy balances but that £0.5m in balances be retained in any one year. However more recently Committee have requested that the balances be further reduced given the annual underspend usually associated with Levy spend.
- 2.4 As well as supporting the existing levy principles, Committee have stated that any new levy

should:

- Ensure a mix of schemes on the programme that deliver both high outcomes and address lower scoring Risk Management Authority local priorities that would otherwise remain unfunded without significant contributions
- Not be allocated to Capital Maintenance of existing assets
- Prioritise schemes with previous spend so as not to waste previous levy investment
- Plan for a six year programme of levy investment assuming the maximum available levy income option for the six year planning period.

2.5 Committee have decided that the local levy programme needs to be more closely monitored and given greater priority to better ensure its delivery. It has therefore reviewed and updated the principles (to those set out above) and put in place a new process for tightening the controls around levy spend to allow better management of funds and delivery of levy schemes.

### **3.0 The current 2019/20 Levy programme**

3.1 The current Levy programme is summarised in table 1 and shown in more detail in **Appendix A** along with a Red / Amber / Green status according to the confidence in delivery of the project to its in-year spend profile.

3.2 Again, the SRFCC were keen to see the draw-down of local levy balances and so an aspirational programme has been put together, totalling some £2.6m. Whilst there will be a degree of programme attrition experienced on the local levy programme, the quantity of projects both continuing and beginning will ensure that the expenditure will be in excess of the annual income.

3.3 Individual detail of each project is explained in the update comments within the table in Appendix A.

3.4 Langstone is proposed to be re-profiled due to not requiring the 2021/22 local levy until after the detailed design and the Outline Business Case has been approved. The early stages of the project will be funded by Havant Community infrastructure levy. Therefore the local levy will now be required in 2022/23.

3.5 After heavy rainfall in the winter of 2013/14 there was significant flooding in the Nailbourne catchment. As a response to the event the Southern RFCC subsequently allocated levy money to provide modelling to understand flood risk in the area and to support the development and delivery of schemes on the ground to mitigate the flood risk. These schemes were the Nailbourne Options Investigation, which was the modelling element, then potential projects of; Barham FAS, Ickham FAS, Flint Cottages Access Road Bund and Bridge & Patribourne

The Nailbourne modelling project experienced significant delays due to issues with the hydraulic modelling because of the complex nature of the catchment and difficulties representing the interaction between fluvial and ground water sources. This meant that the model was not correctly representing flood risk as we know it in the catchment. Without the ability of the model to show the benefits of proposed schemes in the catchment or how the schemes would then interact with the fluvial and groundwater systems these projects were not able to progress through their lifecycles and draw down the levy money they had allocated.

The model has been eventually signed off earlier this year and the project teams are now going through the process of identifying options for the schemes and selecting a preferred option. Rather than continue to hold onto the levy sums for these schemes we are putting them back into the levy pot due to the commitment on levy funds and allow other projects which are more advanced to draw it down. The Nailbourne schemes will then re-bid for levy

once we know total costs of works, the potential benefits and what the levy requirement is to support the preferred option. As with our other projects this process will also include assessing the proposed construction plans to ensure they are deliverable in the proposed timeframes, as well as having the required resource assigned.

**Committee is asked to approve the change to Langstone and note the In Year progress of the SRFCC local levy programme and Nailbourne project options.**

Table 1 – Summary of SRFCC 2019/20 Local Levy Programme

£m	2019/20 Local Levy Forecast	Starting Programme Budget
Local Levy	2.3	2.6

#### 4.0 6 Year Local Levy Programme

- 4.1 The 2019/20 Local Levy Programme was agreed in the April 2019 meeting, including the rollovers from 2018/19 and new projects. A summary can be seen in Table 2 which details previous year spend, forecast future spend, income, what the impact the new schemes and roll-overs will have, and the resulting effect on balances.

Table 2 – SRFCC 6 Year Local Levy Programme

£k	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
<b>Current Levy programme</b>	<b>560</b>	<b>1,643</b>	<b>1,755</b>	<b>2,102</b>	<b>2,281</b>	<b>960</b>	<b>9,301</b>
<b>Levy income* (assuming 5% per annum increase)</b>	<b>1,219</b>	<b>1,243</b>	<b>1,268</b>	<b>1,332</b>	<b>1,399</b>	<b>1,469</b>	
<b>Effect on balances</b>	<b>3,320</b>	<b>2,920</b>	<b>2,433</b>	<b>1,663</b>	<b>781</b>	<b>1,370</b>	

- 4.2 It should be noted that previously the local levy programme was close to being over allocated across the 6 year investment period, however this is no longer the case. Therefore the restrictions on the ability to bring in new projects or accommodate increases in spend have been mitigated and opportunities to strengthen the local levy programme should be explored.

#### 5.0 Recommendations

Committee are asked to note:

1. In Year progress of the SRFCC local levy programme
2. Nailbourne scheme options

Committee are asked to agree:

3. Langstone Project Re-profiling

## Appendix A - Current 2019/20 Local Level Programme

Proposed Local Levy Programme (£k)	Area	Lead Risk Management Authority	2019/20 £k	Current Forecast £k	RAG Status	Update
Land Drainage Outfall Extension - Peak Lane, Kingston	SSD	Arun District Council	40	40		July 2019 - OBC submitted for EA review. April 2019 - Revised bid for an additional £20k was approved on 9/04/2019.
Southern Wealden Groundwater Study	SSD	East Sussex County Council	16	16		July 2019 - project progressing and allocation to be claimed.
Barham Flood Alleviation Measures	KSL	Environment Agency	200	0		Nailbourne Modelling received and being analysed. Options appraisal underway, this will be used to generate the business case which will then determine the funding need to deliver any potential intervention. Once this is understood we will come back to the committee to re-bid for levy.
Hedge End PLR FAS	SSD	Environment Agency	46	46		July 2019 - Meetings with residents were completed in June.
NFM Studies	SSD	Environment Agency	20	20		July 2019 - Polegate and Little Common to be the focus this year. April 2019 - New bid approved.
River Ems, Westbourne FAS	SSD	Environment Agency	200	200		July 2019 - 3rd party modelling completed and threshold surveys being procured.
Romsey FAS	SSD	Environment Agency	380	380		July 2019 - Ongoing liaison with Southern Water regarding northern section and embankment 14. Tree & bat surveys in progress to allow design changes and construction start. April 2019 - SRFCC approved additional funding of £350k in October 2018. Roll-over of £30k from 2018/19 was approved on 09/04/2019.

Proposed Local Levy Programme (£k)	Area	Lead Risk Management Authority	2019/20 £k	Current Forecast £k	RAG Status	Update
Tidal Flood Defence Improvements, Wallington Shore Road, Fareham	SSD	Environment Agency	35	35		July 2019 - Project progressing. over request from 2018/19 approved on 09/04/2019 April 2019 - Roll-over request
Forton Flood Risk Management Scheme	SSD	Gosport Borough Council	157	114		July 2019 - Expenditure variation due to slow start to the detailed design element of the project. Additional site investigation has been taking place.
Bourne Valley Small Schemes Pathfinder	SSD	Hampshire County Council	150	150		July 2019 - no update.
Outer Winchester Flood Alleviation	SSD	Hampshire County Council	185	185		July 2019 - Further CCTV investigation has been completed in Headborne Worthy and is being analysed. Initial basic modelling of drainage system on Springvale Road in Kingsworthy has been completed and is due to be finalised. Next steps will be to completed drainage design. CCTV on private drainage system in Littleton has been completed and highlights constraints to integrating it in an improved drainage system. A small package of minor works and investigations is to be costed and progressed this autumn. April 2019 - £5k roll-over from 2018/19 approved on 09/04/2019
Langstone (Havant) CFERM scheme	SSD	Havant Borough Council	36	36		July 2019 - Targeted engagement with key stakeholders and residents to share the preferred options. Future activities: Continued engagement with residents, Stakeholder working group meeting, start outline designs April 2019 - Roll-over request from 2018/19 approved on 09/04/2019
Southern Coastal Group	SSD	Havant Borough Council	23	23		July 2019 - No update approved April 2019 - New bid
Barton Coast Defence Scheme Phase 1	SSD	New Forest District Council	181	135		July 2019 - No update. 2018/19 approved on 09/04/2020 April 2019 - Roll-over request from

Proposed Local Levy Programme (£k)	Area	Lead Risk Management Authority	2019/20 £k	Current Forecast £k	RAG Status	Update
Hurst Spit Beach Sediment Tracer Study	SSD	New Forest District Council	44.5	33		July 2019 - no update. request from 2018/19 approved on 09/04/2021 April 2019 - Roll-over
Eastney Spit Coastal Defence Option Appraisal Study	SSD	Portsmouth City Council	100	100		July 2019 - no update. April 2019 - New bid approved in October 2018 for funding in 2018/19 and 2019/20. £100,300 for 2019/20.
Portsmouth Groundwater Monitoring	SSD	Portsmouth City Council	20	20		July 2019 - no update. April 2019 - Roll-over request from 2018/19 approved on 09/04/2021
North Winchester (Dumgate) Flood Relief Scheme Phase II	SSD	Winchester City Council	200	200		July 2019 - no update. April 2019 - New bid approved.
Brewery Sluice Reinstatement	KSL	Environment Agency	232	232		July 2019 - no update. April 2019 - Roll-over request from 2018/19 approved on 09/04/2018
Flint Cottages Access Road Bund	KSL	Environment Agency	60	0		July 2019 - Nailbourne Modelling received and being analysed. Options appraisal underway, this will be used to generate the business case which will then determine the funding need to deliver any potential intervention. Once this is understood we will come back to the committee to re-bid for levy. April 2019 - Roll-over request from 2018/19 approved on 09/04/2019.
Middle Medway Flood Resilience Scheme	KSL	Environment Agency	100	100		July 2019 - Project progressing. request from 2018/19 approved on 09/04/2019 April 2019 -Roll-over

Proposed Local Levy Programme (£k)	Area	Lead Risk Management Authority	2019/20 £k	Current Forecast £k	RAG Status	Update
Middle Medway Flood Resilience Scheme Phase 1b	KSL	Environment Agency	91	91		July 2019 - Project underway, first two installations have been undertaken April 2019 - Roll-over request from 2018/19 approved on 09/04/2019
River Rother Restoration Study	KSL	Environment Agency	30	30		July 2019 - Surveys and preliminary work being undertaken
Viking Bay to Dumpton Gap - Berm Slab, Coping and Apron Repairs	KSL	Thanet District Council	95	95		July 2019 - Study underway which will allow proposed construction in the Autumn
			<b>2641.5</b>	<b>2281</b>		

**Intentionally left blank**



Chief Executive  
[ ] Council

**Date:** [ ] July 2019

Dear

### **Managing Flood and Coastal Erosion Risk – Local Levy**

While the last major floods in the south of England were in 2013, as recently as last month a number of properties were flooded in major rainstorms from both surface water and river flooding. Floods also impact on business, can severely interrupt transport and the risk of floods holds back new development. Across the Southern Regional Flood and Coastal Committee Region (SRFCC) 22,138 properties are estimated to be at risk of river and coastal flooding more than once in 75 years, a figure that can only grow with climate change.

Last financial year (2018/19) over 12,900 properties benefited from improved flood and coastal defences in the area covered by the SRFCC, which I chair, including in your local authority area. This was due to the delivery, as planned, of 112 schemes across the region spending the allocated budget of £56.3m of capital Government Grant in Aid and other sources of funding including £2.1m of Local Levy raised through the SRFCC and paid for by Lead Local Flood Authorities, including your own. This impressive level of achievement was due to the leadership, staff and resources dedicated to flood and coastal erosion matters by local authorities such as yours – thank you.

The current levy, which raises a total of £1.3m across the southern region is equivalent to £0.74 per Band D property. By comparison no other RFCC has set a levy which is below £1 per Band D property (see attached table). The levy plays an essential role, both in providing some of the match funding for schemes which the Treasury requires (other matched funding comes from the LEPs, for example), and providing a small amount of seed core funding for critical investigations, to prepare for flood schemes.

We are now looking to maintain delivery of the remainder of the 6 year capital programme for the region (totalling £114m) from 2019/20 to 2020/21; of which 52% of projects will be led by Local Authorities (rather than by the Environment Agency). And we are looking to influence the next 6 year programme, where negotiations have already started, the refresh of the shoreline management plans, which set priorities for the coast, and the new strategy for the period to 2050.

At the October 2018 RFCC Meeting (attended by your representative member), it was agreed in principle to support an annual increase in local Levy, subject to annual approval of actual amounts. Given the continuing high flood risk across the south of England, I request agreement from your Authority to continue this agreement and fund a further 5% increase in Levy for 2019/20 – the same rise as last year. This increase in Levy would cost your LLFA £[ ] in 2019/20.

This increase is not something I suggest lightly. As a board member of two major housing associations I know the importance of social care and the pressures there and more widely that local authorities are under. But there are two overriding reasons why I feel it is needed:

- First, we will need this money to help make the best possible evidential case for the region over the rest of the existing 6-year programme and for the next 6-year programme, and to help authorities across the region to jointly prepare for the new programme. As I said at the RFCC meeting, I am determined to use my term as chair to push local authorities' issues in flood management, using the fact that we have more of our programme delivered by local authorities, and a better track record on delivery, than anywhere else in the country.
- Second, our existing and planned stock of levy balances are dangerously low. Even with some quite drastic reprioritisation we barely have enough levy money to finance the bids we know are already coming from councils. We must have enough funds to enable good quality new bids for funding to be progressed.

I have also undertaken some work - at the request of Hants CC - to demonstrate the direct benefit of levy in terms of local authority finances: I believe there is a credible case for arguing that it in fact generates more savings/income than it costs:

On the benefits to local authorities of local levy, I think there are five main such benefits:

- First, the multiplier effect which access to levy gives to central Government GIA and therefore the very significant local benefits which accrues for levy spend. On average, the National Audit Office estimate that for every £1 invested in flood and coastal risk management £9.50 in damages is saved, if one takes into account that levy might bring in 5-10 times its size in national grant in aid it is easy to see quite how cost effective levy can be.
- Second avoided direct costs during a flood arising from LA's duties with regard to resilience. For example, a typical scheme which received £1.1m in Romsey of levy money generated estimated savings in emergency service costs alone over the life of the scheme to be in excess of £700k.
- Third, avoided reduction in business rates etc. when businesses would otherwise have been unable to operate during a flood.
- Fourth, increases in the council tax and business rates base from development/increased business operations which would not occur if land were not protected from floods. This is obviously highly scheme specific, but given the increase in housing (and the increase in business which will follow this) earmarked for all councils in the southern region this must be significant.
- Finally, the ability to put levy spend to support basis analysis/studies which otherwise would need to be undertaken in multiple places. For example, money in helping prepare the region as a whole for the next 6 year plan, money helping coastal authorities and counties join up through the RFCC, and basic research already undertaken from levy funding into location of and costs (perhaps £750m!) of making good coastal landfill sites.

I would therefore ask that you raise this issue with relevant fellow Members in your Authority, to share the content of this letter and to agree a position, ahead of the vote.

I attach a copy of the SRFCC Levy Q&A, which sets out all the details about the Levy which may be helpful to you and colleagues, and the new annual report from the committee. If you have any questions, or if I can assist you in any of the discussions you may wish have with your colleagues about the level of investment and the benefit of doing so, please let me know.

Yours sincerely



**Dr Martin Hurst**  
**Chair, Southern Regional Flood & Coastal Committee**

Cc: LLFA Leader  
LLFA elected member  
LLFA Officer

Enc. SRFCC Levy Q&A and table of levy across all RFCCs

**Local Levy Comparator 2018/19**

<b>RFCC</b>	<b>2018/19 Levy £m</b>	<b>2018/19 FD Levy per band D property £</b>
<b>Anglian Central</b>	1.11	1.66
<b>Anglian Eastern</b>	3.16	3.38
<b>Anglian Northern</b>	1.70	2.92
<b>Midlands Severn</b>	1.13	1.18
<b>Midlands Trent</b>	2.05	1.15
<b>North West</b>	3.94	1.81
<b>Northumbria</b>	2.30	3.20
<b>South West</b>	1.16	1.92
<b>Southern</b>	1.35	0.74
<b>Thames</b>	11.35	2.27
<b>Wessex</b>	3.60	3.56
<b>Yorkshire</b>	2.47	1.67
<b>Total/Average</b>	35.32	2.13

Note: Amount per Band D home changes because of the council tax base and where the amount of levy per Band D home decreases it reflects increases in homes in the Committee area.

**Intentionally left blank**

## **Southern RFCC annual report 2018-19**

The 12 English Regional Flood and Coastal Committees (RFCCs) were established by the Environment Agency under the Flood and Water Management Act 2010. Each has an independent chair appointed by the Secretary of State. They bring together a majority of members appointed by Lead Local Flood Authorities (LLFAs – counties and unitary authorities, providing the democratic oversight of) with Independent Members with relevant experience, appointed by the RFCC Chair and the lead Area Director of the Environment Agency.

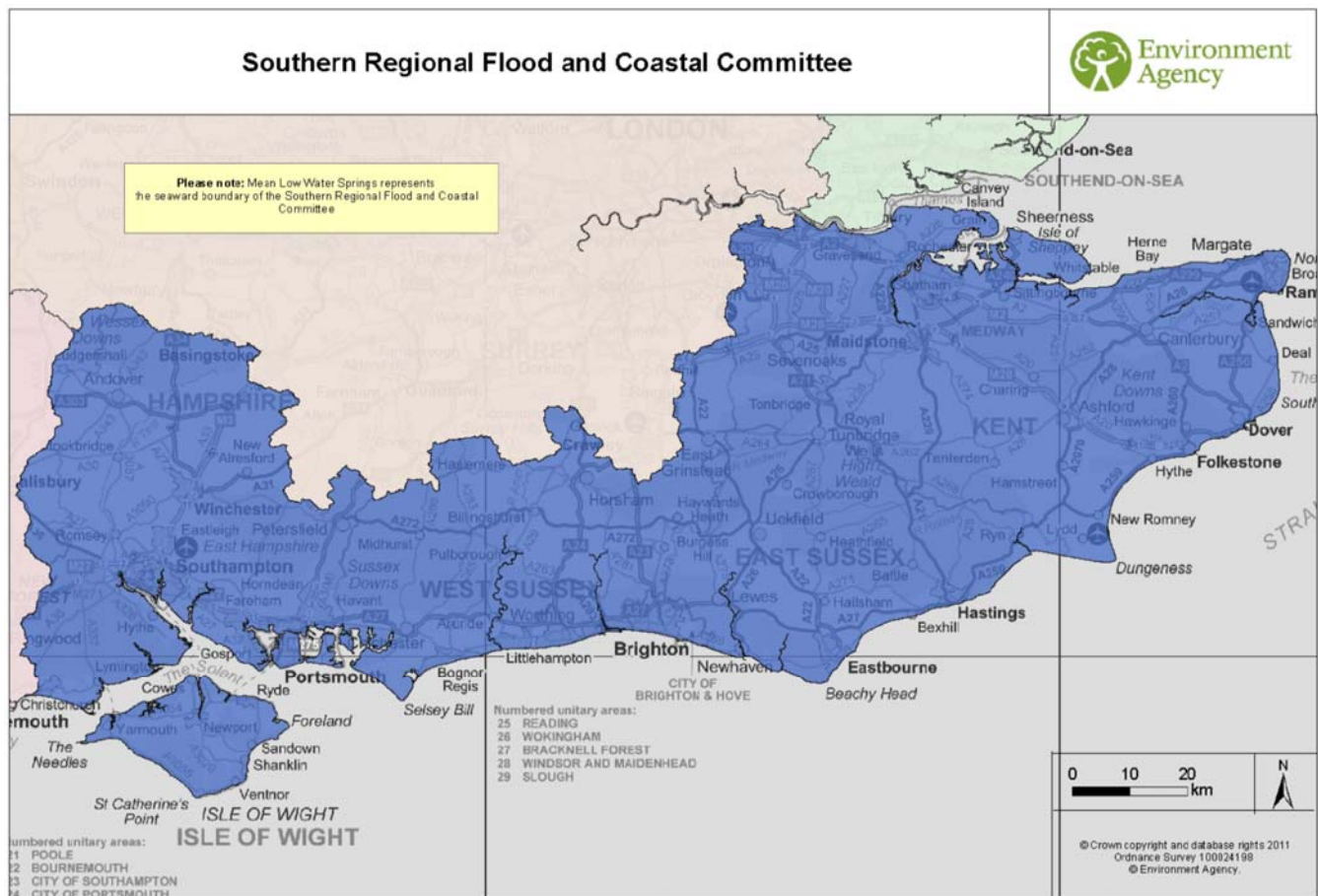
The Southern Regional Flood and Coastal Committee is chaired by Dr Martin Hurst who has held the position since 1 July 2018 when he succeeded Mrs Lorraine Brown who had ably chaired the committee for the preceding 6 years. The committee comprises 14 LLFA appointed Members and 8 Independent Members. Officers from the relevant local authorities, Chairs of the South East Coastal Group and the Southern Coastal Group and a representative of Southern Water are also invited to attend meetings of the committee.

Southern RFCC meets quarterly to take formal decisions. There are 3 principal statutory objectives:

- To approve the strategic business plans of the Environment Agency and other risk management authorities for investing in flood defences and coastal erosion in Southern region. In the financial year 2018-19 this totalled £68.9m from all funding sources.
- To approve the raising of a local levy on county and unitary local authorities in the RFCC's area to support investment in flood defence that could not otherwise be financed, including by a top up contribution or by financing investigation and research. The per annum sum levied in Southern region is currently approximately £1.4m and is per head the lowest in the country. The annual local levy must be agreed by a majority of LLFA Members and usually allows for an annual increment.
- To review and agree the programme under which the local levy is utilised.

Informally, Southern RFCC serves to provide a valuable collective voice for flood related issues across its regional area and acts as a focus for good practice. This includes supporting the establishment of partnerships with relevant bodies in the wider interests of the RFCC's role and aspirations. Many flood defence schemes are only enabled to proceed because of partnership funding provided by interested third parties of which local authorities are major contributors in order to secure the benefits of flood defence for their communities.

Southern RFCC encompasses an area from West Hampshire to East Kent and from the Isle of Wight to Bexley and Bromley on the fringes of Greater London. Within this area lies most of Hampshire, most of West Sussex, Isle of Wight, East Sussex and Kent; and includes Southampton, Portsmouth, Brighton & Hove and Medway that have unitary council status. Also included are small parts of Surrey, West Berkshire and Wiltshire. Southern RFCC has the longest coastline of the 12 English RFCCs, which when the Thames Estuary is included totals some 300km. It also has over 3200km of main river.



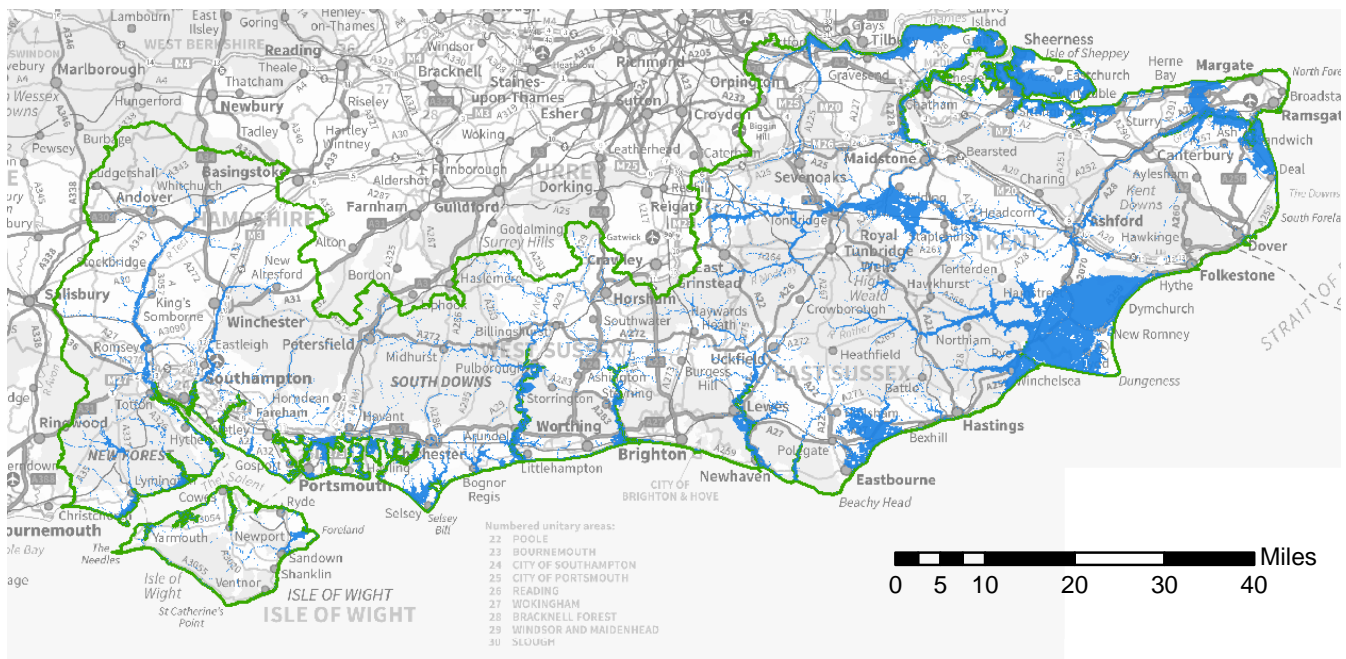
The topography of Southern region has meant that parts of the area have historically been liable to flooding from the sea, rivers, groundwater and surface water. The Romney Marsh for example was at one time under the sea and requires constant drainage pumping by the Environment Agency to maintain present water levels and land use.

Recent investment has protected or better protected many thousands of homes and programmes to support this continue. At the same time climate change, rising sea levels and increased population mean that the problem is not standing still and there will be new challenges. Going forwards, Southern RFCC has a strong potential future programme of works although dependent upon funding.

Local authority boundaries do not define the geographical boundaries of RFCCs; these are instead drawn to reflect the catchments that drain into the region's river systems. Southern RFCC covers the South East river basin district with the main rivers Test, Itchen, Arun, Adur, Sussex Ouse, Rother and Kentish Stour draining south into the English Channel. Southern RFCC additionally covers part of the Thames river basin district with main rivers Cray and Darent flowing north into the Thames and the Medway flowing to the North Sea through the Swale. Each of these rivers have different characteristics and most are capable of high flows after heavy rain with potential for flooding.

The Environment Agency maintains sea defences including by beach recharge along many lengths of coastline. District, borough and unitary councils have coast protection powers. They are also local planning authorities to which the Environment Agency provides advice on flood risk.

There are 6383 flood defence assets across Southern region of which 3580 belong to the Environment Agency. They include 79 pumping stations, 1529 water level control structures, 837km of raised tidal embankments and 190km of coastal flood defences. These assets and other defences reduce risk to the natural, fluvial and coastal floodplains as well as the communities and infrastructure within them as illustrated below.



In 2018-19, the main Environment Agency business plan enabled some new major schemes to be delivered including:

#### Arun Tidal Walls





## Newhaven



## Sheerness Asset Refurbishment





It also financed a number of smaller and ongoing defences, for example, a programme of £6m of beach replenishment and management works such as that on the Denge frontage, between Jury's Gap and Dungeness.



Local levy was used for 31 schemes including schemes that completed their construction this year:

- PLR for Central Hove & Portslade – Brighton & Hove City Council
- Southern Wealden Groundwater Study – East Sussex County Council
- Arun Valley Vision Group looking at sustainable Arun flood & environment risk management – EA
- Broadmarsh Coastal Defence Feasibility Study – Fareham BC
- Eastney Spit Coastal Defence Option Appraisal Study – Portsmouth City Council
- North Portsea Eco-formliner – Portsmouth City Council
- Priory Road River Itchen PLR – Southampton City Council
- Epple Bay to Minnis Bay (Grenham Bay) Sea Wall re-facing – Thanet District Council
- Wealden Phase 2 PLR – Wealden District Council
- Elmer Surface Water Management Plan – West Sussex County Council
- Delivery of ground water study actions – West Sussex County Council
- Parklands Estate drainage catchment SuDS feasibility study – West Sussex County Council

Together these defended a significant number of properties, and provided vital information for the development of future schemes to protect people and property from flooding and coastal erosion.

It also jointly financed (with the Wessex RFCC) a ground-breaking study of risks to coastal landfill sites (usually historic sites which are no longer operational). It identified a total cost to make these sites safe of in excess of £700m. This has been discussed nationally with the chair of the Environment Agency and with Defra.

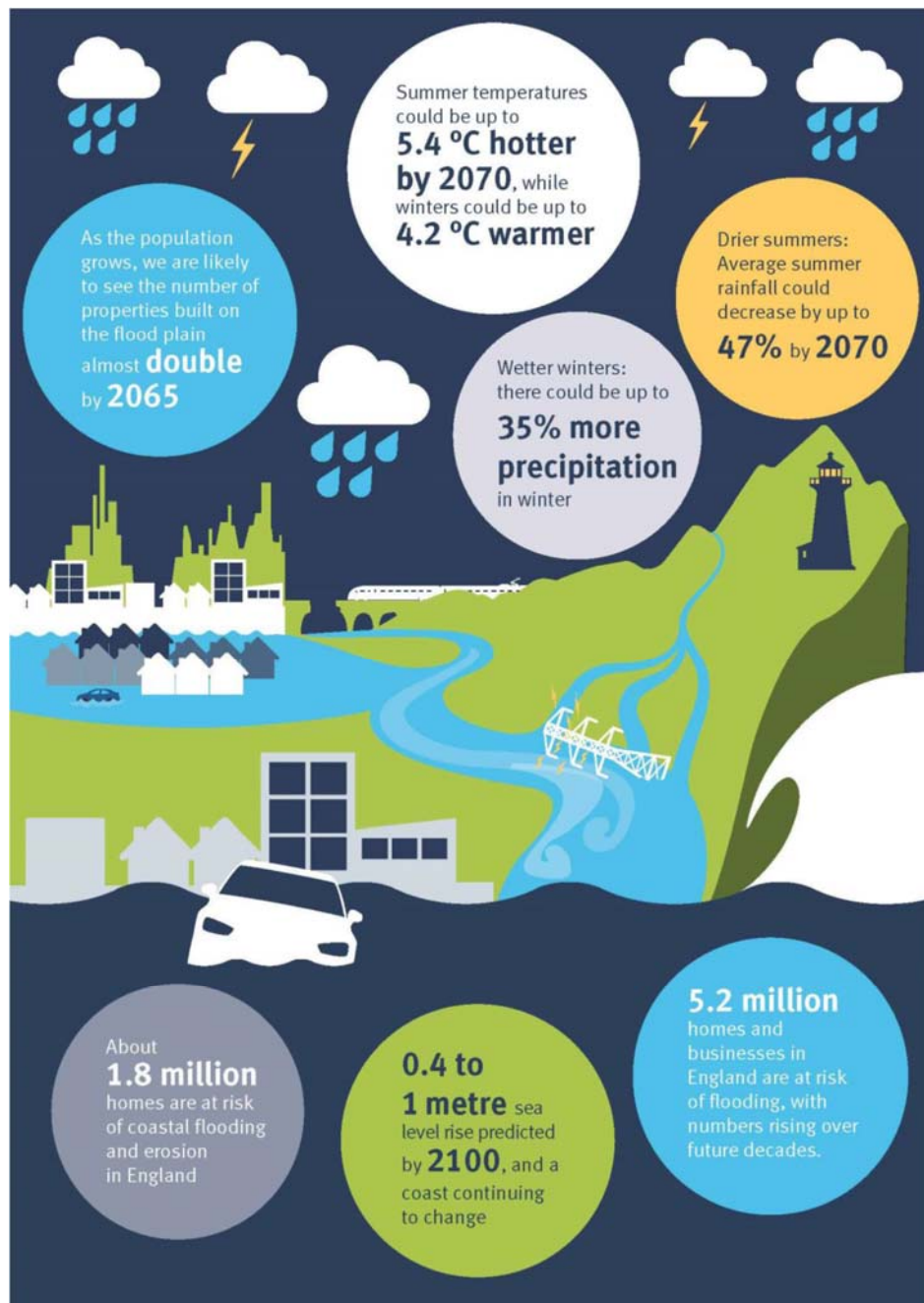
There are as many as 1,500 coastal historic landfill sites that are at risk from erosion and flooding. A number of these landfill sites exist from Lyme Regis, Dorset to Shoreham-by-sea, West Sussex. These are already at risk of leaking contaminants; and the problem is becoming increasingly prevalent given:

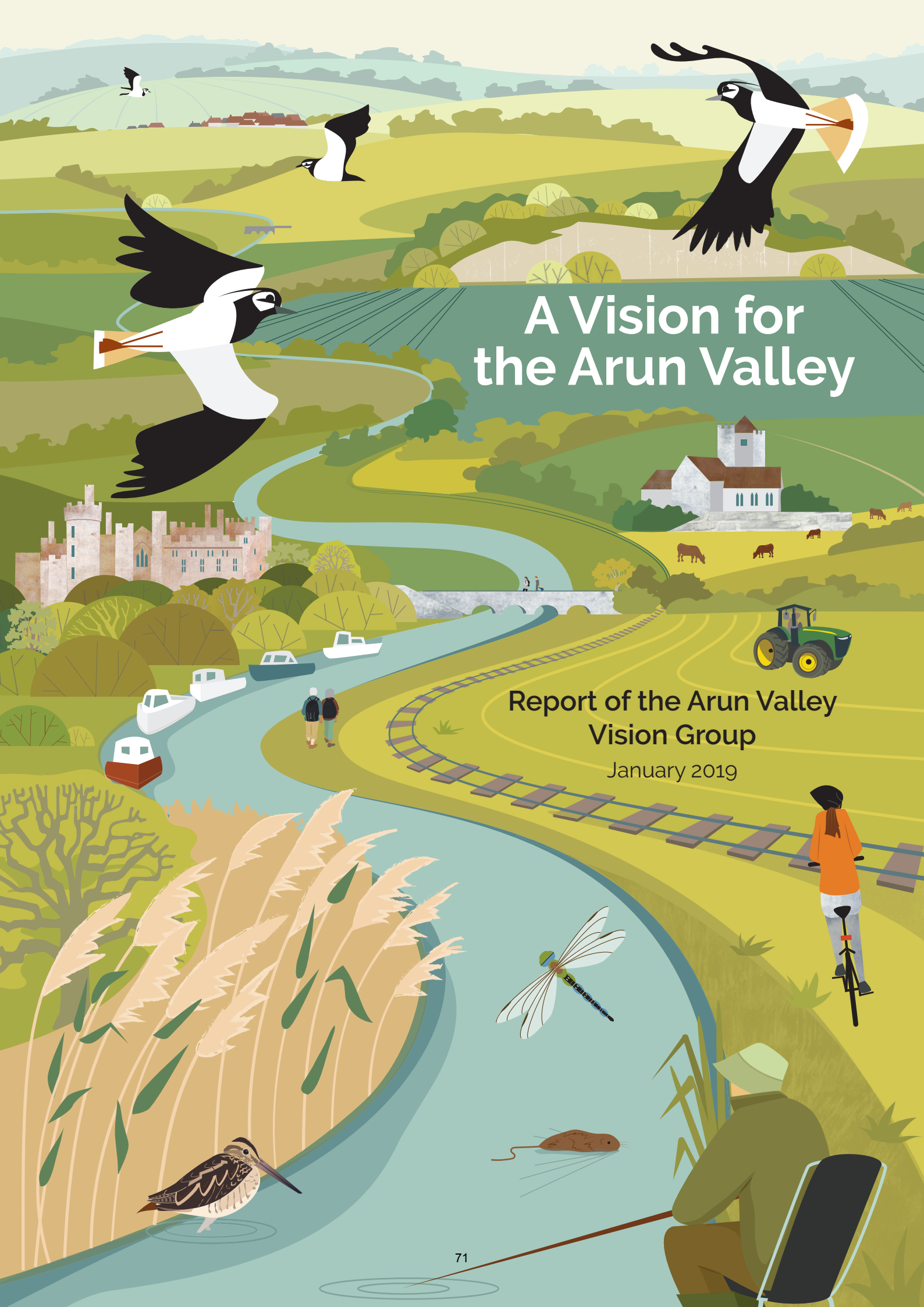
- Many of these landfills were set in place before regulation meant they would be sufficiently lined or sealed to prevent waste from escaping into their surrounds,
- The degradation of defences over time has exposed many of these landfills,

- Climate change in the form of sea level rise, increased rainfall, and possibly increased wave action is imposing greater hydraulic action upon the landfills themselves and the defences that protect them

Going forwards the committee has a strong programme of work, and its work is starting to be constrained by the amount of levy money available. Key strategic discussions include:

- Work with Southern water on surface water issues, including their 2022 Drainage and Waste water management plan.
- The impact of climate change on the region, including a potential 1m rise in sea level by 2100 under a 'high emission' scenario.
- The region's pitch for the next spending review for Government GiA Allocation due to commence in 2021.
- The longer term strategy for Flood and Coastal Erosion, the regions input to the new FCRM 2100 strategy





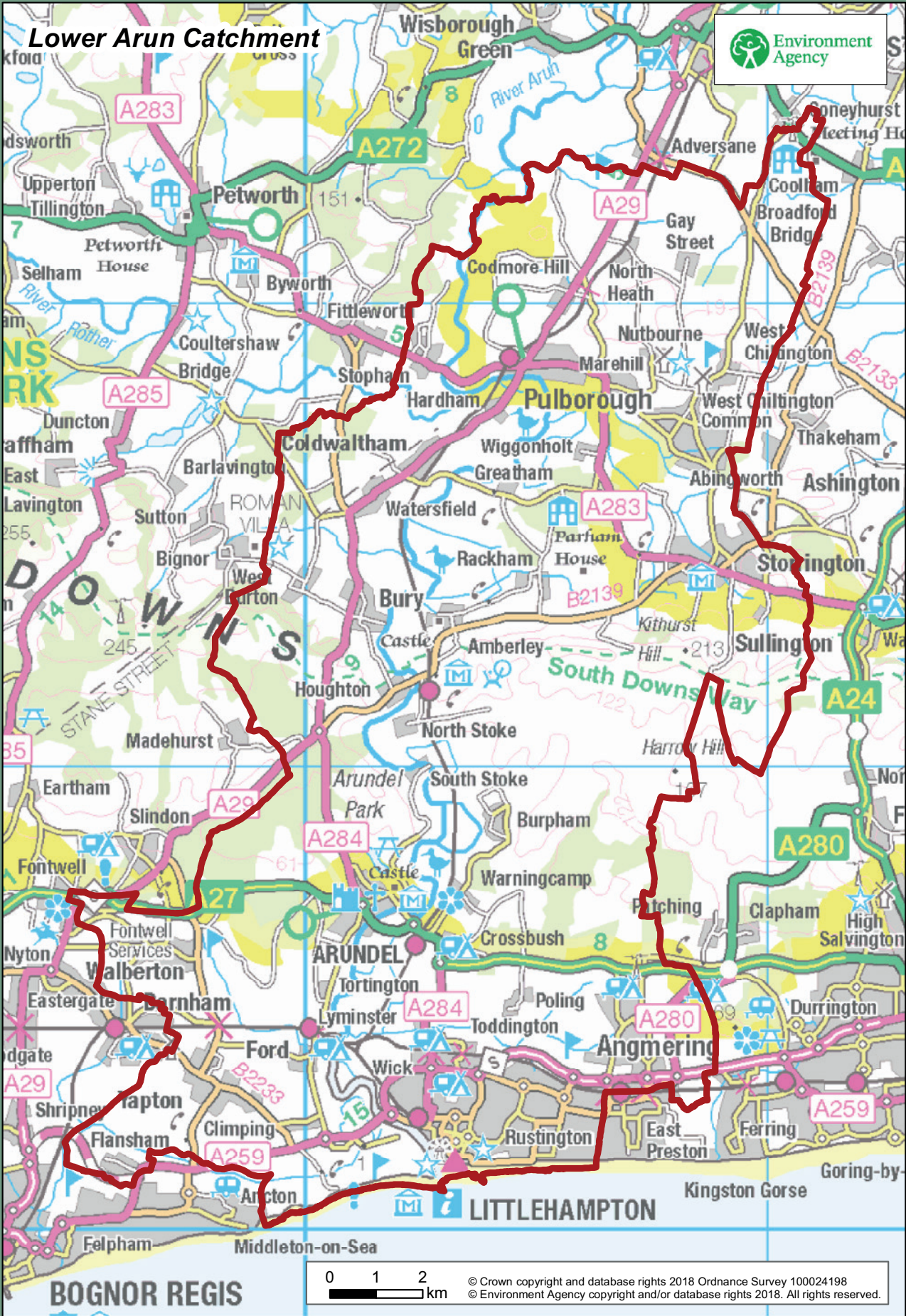
# A Vision for the Arun Valley

Report of the Arun Valley  
Vision Group

January 2019



THE ARUN VALLEY



# Contents

FOREWORD .....	2
EXECUTIVE SUMMARY .....	3
1. INTRODUCTION .....	6
2. THE SIGNIFICANCE OF THE ARUN VALLEY .....	8
3. THE STARTING POSITION.....	10
4. OUR VISION .....	14
5. POTENTIAL SCENARIOS FOR THE FUTURE OF THE ARUN VALLEY .....	15
6. WORKING TOWARDS ADAPTIVE MANAGEMENT .....	18
7. SUMMARY OF RECOMMENDATIONS.....	23
APPENDIX 1: TERMS OF REFERENCE.....	25
APPENDIX 2: LOWER RIVER ARUN STRATEGY (LTRAS).....	28
APPENDIX 3: BACKGROUND: PLANS & POLICIES .....	31
APPENDIX 4: DETAILED SCENARIOS.....	38

# Foreword



## BY THE RT. HON. NICK HERBERT CBE MP

It is my great pleasure to write this Foreword to the report of the Arun Valley Vision Group.

The Group was set up in January 2017 on my initiative as a community partnership made up of the major stakeholders in the Lower Arun Valley between Pulborough and Littlehampton.

The Group's brief was to work in collaboration and develop a viable long-term vision for what the wider community wants for the Valley and a plan for how that vision could be achieved and managed.

Over the last two years, the Group has come together to agree a vision for the Valley which is based on the concept of Adaptive Management.

This approach seeks to protect key areas of importance by upgrading

local flood defence structures, but will also create wetland habitats for flood storage for long-term flood resilience.

The vision is accompanied by a plan of action, which specifies lead roles for the various agencies involved.

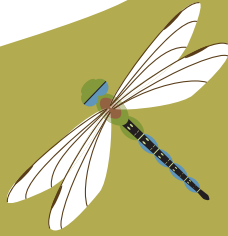
I am very grateful to all those who have worked hard to agree and deliver this report: the Environment Agency, which hosted the project, Sara Denton, the project officer, members of the Group, and especially its independent co-chairs, John Godfrey and Gill Farquharson, who have given a huge amount of time to this initiative.

I commend the report to all those interested in the future management of the Valley.

A handwritten signature in black ink that reads "Nick Herbert." followed by a horizontal line.

**Nick Herbert**





# Executive Summary

**The Arun Valley Vision Group (AVVG) was established at a conference on 20th January 2017 in Arundel convened by Nick Herbert MP for Arundel and South Downs. This followed representations he received from constituents concerned about the future management of the River Arun, particularly in relation to implementation of the Lower Tidal River Arun Strategy (LTRAS) (see Appendix 2) and the abolition of the Arun Valley Internal Drainage Board (IDB).**

The aim of this two year project has been to:

- Carry out a new community-led partnership project to develop a sustainable long-term vision for the Lower Arun Valley.
- Provide a landscape-wide context for the consideration of flood management issues; and
- Find a sensible and affordable balance between the needs of conservation, land management and protection of people and properties against flood risk as time passes.

This document is the final report of the AVVG, providing the Group's recommendations and an overview of how the project developed.

## A Vision for the Future of the Arun Valley

As an initial exercise, members of the Group, which comprised representatives from key stakeholders and organisations in the Valley, were asked to provide statements concerning their aspirations for future management. This exercise began the process of enabling

participants to better understand each other's positions and to begin the process of identifying common ground, leading to informed discussion about a way forward that would be acceptable to all interested parties. A key aspect of these early stage discussions was the observation that an agreed way forward should retain an element of flexibility and the ability to respond at short notice to changing circumstances.

These discussions enabled a joint vision to be agreed, which aspires to ensure that:

- Communities are supported to create a healthy local environment which supports multiple benefits to society
- The long-term economic, social and environmental sustainability of the landscapes, wildlife and communities of the Arun Valley are secured
- Farmers and landowners are fairly rewarded for their vital roles in producing food and actively managing the environment
- The risk of flooding is managed effectively and sustainably for the long term

- Enhanced rural tourism and other linked opportunities provide important support for the local economy
- The Valley makes an enhanced contribution to the health and well-being of the people of West Sussex and visitors from further afield.

## Collaborative Scenario Appraisal

To develop how these aspirations can be delivered it has been important to recognise some of the complexities, uncertainties and practical realities affecting the Valley. In particular there is much uncertainty concerning the implications of future agricultural policy, the potential scale of climate change impacts and any associated adaptation that would need to take place to help the internationally important wildlife interest in the Valley.

In light of such uncertainty, the Group jointly contributed to a description of four scenarios which helped develop a shared understanding of the achievable and desirable outcomes. The following three scenarios were considered by the Group either to be too costly, not widely acceptable to the whole community or entailing too great a risk to wildlife, people, properties and farmland:

- **Do Nothing:** The option that no further co-ordinated management, planning and delivery would be undertaken was considered unacceptable on the basis that it would make catchment and landscape scale outcomes nearly impossible to deliver. There would be no way of resolving wide scale issues or conflict between distributed interests in the Valley.
- **Hold the Line:** The option to find an engineered solution to increase the height of all embankments and undertake a dredging maintenance programme was

seen as too costly as it would require very significant private investment and there are no obvious sources of funding that could be used for this purpose. It would also restrict opportunities to provide space for wildlife to adapt to climate change in the future.

- **Managed Re-naturalisation:** This option was considered to provide significant wildlife and flood resilience benefit, but it would be extremely controversial. It would be costly to deliver as landowners would potentially dispute the impacts to farmland and rural livelihoods. A far reaching option such as this would require such a substantial change to the rural economy in the Valley that the Group considered delivery would be unrealistic within a foreseeable timeframe.

## Adaptive Management – The Preferred Approach

Adaptive Management, the fourth scenario, was considered to represent the most realistic way of developing a co-ordinated approach that balances the interests of all stakeholders. We define Adaptive Management as:

A long term, co-ordinated approach, which recognises the dynamic and unpredictable challenges on the horizon. Adaptive Management refers to a process of continuous assessment and responsive consultation to find the right solution for the appropriate time and place. This would enable a joint process shared by relevant stakeholders within the Valley to continue reviewing key areas of importance, exploring options to upgrade local protection standards and seeking to secure localised storage measures offering multiple benefit wetland solutions where appropriate.

It provides a balanced approach which uses a combination of management



techniques, including the upgrading of local flood defence structures and the creation of wetland habitats for flood storage and long term flood resistance. It enables gradual, targeted and managed

interventions to increase flood resistance and adapt to climate change and, over time, will allow more natural flood management in appropriate circumstances, alongside traditional management.

## Key Recommendations

Taking this forward, the report expands on how an Adaptive Management approach for the Arun Valley should be developed in the next two-year phase of the project. In particular we propose:

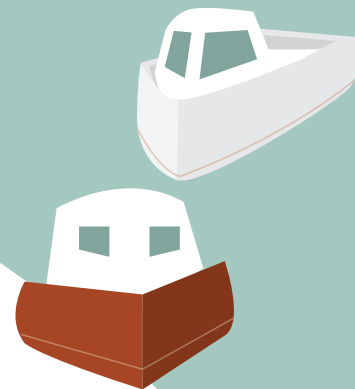
- The establishment of a strategic partnership body to assess, prioritise and co-ordinate the interests of all stakeholders, seeking to identify public and private funding opportunities as appropriate to each case; and
- The delivery of a robust assessment of the natural, economic, agricultural, social and cultural capital within the Valley and the production of a strategic plan for the future of the Valley.

In addition, the Environment Agency will work with landowners with the assistance of the NFU to help them to determine how, individually and collectively, they wish to operate following the possible abolition of the IDB and the proposed implementation of the relevant provisions of LTRAS.

The success of implementing these recommendations will rely on securing external sources of funding and the continuation of a partnership approach with support of key organisations such as the Environment Agency, the South Downs National Park Authority and local authorities.



# 1. Introduction



**The Arun Valley Vision Group (AVVG) was established in January 2017 following discussions between Rory Stewart MP ( Environment Minister 2015-16), Nick Herbert, MP for Arundel and South Downs, the Duke of Norfolk and the Environment Agency.**

This led to the creation of a community-led partnership made up of key representatives in the Arun Valley, including the Environment Agency (EA), Natural England (NE), the South Downs National Park Authority (SDNPA), the Royal Society for the Protection of Birds (RSPB), Sussex Wildlife Trust, Southern Water, Arun District Council (ADC), Arun Town Council, West Sussex County Council (WSCC), the Country Land and Business Association (CLA), the National Farmers Union (NFU), and landowners, including the Norfolk and Angmering Park Estates.

The stated aims of the partnership group were that the AVVG would:

- Carry out a new community-led partnership project to develop a sustainable long-term vision for what interested stakeholders and the wider community want for the lower Arun and how it could be achieved and managed.
- Reflecting our sense of pride and place in the Arun Valley and its special qualities, our aim is to provide a landscape-wide context for the consideration of flood management issues.
- Working collaboratively we will aim to find a sensible and affordable balance between the needs of conservation, land management and

protection of people and properties against flood risk as time passes.

Further terms of reference and membership of the steering group are set out in Appendix 1.

The exercise was conducted within the context of two existing EA-administered projects: firstly, the proposed implementation of the Lower Tidal River Arun Strategy (LTRAS), an £85m plan for flood related activities and expenditure in the Arun Valley during the next 100 years. The Strategy divided the area into seven Strategy Units (SUs) to assist in the identification of appropriate management practices (see Appendix 2 for details). The EA agreed to delay implementation of this Strategy during the two year life of the AVVG.

The second project was the proposed abolition of the EA-administered River Arun IDB, a body responsible for the management of drainage within the Valley to control water levels and to reduce the risk of flooding from smaller 'ordinary' watercourses. This proposal was the subject of a Local Public Inquiry in February 2018, as a result of which further investigations are currently proceeding.

The wider policy context and key driving factors impacting on the Arun Valley,

including the proposed new system of agricultural payments and the landscape-scale approach, are described in Appendix 3.

The AVVG was asked to report in January 2019 on a landscape-wide context for the consideration of flood management issues, aiming to find a sensible and affordable balance between the needs of conservation, land management and the protection of people and properties against flood risk. While not a decision-making body, the Group would make recommendations to decision-makers on the way forward for the benefit of all interested parties.

The Group has met 14 times in the two year period in addition to a number of smaller sub-group meetings and one-to-one meetings held by the Chairs to consider specific issues. The Group has heard position statements, discussed areas of agreement and dissent and received expert testimony from a variety of organisations, including Defra, Highways England and the Association of Drainage Authorities. We also set up a website ([www.avvg.co.uk](http://www.avvg.co.uk)), which enabled interested people to monitor our progress.

The road to achieving consensus has not always been straightforward and, for all parties involved, the process has required a need to be flexible, recognising there are

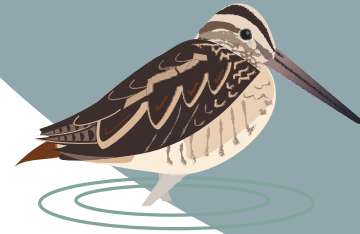
complex overlapping priorities. From this perspective the findings of this report should be seen very much as a landmark on a much longer journey, where our recommended approach still requires further consensus building, consultation and development. To ensure that the communities of the valley, its wildlife and farmland have a bright and sustainable future, our recommendation is for a balanced approach where social, economic and environmental priorities should all be achievable in time.

In this light, whilst representing the final report of the AVVG, it is perhaps more fitting that this document should be seen as a report on work in progress, but nonetheless one with a clear sense of direction. We now commend this ongoing process to the decision-makers and communities of the Valley as a mechanism and direction of travel for achieving together a safe, prosperous, inclusive and landscape-scale approach to flood risk management within a healthy catchment in the future.

**Dr. John Godfrey and Gill Farquharson**  
**Co-Chairs, Arun Valley Vision Group**

**January 2019**

## 2. The significance of the Arun Valley



**The Sussex poet and writer Hilaire Belloc described Arundel and the Arun Valley as “the jewel for which the whole county of Sussex was made and the ornament worthy of its setting”<sup>1</sup>.**

While other areas might dispute this title, there is no doubt that the Arun Valley is a very special place. Situated at the very centre of the South Downs National Park, equidistant from Winchester and Eastbourne, it contains woodland, wetlands, chalk grassland and sites of international and national importance for nature conservation, amid landscapes that reflect the essence of lowland England.

The River Arun provides the vertical axis of the area, with the escarpment of the South Downs serving as the horizontal access. There is a community of interest among those who live in the Arun Valley, which has some of the characteristics of a French *pays*<sup>2</sup>.

The river is tidal up to Pallingham Weir, some 30 kilometres inland of the mouth of the river at Littlehampton. Draining most of the western Weald of Sussex, the Arun is one of the fastest flowing rivers in England, with a tidal range of some three metres at Arundel Bridge.

Upstream, the river rises on the southern slopes of the Surrey Hills, flows through Horsham to Pulborough, where it is joined by its tributary, the western Rother, and thence it flows to the sea.

For administrative purposes, the Valley falls wholly within the county of West Sussex. The district council boundary between Horsham

<sup>1</sup> H. Belloc, *The Four Men* (1911)

<sup>2</sup> “Every village, every valley, *a fortiori* every *pays* (a word derived from the Gallo-Roman *pagus* and meaning an area with its own identity, as in the *pays de Bray*, *pays de Caux*), every town, every region, every province has its own distinct character – visible not only in the particular features displayed in the landscape and in the many imprints man has left upon it, but also in a lived culture, ‘a way of life and death... a set of rules governing basic human relations between parents and children, men and women, friends and neighbours.” Fernand Baudel, *The Identity of France, Volume One: History and Environment* (London, 1988), p37.

and Arun runs along the escarpment of the South Downs, with the northern half of the Valley being in Horsham district and the southern half in Arun district.

The Valley is sparsely populated but accessible from neighbouring and more distant centres of population, including by the Arun Valley railway line, with connections to London, Croydon, Gatwick Airport, Horsham, Brighton and Portsmouth. The majority of the population is concentrated in coastal towns such as Littlehampton which contain areas of significant social deprivation.

Opportunities for outdoor countryside recreation abound: the Valley benefits from an extensive network of well-maintained public rights of way, including the South Downs Way national trail, the Wey-South Path (which follows the line of the old Wey & Arun Canal) and the Monarch's Way.

At Arundel, Watersfield and Pulborough, the Valley contains important centres for outdoor education and recreation, and both the River Arun and the sea at Littlehampton provide opportunities for water-based recreation.

The Valley is steeped in history, with an abundance of listed buildings and many conservation areas. Arundel Castle, the Cathedral and parish church, and the historic town itself attract many visitors.

The prosperity of the Valley was traditionally dependent on the continuing success of the downland sheep-corn economy,

with sheep on the hill, arable on the lower slopes and summer grazing of cattle in the valley floor. While modern agricultural methods have enabled greater flexibility in land management practices, farming patterns still reflect the realities of geography and topography.

Arundel has its own craft brewery and the Valley lies at the centre of the highly successful West Sussex wine industry, specialising in the production of top quality English sparkling wine.

Increasingly, tourism makes a major contribution to the local economy, supplementing farm incomes and providing a renewed purpose for market towns and villages whose traditional commercial functions have been affected by changes in shopping habits.

This project, and the work which will flow from it, provides the opportunity to promote the Arun Valley as a destination and a brand, further strengthening the economic potential of the area.

An extract from the OS 1:50,000 map showing the area we have identified as the Arun Valley for the purposes of this report appears on the inside front cover.



# 3. The Starting Position



**As a first step, all the locally based organisations represented on the Group were invited to submit a position statement setting out their organisation's views on the issues the Group needed to discuss.**

These position statements are included on the AVVG website, but for ease of reference are summarised below. The relevant policies and programmes of national and quasi-national bodies, such as Defra and English Nature, and the South Downs National Park Authority, are summarised in Appendix 3.

## The NFU

In its position statement the NFU expressed concern about the health, safety and welfare of farmers and rural communities who live in flood affected areas such as the Arun Valley. It highlighted that the 2013/14 winter flooding, which caused the need for houses to be evacuated and farmers to access livestock by means of canoes, was not a "perfect storm". Had there been a coinciding spring tide, the flooding could have been far more devastating. One of the NFU's main concerns has been that the withdrawal of flood risk management services has the possibility of increasing the risk to life and livelihood during extreme events. It wishes to see some level of management

capability and coordination retained, so that local farmers and communities are able to achieve their own local priorities. Going forward the NFU recognises there are limitations on public spending but nonetheless there will still be a continuing need for watercourse management. Whilst the NFU and members recognise the "fair share" that each riparian owner will need to provide in terms of maintenance, it also highlights how in many cases there are significant public benefits to continuing co-ordinated management which is not always achievable or affordable by the relatively small farms situated along the banks of the river. In this context the NFU called for more innovative approaches to generating partnership funding (i.e. funding contributed by local communities and businesses), so that some management capability can be continued in the future and suggested that targeted economic development should be seen as the best means by which additional revenue can be generated to contribute towards the delivery of environmental and flood risk management services.

## Landowners

The Norfolk and Angmering Park Estates, who between them own some 20 per cent of the land in the Valley, focused their comments on the proposed withdrawal of maintenance from SU4. This proposal would impact adversely on both estates in that, if maintenance were withdrawn, the continued agricultural use of some 300 hectares of land would be under threat. The estates were also concerned about the impact such withdrawal might have on their duty of care to the owners of adjoining land, who might be impacted by flood water from estate-owned land. This issue was thrown into sharp relief by the deterioration of the condition of the embankment to the Arun Valley railway line at South Stoke. The Norfolk Estate had offered to contribute £15,000 pa towards the estimated £35,000pa cost of maintaining flood defence structures in SU4. The estates' concerns about the proposed abolition of the Arun IDB were shared by the Amberley Landowners Group.

## The EA

The EA explained the legal basis for its flood management activities, emphasising that relevant legislation gives it powers, but not duties, in relation to flood management and that its investment in capital and revenue works is governed by HM Treasury rules which, in an environment of public expenditure constraints, focus available resources on the protection of life and property in heavily populated areas. The proposal to withdraw maintenance in SU4 was included in LTRAS, which had been approved by the EA Board in 2014, but the EA had agreed, following the establishment of the AVVG, to further suspend its implementation for two years until the Group had reported in January 2019. The EA reported that the River Arun IDB was the only IDB remaining in the country for which the

EA Board was the responsible authority. This anomaly needed to be corrected. If, following the abolition of the IDB in its present form, affected farmers and landowners wished to consider setting up some alternative arrangement to oversee the maintenance of flood defences on their land that would then be a matter for them. The EA were available to offer any advice and assistance.

## Southern Water

Southern Water pointed out that changes to land and water management in this area have the potential to impact on its infrastructure and operations. Its key concerns were around the following potential impacts: increased saline intrusion, affecting ground and surface water supplies; changes to flow regimes affecting discharges from their wastewater treatment works; any changes which affect its ability to service their own assets and Water Framework Directive status changes.

## Nature Conservation Organisations

The Sussex Wildlife Trust (SWT) and the RSPB reported that they are both significant landowners in the Arun Valley, primarily in LTRAS SU3, and they also have a wider interest in the future management of the Valley. They supported a strategic landscape-scale approach for the future of the catchment, as part of the wider catchment landscape, from both ecological and socio-economic perspectives. They would like to see a strategy put in place to address key issues which will impact on both people and wildlife across the catchment in the long term. This might be achieved by developing a dynamically functioning river valley, which also allows a greater role for natural processes, whilst protecting and enhancing existing natural assets, delivered through strong collaborative working amongst landowners and key stakeholders. Similar

views were expressed by the SDNPA and Natural England. On the specific issue of the management regime in SU3, all these bodies are involved in the work which the EA is undertaking in relation to the internationally important sites for nature conservation in the Arun Valley and note that LTRAS provides that maintenance should continue in the short term while this work is completed.

## Arun and Rother Rivers Trust

The Arun & Rother Rivers Trusts (ARRT) considered that it was essential to take a whole catchment approach to the problems of the Lower Arun. Its vision was of a sustainably managed water environment that enables native wildlife to thrive and which people will use, enjoy and value for generations to come and the Trust looked forward to playing their part in its development and delivery.

## Local Authorities

West Sussex County Council (WSCC) as Lead Local Flood Authority (LLFA) presented and reiterated to the Group its role and associated statutory responsibilities within the county. These duties include the preparation and update of a strategy for local flood risk management (WSLFRMS), strategic overview in the co-ordinating of views and activities with other Risk Management Authorities (RMAs) as well as other local bodies and the community. This is achieved through public engagement and project delivery. The LLFA maintains a register of assets, investigates significant local flooding incidents [s19 FWMA2010] and plays a leading role in emergency planning and recovery after a flood event. The involvement of community groups is a key element of its approach, with some funding being available for local initiatives through Operation Watershed. Arun District Council (ADC) supported the proposed abolition of the IDB and is intending

to use the money previously used to meet its share of the IDB precept to employ an additional member of staff to help with the transition (back to riparian responsibility), inspect flood defences in the District, drawing any problems to the attention of the landowners concerned and in certain circumstances, to fund flood prevention work around the District. We did not receive a position statement from Horsham District Council (HDC). Arundel Town Council (ATC) expressed concern about the need to find a practical and affordable solution to the problems relating to flood prevention in Arundel, and also about the possible consequences for the town of the withdrawal of maintenance in SU4. No other town or parish councils submitted any views to us.

## Overall Direction of Travel

A constant theme in all the position statements we received was the uncertainty of the policy environment in which we were operating. Relevant factors include environmental change (including climate change, sea level rise, flood maintenance and collective responsibility), constrained public resources (having to deliver more for less), localism and the implications of Brexit. This thread of uncertainty was to be a continuing feature of our work and was an important factor in shaping our conclusions and recommendations. It is important that any agreed way forward retains an element of flexibility and the ability to respond at short notice to changing circumstances.

Having discussed these position statements and identified key themes, we then set up three sub-groups, which began to consider sustainable catchment management (led by Claire Kerr, RSPB), community consensus (led by Tom Ormesher, NFU) and delivery mechanisms (led by Mat Jackson, WSCC). There were limitations in the extent to which these sub-groups were able to develop in



the time available, but the exercise began the process of enabling participants to better understand each other's positions and to begin the process of identifying common ground, leading to informed discussion about a way forward which would be acceptable to all interested parties.

As the date for the submission of the Group's report came closer, successive drafts of sections of the eventual final report were circulated to all members of the Group and discussed, both at meetings and off-line. The continuing dialogue has fostered a positive and collaborative atmosphere, and has

highlighted a continuing need to develop closer and more joined up approaches to objective setting and ultimately delivering management outcomes. The working of the Group has led to an increasingly robust understanding of the issues and potentially shared responsibilities, enabling us to rally round the proposed middle ground solution of Adaptive Management described below. This collaborative approach now needs to be further consolidated and captured in a sustainable governance structure for the Valley as a whole.



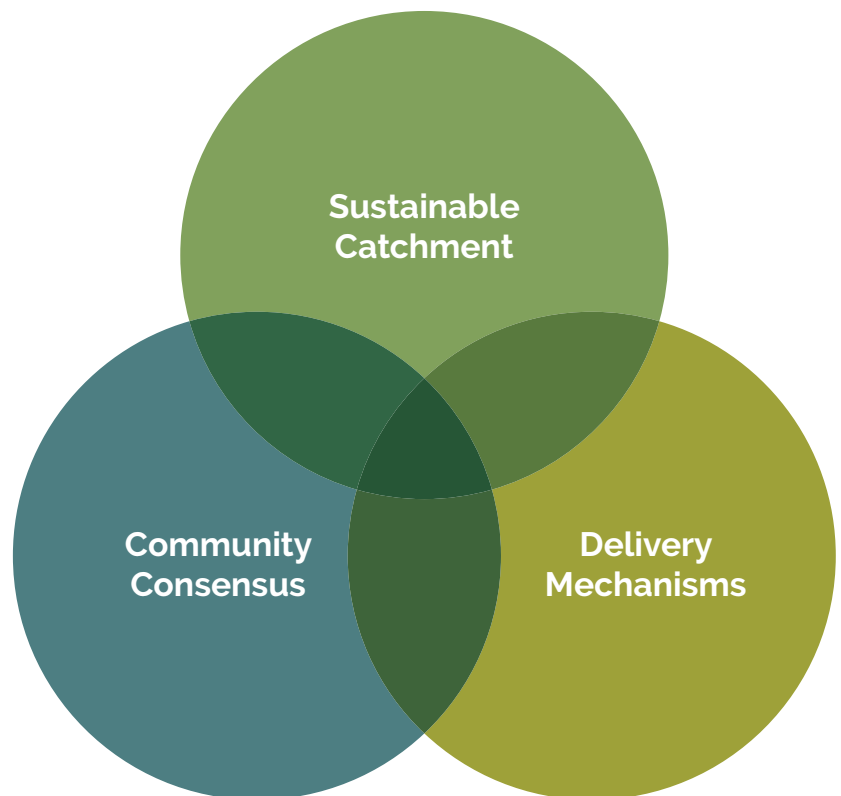
# 4. Our vision



**Having listened to the opinions of all contributors, the Arun Valley Vision Group has agreed on a joint vision which aspires to secure that:**

- Communities are supported to create a healthy local environment which supports multiple benefits to society
- The long-term economic, social and environmental sustainability of the landscapes, wildlife and communities of the Arun Valley are secured
- Farmers and landowners are fairly rewarded for their vital roles in producing food and actively managing the environment.
- The risk of flooding is managed effectively and sustainably for the long term
- Enhanced rural tourism and other linked opportunities provide important support for the local economy
- The Valley makes an enhanced contribution to the health and well-being of the people of West Sussex and visitors from further afield.

After determining this common ground, the Group has sought to develop four scenarios as a way of considering how these shared aspirations might be achieved. As set out in detail in the next section, the four scenarios take as a background our vision for the valley as well as the three pillars of delivery we have identified – Community Consensus, Delivery Mechanisms and Sustainable Catchment.



# 5. Potential Scenarios for the future of the Arun Valley



**In seeking to investigate the practicalities of how we achieve our vision for the Valley, we have given detailed consideration to four possible scenarios in terms of the short, medium and long term impacts as seen from the perspectives of farmers and farmland, the natural environment and the wider community.**

This section of the report outlines the key aspects of those scenarios and a much more detailed assessment of them is included in Appendix 4.

## Option 1 – Do Nothing

An active decision by the Environment Agency to cease maintenance in sections of the Arun Valley in accordance with LTRAS.

Summary of Key Issues/Opportunities:

- Could by default result in an unmanaged and uncontrolled partial re-naturalisation of the Arun Valley flood banks.
- No strategic or co-ordinated approach and no formal management plan in place.
- Watercourse maintenance would be the individual responsibility of each riparian landowner
- Potentially unmanaged impacts on road, rail, water and sewerage infrastructure leading to future risk of catastrophic failure.
- Could lead to deterioration in community engagement meaning that their wider priorities are not taken into account.



## Option 2 – Hold the Line

The Lower Arun Valley continues to be managed and maintained as an engineered landscape.

Summary of Key Issues/Opportunities:

- Significant investment required to upgrade embankments and river capacity to accommodate high flows within the channel.
- Treasury spending rules will not justify the significant investment required.
- Future agricultural policy will focus on natural capital outcomes and could therefore take away opportunities for local farmers and land managers to take advantage of new schemes.
- Future upgrades will need to take account of climate change
- Combination of authorities and possible (new/ replaced) IDB with contributions from riparian landowners and other third parties.
- Buys time to identify longer term solutions but this option will itself take a long time to negotiate and deliver.

## Option 3 – Managed Re-naturalisation

The active decision to no longer maintain existing flood defences in parts of the Lower Arun Valley allowing the river and floodplain to function naturally, which could include the targeted removal of existing embankments to create additional floodplain wetland habitats

Summary of Key Issues/Opportunities:

- Opportunity for bio-diversity enhancement (provided other impacts are addressed as well), long term climate resilience and sustainability.
- A fully planned and costed approach would be needed to deliver extensive landscape scale habitat creation.
- Targeted mitigation and compensation would be required for the loss of land and property
- Unknown socio-economic outcomes for agriculture and local communities.
- Likely to be contentious for communities directly affected.
- Lack of a co-ordinated approach could lead to deterioration in community engagement meaning that their wider priorities are not taken into account.



## Option 4 – Adaptive Management

Adaptive management would take a long-term planned approach which uses a combination of management techniques. This approach seeks to protect key areas of importance by upgrading local flood defence structures, but will also seek to create wetland habitats for flood storage for long term flood resilience.

Summary of Key Issues/Opportunities:

- Gradual targeted and managed interventions to increase flood resilience and facilitate adaptation to climate change and sea level rise.
- Will be consistent with Environmental Land Management (ELM) and will assist farmers in attracting public goods and services payments.
- A recognised and sustainably funded management body or partnership in place to manage, lead and monitor the interests of all stakeholders.
- Local measures designed in consultation with stakeholders would seek to improve resilience of Natura 2000 network and other natural capital assets.
- Over time options will be to reconnect floodplains allowing for more natural flood management and sustainable urban drainage systems (SuDs) alongside traditional management. This approach facilitates adaptation to climate change in line with national policy and allows time to implement solution to other compounding anthropogenic influences and fully mitigate impact on designated sites.

---

## Adaptive Management – the best option

We conclude that Adaptive Management represents the best option for the future management of the Arun Valley, which we propose can be defined as “a structured approach to management and decision-making that accumulates and incorporates knowledge to reduce uncertainty”.

Adaptive Management is an iterative, systematic, decision-making process, requiring continual evaluation to inform the planning and delivery of projects. By its very nature it requires oversight and programme management by a representative body so that all stakeholder interests can continue to be served as more detailed projects develop.

Adaptive Management should seek to provide a balanced approach which uses a combination of management techniques, including the upgrading of local flood defence structures and the creation of wetland habitats for flood storage and long term flood resilience. It

enables gradual, targeted and managed interventions to adapt to climate change, over time allowing more natural flood management in appropriate circumstances alongside traditional management.

The Group concluded that Adaptive Management is the best option for farmers and farmland, the natural environment and the wider community. The timing is right for such an initiative, given current government and local policies, and the fact that the introduction of the new system of farm payments and the EA's withdrawal of maintenance from LTRAS SU4 (Houghton to Arundel) are both likely to occur in early 2021, allowing two years for further investigation and preparation. Subject to ministerial decision, the abolition of the River Arun IDB may occur before that date, in which case some of the further work described below may need to be advanced to provide an earlier indication of the way forward.

# 6. Working towards adaptive management



**We now consider how the principles of Adaptive Management might be applied in the Arun Valley. We conclude that there are two related, but separate, strands of work which need to be pursued to deliver our vision.**

The first priority is for all relevant stakeholders to work together to develop a strategic plan for how the principles of Adaptive Management can best be applied to the particular circumstances of the Arun Valley. Adaptive Management is not cost free and this work needs to keep a close eye on the potential availability of alternative sources of funding, including any money available for natural flood management projects, the new farm payments scheme and other sources of partnership contributions. Innovative sources of partnership funding could potentially be considered such as those linked to local growth plans or skills development initiatives.

The next priority is that we suggest that the use of a natural capital approach (see Appendix 3), suitably adapted to local circumstances, is potentially helpful. An approach such as the Capitals Approach provides a methodology to assess the value of the Arun Valley to the community as a whole in terms of all forms of capital (natural,

social, human, manufactured and financial). Utilising a “capitals accounting” process should therefore provide a benchmark against which decisions on investment can be fully understood by potential funding partners. The scope of such an accounting process should concern:

- Natural Capital (the stock of natural assets such as soil, air, water and all living things): For example, increasing the capacity for land to store water through various techniques will potentially improve resilience to flooding and climate change at a catchment and farm holding scale. As such services hold a value, a capitals accounting process would provide a useful starting point to incentivise further delivery of such outcomes.
- Social and Human Capital: The Arun Valley provides value as a place of recreation and renewal, learning and personal development. A capitals accounting process will help to further describe how

and to what level the Valley provides these essential services. By doing so an Adaptive Management approach can then work with stakeholders to enhance and improve the social and human capital services provided.

- **Manufactured and Financial Capital:** A capitals accounting process can help to describe the interdependencies between various types of capital. For example, as healthy soil is a necessity for producing a high yield of crops, so many other natural assets are also a precursor for generating economic gain. In specifically evaluating these relationships for the Arun Valley it will underpin justifications for delivering environmental gain whilst enabling sustainable economic growth to support the ongoing viability of business activity within the area.

To take this forward, we propose that, during the period between now and 2021, when the EA proposes to withdraw from maintenance in SU4, further work should be done, by appropriately qualified professionals and using a methodology such as the Capitals Approach, to develop a strategic plan or roadmap for the management of the Arun Valley, based on an assessment of the natural, economy, agricultural, social and cultural value of the Valley and providing a framework for attracting new resources to the area.

This project needs a clear point of co-ordination. Changing national priorities mean that the EA is unable to continue in this role and presently none of the local authorities has offered to lead, though all will continue to be involved in some form. Given the central importance of the Arun Valley to the South Downs National Park, there is potential for the SDNPA to play a facilitating role during the two-year transition phase, working in

partnership with other key contributors. To enable this, a costed plan of the work required to deliver an Adaptive Management approach needs to be set out and agreed. The project should be undertaken by a part-time project officer, supported as necessary by consultants, and in liaison with a steering group of representatives of stakeholders, to maintain momentum and collaboration for the project while a new, permanent mechanism is established.

At the same time, consideration needs to be given to the form which any new structures for the co-ordination and funding of relevant land and water management practices in the Valley might take to manage, lead and monitor the interests of all stakeholders in the Arun Valley in the longer term. Options which have been identified include a partnership board, a charitable trust, co-operative voluntary arrangements between landowners and farmers such as Farmer Cluster Groups, a rural Business Improvement District (BID), a new locally accountable IDB, a river authority or a limited company; there may well be others. The river authority option, which was the subject of a Private Member's Bill in the 2017-18 Parliamentary session<sup>3</sup>, would enable a body with overall responsibility for water management in a river catchment to raise precepts to meet the cost of any works.

3 Rivers Authority and Land Drainage Bill 2017-2019 <https://services.parliament.uk/bills/2017-19/riversauthoritiesandlanddrainage.html>



### CASE STUDY: COASTAL PARTNERSHIPS EAST AND SUFFOLK COAST FORUM

In July 2017 a member of the AVVG steering group met with Environment Minister Dr Therese Coffey MP. During that meeting a question was asked about how to secure ongoing watercourse management for rural catchments in light of the limitations on public expenditure. Dr Coffey commended the examples of the Suffolk Coast Forum and Coastal Partnerships East as ways of developing more consistent delivery of local priorities:

- The Suffolk Coast Forum *"brings together a partnership of statutory agencies, local authorities, community groups and other key players involved in the management of the coast, estuaries and hinterland"* with recent initiatives focusing on innovation, consultation and habitat restoration.
- Coastal Partnerships East *"brings together the coastal management expertise from four local authorities into a single team"*. A partnership model to address jointly shared issues to justify the resourcing of critical specialist roles reflecting key priorities in the area.

[www.greensuffolk.org/about/suffolkcoastforum](http://www.greensuffolk.org/about/suffolkcoastforum)

[www.coasteast.org.uk](http://www.coasteast.org.uk)

In tandem with the above, further investigations need to be carried out into the current and future potential for the adaptation of internationally protected sites within the Valley towards a more resilient ecosystem which can adapt to the challenges of climate change. The original aim of the international protected sites network was the conservation of the status quo of habitats and species within the core areas but in light of changing climate, it is evident that maintenance of

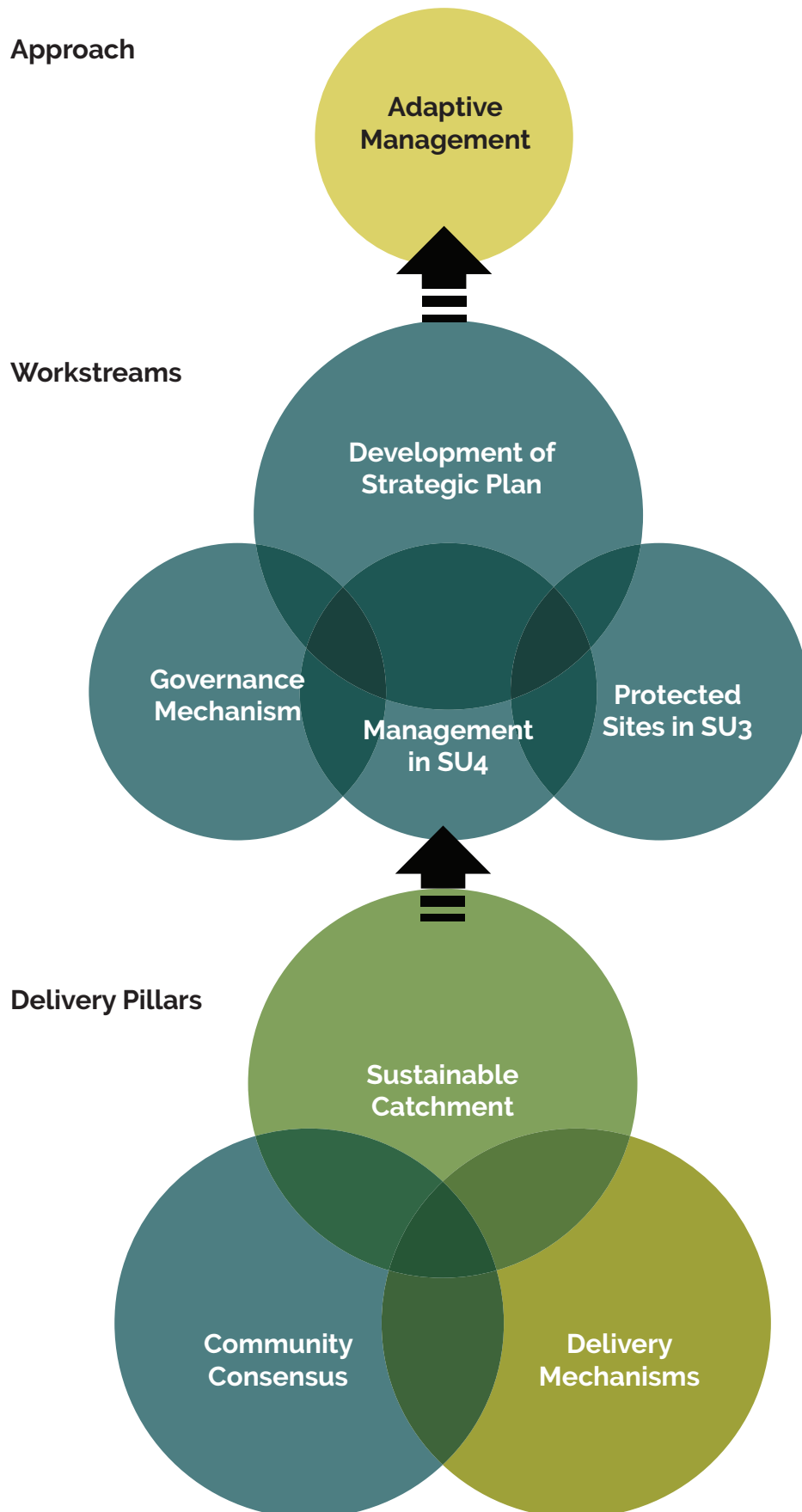
viable populations and habitat integrity may only be achieved by expanding the current protected area estate and ensuring functional connectivity beyond protected areas<sup>4</sup>. The Adaptive Management issue is one with multiple facets and impacts and further investment will be needed to gather evidence in relation to the conservation objectives for the sites, possible adjustments to policy and legal frameworks for their protection, impacts of concern and social considerations. However, any flexibility with regard to the protected sites must not come at the price of weakening the existing legal obligations for nature conservation: any decisions relating to changes will need to be evidence-based and go through a rigorous process of scrutiny at the local, national and international level.

Now is the right time to take forward the initiatives outlined above and to turn our vision for the Arun Valley into a practical programme of action on the ground. The Government's timetable for the phased introduction of the new, post-Brexit system of farm payments, coupled with their new approach to ELM provides for business as usual between 2018 and 2020. The new procedures which will then be progressively introduced over the following years accord with our aspirations for the future management of the Arun Valley, providing "public goods for public money" and the Valley would be the ideal location for an early national, pilot project to test the new approach. Our proposals are consistent with Natural England's Conservation 21 policy statement, which recognises the need to work at landscape scale with people and stakeholders to explore the best options to achieve resilient healthy landscapes and seas, and to put people at the heart of environment.

<sup>4</sup> Wilke, C. and Rannow, S. (2013): Management Handbook – A Guideline to Adapt Protected Area Management to Climate Change. HABIT-CHANGE



## THE ADAPTIVE MANAGEMENT MODEL



Our proposals also recognise and celebrate the contribution which farming makes to food production and identify the Capitals Approach as a way to find the right balance between farming, environment and other relevant factors. Situated at the heart of the South Downs National Park, the Arun Valley provides a possibly unique opportunity for the SDNPA to take the lead in ensuring that the relevant policies in its statutory plans are put into practice. Our proposals are consistent with the aspirations of the EA to implement its own plans for its work in the Arun Valley, beginning in 2021, providing two years in which the further work we are recommending can be completed, a strategic

plan for the Valley agreed and arrangements put in place to ensure that, where ongoing maintenance on flood prevention structures is deemed by the landowners and farmers concerned to be in their business interests, they are able to collaborate to ensure that this takes place, with the value of their work being appropriately recognised through the new farm payments system and other mechanisms identified in the evaluation process. Our proposals are also consistent with the local plans and flood management strategies of the local authorities and the aspirations of town and parish councils in the Valley. We commend our report and recommendations for approval.



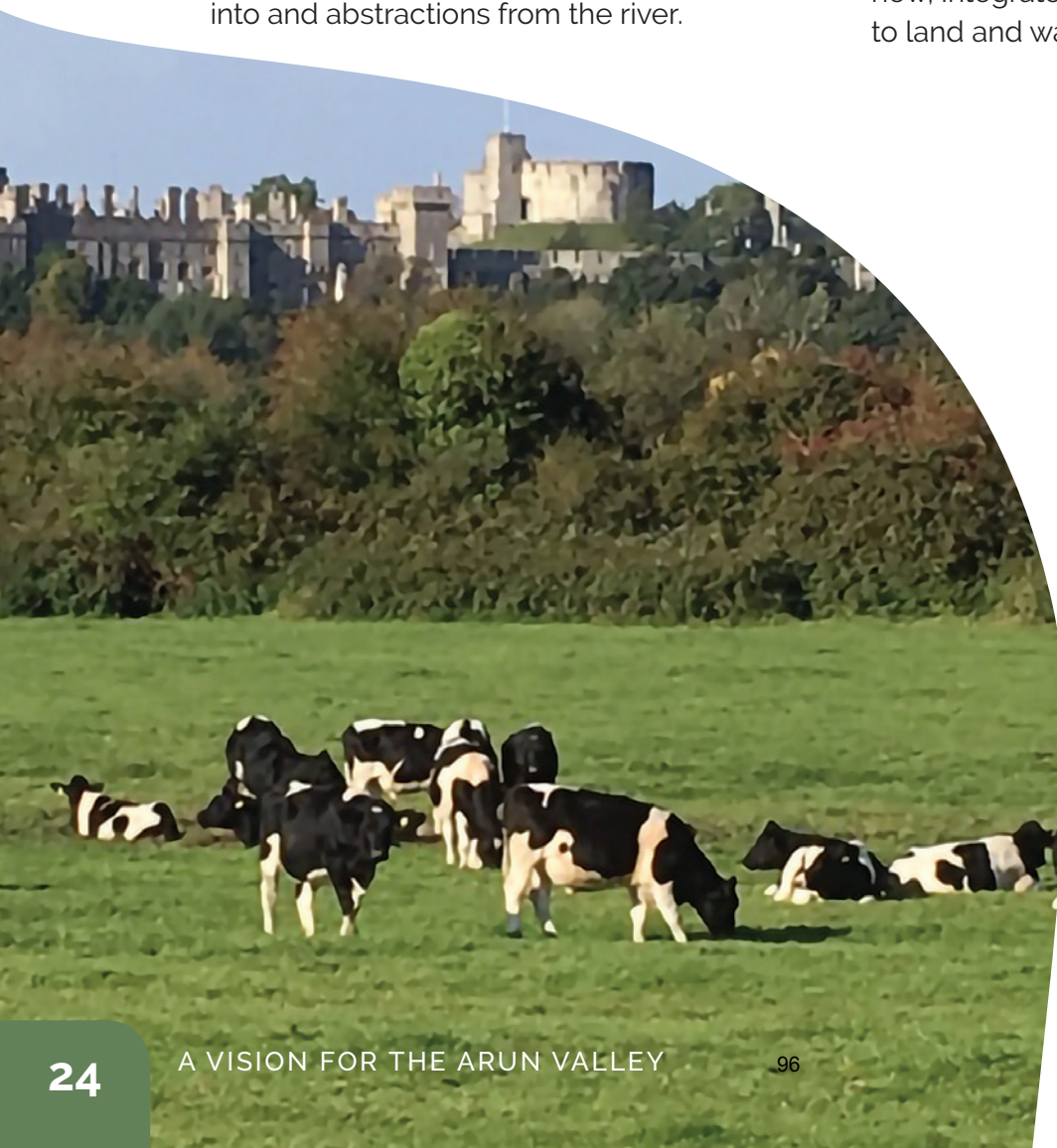


# 7. Summary of recommendations

1. Adaptive Management should be adopted as the agreed way forward for the management of the Arun Valley. Further work is now needed to understand how this approach might best be implemented, for the benefit of all relevant stakeholders in the Valley.
2. Over the next two years and using an appropriate methodology such as the Capitals Approach, work should be taken forward to implement our vision and develop the Adaptive Management approach for the Arun Valley into a costed strategic plan, based on an assessment of the natural, economic, agricultural, social and cultural value of the Valley and providing a framework for attracting new resources to the area.
3. To maintain momentum and collaboration for the project, the SDNPA should be asked to take on the facilitation of the two-year transition phase, working in partnership with other key contributors. The project would be undertaken by a part-time project officer, supported as necessary by consultants, and in liaison with a steering group of stakeholders.
4. During the two-year transition phase, the steering group should develop a proposal for a recognised and sustainably funded management body or partnership to manage, lead and monitor the interests of all stakeholders in the Arun Valley.
5. At the same time the EA should be asked to work with affected farmers and landowners with the assistance of the NFU, to help them determine how, individually and collectively, they wish to operate following the abolition of the IDB and the proposed implementation of the relevant provisions of LTRAS, taking into account the potential availability of future alternative financial support mechanisms.
6. The decision of the EA to proceed with the completion of £4m worth of improvement works in Arundel to reduce the risk of flooding in the town by autumn 2020 should be welcomed and applauded.
7. The EA, Highways England, Natural England and the local planning authorities (including the SDNPA) should consider how the planning and construction of the Arundel A27 bypass can contribute positively towards the Adaptive Management of the Arun Valley.



8. Defra, Natural England and the EA should recognise that further investigations need to be carried out nationally and locally into the current and future potential for the adaptation of the internationally protected sites in the Valley towards more naturalistic and climate proofed ecosystems and a more robust ecological network, to enable the implementation of Adaptive Management in those areas with government support and agreement.
9. The EA should engage with the local planning authorities (including the SDNPA) and Southern Water to ensure that the need to improve water quality in the river is taken into account in planning decisions on future developments in the area to the north and west of the catchment and in decisions on consenting discharges into and abstractions from the river.
10. Further steps should be taken by the EA and local authorities to enable solicitors, estate agents, developers and the public to be more fully aware of the responsibilities of riparian owners and the roles of the various statutory bodies involved in flood management.
11. The contents of this report and our recommendations should be made available widely to all relevant local authorities, organisations, communities and individuals, building a broader base of consensus.
12. This report should be submitted to the Secretary of State for the Environment, with the request that he endorse its contents and recommendations, and agree that the Arun Valley would be a suitable location for a national pilot scheme to test the Government's new, integrated landscape approach to land and water management.



# Appendix 1:

## Terms of Reference

### Arun Valley Vision Group (AVVG) Terms of Reference (March 2017)

#### Aims of the Arun Valley Vision Group

- The Arun Valley Vision Group (AVVG) will carry out a new community-led partnership project to develop a sustainable long-term vision for what interested stakeholders and the wider community want for the lower Arun and how it could be achieved and managed.
- Reflecting our sense of pride and place in the Arun Valley and its special qualities, our aim is to provide a landscape-wide context for the consideration of flood management issues.
- Working collaboratively we will aim to find a sensible and affordable balance between the needs of conservation, land management and protection of people and properties against flood risk as time passes.
- Ensure that work to improve rivers and reduce flood risk in the Arun Valley is well informed by evidence/data and best practice. Ensure that the work of the steering group and wider partnership takes account of all relevant plans and strategies that include the Arun catchment area.
- Co-ordinate and integrate existing collaborative groups and activity with relevant aims into the Arun Valley 'Vision' where appropriate.
- Maximise the use of steering group resources/skills and develop a funding strategy identifying key funding sources.
- Direct and oversee the work of any task and finish groups in order to deliver work on the ground that achieve the agreed outcomes.
- Ensure effective communication and engagement by adopting a joined up approach to engagement with communities, government and MPs.
- Ensure completion of all of the above at the latest by January 2019

#### Objectives of the Arun Valley Vision Steering Group

- Working together to understand the strategic challenges and opportunities that exist within the Arun Valley.
- Production of a strategic long-term vision (including an action plan) that identifies agreed outcomes and details what on the ground activity is needed in order to achieve them. The vision and action plan will focus on working in partnership and implementing actions that will seek to reduce flood risk, improve water resources and water quality and identify opportunities for improved nature conservation, access and recreation in the Arun Valley.

## Membership responsibilities

Members of the Arun Valley Vision Steering Group commit to:

- Work collaboratively, using an honest and transparent approach.
- Regular meeting attendance, avoiding delegation.
- Contribute to agenda setting and agreeing the direction for the group.
- Share organisational priorities for managing flood risk
- Bring strategic issues raised within their organisation to the group for discussion.
- Feedback relevant information to colleagues within their organisation.
- Developing and communicating partnership key messages externally.

## Ways of working

- Agenda items will be led and owned by a variety of organisations.
- Actions will be delivered by all group members.
- Discussion will focus on issues relating to flood risk management, which are within the control of the represented organisations.

## Meetings and secretariat

- **Frequency** – The Arun Valley Vision Steering Group will meet approximately every 6 weeks. The frequency of meetings will be reviewed as the project progresses. Where members agree, additional telecons or meetings may be arranged.
- **Location** – A programme of meeting dates and locations will be agreed in advance.
- **Chair** – The group will be independently co-chaired by Dr John Godfrey and Gill Farquharson.
- **Secretariat** – The Environment Agency will provide the secretariat for the group, including distributing papers before the meeting, producing action notes and issuing external communications about the partnership. All group members are expected to contribute to meeting papers for agenda items on which they are leading.

## Steering Group Members

Name	Organisation
Dr John Godfrey	Independent Chair
Gill Farquharson	Independent Chair
Gordon Wilson/Dave Robinson/Sara Denton	Environment Agency
Kate Rice	Southern Water
John Archer	Arun and Rother Rivers Trust
Jim Seymour/Sue Beale/Louise Bardsley/Elaine Webster	Natural England
Claire Kerr/Julianne Evans/Steve Gilbert	RSPB
Fran Southgate/Henri Brocklebank	Sussex Wildlife Trust
Peter Knight	Norfolk Estate
Adrian Waller	Amberley Landowners
Matt Jackson	West Sussex County Council
Tom Ormesher	NFU
Roger Spencer	Arun District Council
Derek Waller	Arundel Town Council
Matthew Woodcock	Forestry Commission
Jeremy Burgess/Claire Kerr	SDNPA
Tim Bamford/Robin Edwards	CLA
Nigel Draffan	Angmering Park Estate
Martin Brightwell	Horsham District Council

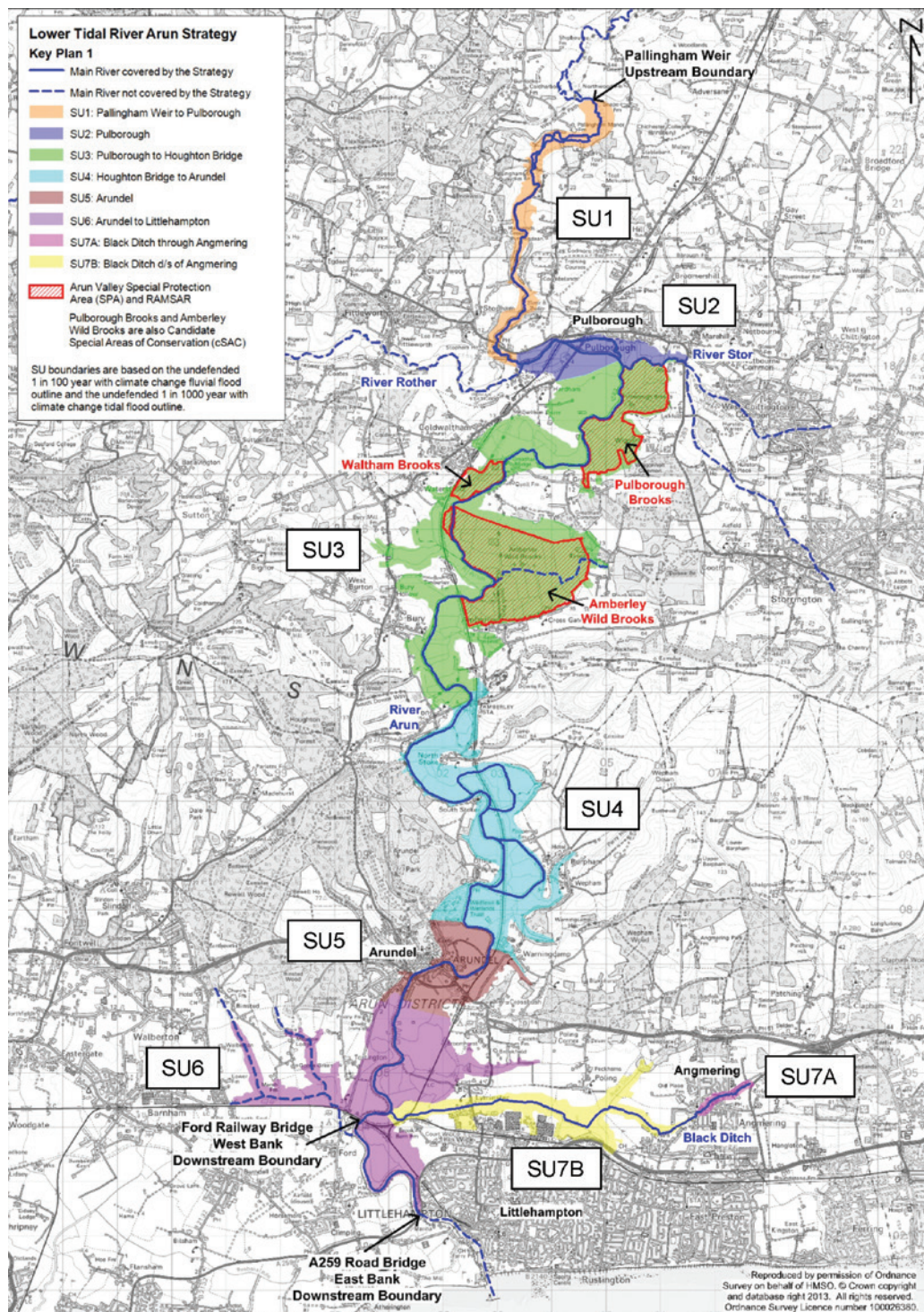


# Appendix 2:

## Lower River Arun Strategy (LTRAS)

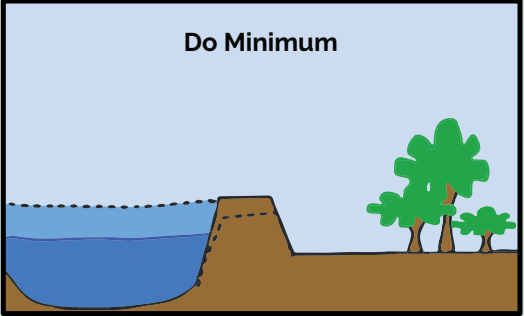
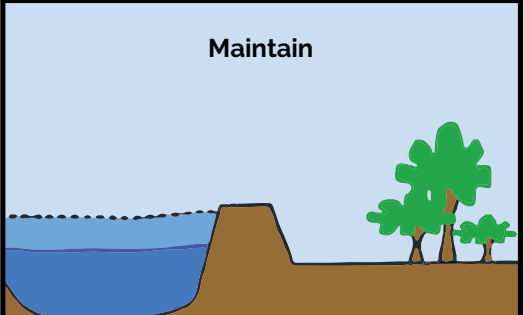
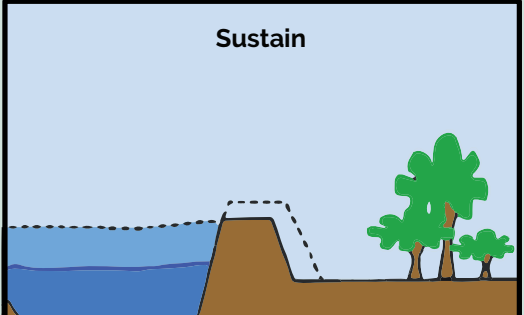
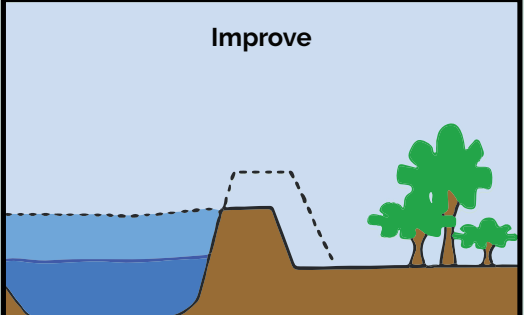
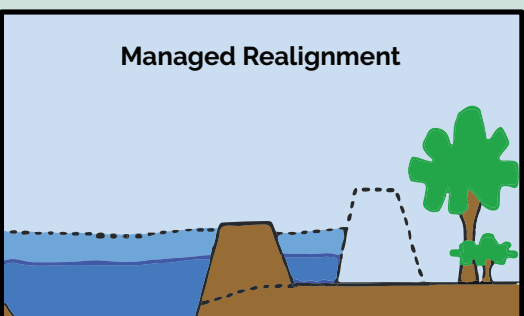
The Lower Tidal River Arun Strategy (LTRAS) is an £85m plan for flood related activities and expenditure in the Arun Valley during the next 100 years. The Strategy divided the area into seven Strategy Units (SUs) to assist in the identification of appropriate management practices.

### EXTRACT FROM THE ENVIRONMENT AGENCY'S LTRAS REPORT





Strategy unit		Our draft recommended option	Benefit Cost Ratio	Approximate number or properties at risk from flooding if the existing defences were to fail	
				Now 2012	Future 2112
1	Pallingham Weir to Pulborough	Withdraw Maintenance	0	2	4
2	Pulborough	Do Minimum and Withdraw Maintenance	2.1	9	10
3	Pulborough to Houghton Bridge (includes 'Arun Valley')	Sustain for 10 years	0.5	16	19
4	Houghton Bridge to Arundel	Withdraw Maintenance	0	9	55
5	Arundel	Sustain to 1 in 75 with new inland defences	2.8	168	457
6	Arundel to Littlehampton	Maintain for 50 years	2.1	24	38
7	Black Ditch	Maintain with a new inland defence	37.3	208	284

Option	Description
 <p><b>Do Minimum</b></p>	<p>The minimum amount of action or intervention necessary to maintain the defence. No work is carried out to replace defences should they fail. This means that over time, the defences will deteriorate and eventually fall down and the natural floodplain will be reinstated. How long a defence will last with the minimal maintenance work before it fails depends on how good the condition of the defence is today. The better the defence condition, the longer it is likely to last.</p>
 <p><b>Maintain</b></p>	<p>Work is done to the existing defences to keep them in good condition and prevent them from falling down. As the sea levels rise and rainfall becomes more extreme, flood risk increases over time which means the amount of protection from flooding provided to the land and property behind the defence today will gradually decrease. When the defences reach the end of their life, it is recommended they be replaced to the same height as the existing defence.</p>
 <p><b>Sustain</b></p>	<p>In general, the same works are done as the 'Maintain' option, but in the future the defences would be built higher as the sea levels rise and rainfall becomes more extreme. This means over time the amount of protection from flooding provided to the land and property behind the defence today stays the same.</p>
 <p><b>Improve</b></p>	<p>Defences are improved to increase the protection provided to land and properties behind them.</p>
 <p><b>Managed Realignment</b></p>	<p>A new line of defence will be created, set back from the existing defences and then the current defence would be deliberately removed. This option is often used to provide a better and stronger line of defence, or to allow land to flood to create a new environmental habitat.</p>

## Appendix 3: Background: Plans & Policies

In parallel with, and arising from, the work described previously we reviewed the relevant policies and plans of a wide range of official and unofficial bodies, national, regional and local, which reflect the significance of the Arun Valley and provide guidance on its future use and management. We took the view that, if the vision which we agreed upon was to have a significant chance of being achieved, it was essential that, as well as local buy-in and support for our conclusions and recommendations, we also could secure the commitment of a wider range of partners and potential funders for our proposals. With this in mind, we conducted a review of current governmental and other policies.

The legal background to these issues is set out in the **Flood and Water Management Act 2010**<sup>5</sup> that outlines the statutory roles and responsibilities of the EA and Local Authorities. The national planning background is set out in the **National Planning Policy Framework 2018**<sup>6</sup>. These two documents determine the framework within which the group has developed its understanding of the implications of national policy.

**Defra's 25-year Plan** states that the Government will seek to achieve its ambition "to leave our environment in a better state than we found it" by, among other things, "improving how we manage and incentivise land management; designing and delivering a new environmental land management

system; bringing the public, private and third parties together to work with communities and individuals; reducing risks from flooding and coastal erosion; expanding the use of natural flood management solutions; putting in place more sustainable drainage systems and making 'at-risk' properties more resilient to flooding"<sup>7</sup> The Plan also sets out the need to achieve clean and plentiful water by improving at least three-quarters of our waters to their natural state and restoring one million hectares of terrestrial and freshwater protected sites to favourable condition, clearly showing the close relationship between the management of flood risk, land management and the on-going diversity of wetlands. The Plan also refers to the Government's proposed new system of support for farmers and to the importance of the concept of natural capital in decision-making.

These ideas are developed in Defra's subsequent paper on the future of food, farming and the environment after Brexit, which proposes that in future agricultural policy should be underpinned by the payment of public money for the provision of public goods, involving "a new environmental land management system ... that pays providers for delivering environmentally beneficial outcomes."<sup>8</sup>

5 Flood and Water Management Act 2010 [www.legislation.gov.uk/ukpga/2010/29/contents](http://www.legislation.gov.uk/ukpga/2010/29/contents)

6 National Planning Policy Framework 2018 [www.gov.uk/government/collections/revised-national-planning-policy-framework](http://www.gov.uk/government/collections/revised-national-planning-policy-framework)

7 Department for Environment, Food & Rural Affairs, *A Green Future: Our 25 Year Plan to Improve the Environment* (London, January 2018)

8 Department for Environment, Food & Rural Affairs, *Health & Harmony: the future for food, farming and the environment in a Green Brexit* (London, February 2018)

## CLIMATE CHANGE

Climate change has been a high profile topic throughout the AVVG process, rising sea levels leading to breaching of sea defences being a pivotal issue. In November 2018 the Met Office Hadley Centre published the UK Climate Projections 2018 – or “UKCP18”. It is the **most comprehensive picture yet** of how the climate could change in the UK. (November 2018).

One key figure in the report is the rise in summer temperatures – up to 5.4C warmer than the average between 1981 and 2000. This would only happen, according to the Met Office, if the world was to continue increasing emissions of carbon dioxide rather than reducing them as most governments intend. However even under a low emissions scenario, the Met Office says that the UK will see an increase in the average yearly temperature of up to 2.3C by 2100.

The report contains many maps showing more localised trends in these predictions and the Arun Valley sits in a band along the South Coast where these changes are expected to be the most significant.

However, the Arun Valley is particularly influenced by rainfall, with fluvial and surface water issues and the increased intensity of summer rain events compounding the issues that the AVVG has been considering.

Unsurprisingly the report reminds us that the UK faces wetter winters and drier summers. These warmer summers of the future are likely to be much drier too, with average summer rainfall dropping by 47% by 2070. Winters could be warmer by up to 4.2C but they will also see more rainfall, increasing by up to 35% by 2070, under the worst emissions scenario.

Raised sea levels are also one of the consequences of a warmer world and according to the report, they could increase by 1.15 metres in some areas by 2100. The report says the UK is set to see an increase in both the frequency and magnitude of extreme water levels.

Just a few weeks ago the UK's Committee on Climate Change (CCC) warned that by 2080 up to 1.2 million homes may be at increased risk of flooding. This inevitably will include properties in the Arun catchment.

Natural England, in its conservation strategy for the 21st Century, focuses on the need to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature. The strategy emphasises the need to work at landscape scale, to put people at the heart of environment and to grow **natural capital**. “Natural capital encompasses the elements of nature that directly or indirectly produce value to people. This includes ecosystems, species, freshwater, land, minerals, the air and oceans, as well as natural processes and functions. The approach can help us all understand what we get from the natural world. It offers the potential to make environmental planning central to local and

national decision-making.<sup>9</sup> In connection with the proposed withdrawal of maintenance of the main river flood defences in SU4, the EA, with support from Natural England, will need to undertake a Habitats Regulations Assessment (HRA) on the possible impacts of the withdrawal on both the “off-site” interest features of the nearby Special Area of Conservation (SAC) and also the plant and invertebrate species covered by the Ramsar designation.<sup>10</sup> If notice is served on the landowners prior to the completion of the HRA of the intention to withdraw maintenance, a caveat will be included to ensure that the conclusions of the assessment will determine any future actions within SU4.

9 Natural England, *Conservation 21: Natural England's Conservation Strategy for the 21<sup>st</sup> Century* (Sheffield, October 2016)

10 <https://rsis.ramsar/ris/1011>

The future of the protected sites in LTRAS SU3, including Amberley Wildbrooks, remains under consideration. There is no intention on the part of the EA to change the management arrangements while further studies are carried out into the effects of climate change on these internationally designated sites. Phase 1 of the SU3 investigations is completed but Phase 2 is still being planned. It should be noted however that these issues cannot be solved locally but will need national government involvement. Natural England has published a **Site Improvement Plan (SIP)** for the Arun Valley, which provides a high level overview of the issues (both current and predicted) affecting the condition

of the Natura 2000 features of relevant sites in the Arun Valley.<sup>11</sup> The main issues that were identified for the Arun Valley were inappropriate water levels; inappropriate ditch management and water pollution, all of which have the potential to impact on the features for which the site is designated, namely water bird assemblages and a suite of important plants and invertebrates. For each issue, the Plan sets out the mechanisms available for combatting the issue, along with the funding options, timescales and delivery body. The further studies being undertaken by the EA on the future of the protected sites need to take into account all these relevant policy issues.

## A NATURAL CAPITAL APPROACH

A natural capital approach to the environment brings established economic and accounting methods for public and private assets together with the best natural science understanding. Properly measured and accounted for, the approach brings disparate activities and their consequences together into a single strategic perspective that addresses the complexity and long-term nature of making the most of our natural capital.

Economic and social opportunity that can genuinely transform the natural environment, support the growth of the economy, allow citizens to reconnect with the health, wellbeing, spiritual and educational benefits of interacting with nature, and gift our children a richer, better and more resilient natural inheritance. With a natural capital approach, the environment should no longer be regarded as an obstacle to development; rather, a healthy environment is the basis of sustainable economic growth.

The Arun Valley has a wealth of natural capital which delivers a wide range of ecosystem services. For example, the wetlands in the Valley are a significant natural resource, supplying both the landscape and its inhabitants with water and delivering other ecosystem services such as flood storage and climate change buffering.

*Natural Capital Committee – Advice on Government's 25 year Environment Plan (September 2017)*

11 Natural England, *Site Improvement Plan: Arun Valley (SIP004)* (Sheffield, October 2014)

The concept of natural capital is key to much of this thinking, but its scope needs to be broadened if it is to be useful in the context of the Arun Valley. Specifically, such an assessment of the value of the Valley should encompass agricultural, economic, social, recreational and cultural value as well as that of the natural environment. This is consistent with the **Capitals Approach** which has been advocated by a number of relevant policy centres, including Forum for the Future<sup>12</sup> and is one of several natural capital approaches which is currently being developed. The adoption of an approach on these lines would potentially provide a more comprehensive assessment of the value of the Valley to the community and the nation at large, and identify policy initiatives and possible funding opportunities that might be available to implement our vision for the Valley. The Arun Valley has so much to offer, and a professional assessment of its value to the community at large would potentially unlock its economic and cultural potential as a distinctive locality.

These policy themes all helped to shape the Government's proposals for the reform of the agricultural payments system contained in the **Agriculture Bill** currently before Parliament. These proposals may well be amended during the passage of the Bill but, as currently drafted, it provides that the existing Basic Payments (BPS) and Countryside Stewardship (CS) systems will continue until 2020. There will then be a transitional period from 2021 to 2027, during which farmers will be encouraged to move to a new Environmental Land Management (ELM) approach, which will be universally applied when direct payments are eventually phased out from 2028. Farmers will be

encouraged to enter into ELM contracts that "help to deliver improved air and water quality; protect and enhance biodiversity on farmland by providing habitats for wildlife; prevent, reduce and adapt to climate change and other environmental hazards like flooding and drought; provide public access to their land and contribute to the public's understanding and enjoyment of nature; and protect the historic rural environment and our distinctive landscape features."<sup>13</sup> The NFU and the Tenant Farmers Association (TFA) emphasise the continuing importance of food production, urging the Government to "show that it will use its powers to introduce assistance to the farming industry to continue to deliver high quality food to the UK and international consumers, produced to high standards of animal welfare and environmental management at prices consumers can afford and at returns that reward the risk, investment and effort of the farming community."<sup>14</sup> It will be some time before the final details of the new arrangements for agricultural payments emerge, but it is important that our conclusions and recommendations are informed by an understanding of the Government's present intentions. Once again, this continuing uncertainty dictates flexibility.

The Environment Agency (EA) recognises its key role in implementing the **Government's 25-year Plan** for the environment and identifies the following areas on which it will concentrate: clean air, clean and plentiful water, thriving plants and wildlife, reducing risk of harm from environmental hazards, using resources from nature more sustainably and efficiently, enhancing beauty, heritage and engagement with the natural environment, mitigating and

12 Forum for the Future, *The Capitals Approach* ([www.forumforthefuture.org/the-five-capitals](http://www.forumforthefuture.org/the-five-capitals))

13 National Farmers Union, *Briefing on Post-Brexit Agricultural Policy: Agriculture Bill* (London, September 2018)

14 Tenant Farmers Association, reported in *West Sussex Gazette*, 24<sup>th</sup> October 2018

adapting to climate change, minimising waste, managing exposure to chemicals and enhancing biosecurity.<sup>15</sup> In October 2017, the EA published a report on the role of natural flood management in reducing flood risk. The report noted that working with natural processes to reduce flood risk is not a new concept but explained that this was the first time that the evidence of more than 60 case studies had been brought together from across England to explore how successful the approach is, how it could be used

elsewhere and what research may still be needed. Natural flood management is when natural processes are used to reduce the risk of flooding and coastal erosion. Examples include restoring bends in rivers, changing the way land is managed so soil can absorb more water and creating saltmarshes on the coast to absorb wave energy<sup>16</sup>. The concept, which has relevance to the Arun Valley, and specifically to the offer of the Norfolk Estate to make available land in their ownership for this purpose, is explained in the box.

## NATURAL FLOOD MANAGEMENT

"I often think improving flood resilience is like a mosaic, many different pieces need to come together to complete the resilience picture. Natural flood management is an important part of that mosaic when used alongside more traditional engineering. These projects also provide fantastic opportunities for community involvement and leadership.

Many of our flood schemes already feature a mixture of hard and soft engineering and natural flood management. It can be a cost-effective and sustainable way to manage flood risk alongside traditional engineering, while creating habitat for wildlife and helping regenerate rural and urban areas through tourism.

Natural flood management works best when a 'catchment based approach' is taken, where a plan is developed to manage the flow of water along the whole length of a river catchment from its source to sea. This way, natural processes can be used upstream and on the coast to complement engineered flood defences – such as walls and weirs – in populated areas.

Natural flood management not only reduces flood risk it can also achieve multiple benefits for people and wildlife, helping restore habitats, improve water quality and helping make catchments more resilient to the impacts of climate change.

The Environment Agency hopes that the evidence directory will help flood risk managers, local authority engineers, non-governmental organisations and community flood action groups to incorporate natural approaches to flood risk management into their plans to reduce flood risk.

Earlier this year the government announced a further £15m for natural flood management schemes across England."

*John Curtin, Executive Director of Flood & Coastal Risk Management at the Environment Agency*

<sup>15</sup> Environment Agency, *Environment Agency: Our ambition to 2020* (London, June 2016)

<sup>16</sup> Environment Agency, *Natural flood management* (London, October 2017) [www.gov.uk/government/news/natural-flood-management](http://www.gov.uk/government/news/natural-flood-management)



Locally, the **EA's** plan for its work in the Arun Valley is described in LTRAS, which is discussed above. In urban areas, the strategy recommends maintaining and enhancing many existing, and providing some new, flood defences to manage increasing flood risk from climate change. The new defences will not be needed for many years and they will depend on funding. Central government funding is limited, and it is likely that substantial contributions will be needed from other sources. In some rural areas this strategy recommends new approaches such as working with natural processes and more landowner involvement in decisions. We are pleased to note that the Environment Agency is working with people who are affected to understand and explore how this might work best.<sup>17</sup>

The **South Downs National Park Authority's Partnership Management Plan** includes policies to improve the sustainability of water resources and waste water management through partnership working across the water

sector; support and promote river catchment management approaches that integrate sustainable land management, wildlife conservation, surface and groundwater quality and flood risk management; actively promote water efficiency measures and more sustainable patterns of domestic, industrial, farming and leisure water use; raise awareness of the importance of chalk streams and rivers and develop a programme of restoration and rehabilitation.<sup>18</sup>

All these policies and plans identify climate change and sea level rise as key issues, with profound implications for the management of the Arun Valley, its landscapes, communities and wildlife. At a time when state funding is ever more constrained, both the desirability and practicality of maintaining hard engineering flood defences is coming under question. Priority in the distribution of available funds must inevitably favour areas where significant numbers of people and properties are under threat.

## ARUNDEL FLOOD ALLEVIATION SCHEME

We were delighted to hear in the course of our deliberations that the EA has been able to accelerate its timetable for the completion of improvement works in Arundel to manage the risk of flooding in the town by autumn 2020. The EA anticipates the scheme will better protect around 130 properties from flooding and up to 30 properties against river erosion (on both river banks between the Queen Street and A27 road bridges). Repairs to the collapsed wall at River Road will be completed first, and work there will begin by autumn 2019. The current best estimate of the cost of the scheme is £4 million, funded by a combination of Government grant and contributions raised locally (with the support of local councils). Improvement works on the fast-flowing river Arun provide a significant engineering challenge. The EA will carefully manage the risks to minimise the potential impacts this may cause.

17 Environment Agency, *Policy Paper: Lower Tidal River Arun flood risk management plan* (Worthing, September 2015)

18 South Downs National Authority, *Partnership Management Plan 2014-19* (Midhurst, 2013)



In rural areas, the proposed withdrawal of maintenance of main river flood defences in the Valley between Houghton and Arundel (LTRAS SU4) and the proposed abolition of the River Arun IDB have caused consternation among members of the farming community, which led directly to the creation of the AVVG. The EA has now confirmed that it proposes to proceed with the withdrawal of maintenance in SU4 in 2021. It will be for the landowners and farmers concerned to decide what measures they wish to take in their own business interests to defend their land from flooding or to manage it in other ways, and the same principle will apply to the management of watercourses in the Valley currently dealt with by the IDB<sup>19</sup>. From both points of view, there is a need for new mechanisms to be put in place to plan, co-ordinate and deliver whatever maintenance it is decided is necessary. The EA and the NFU have offered their services to assist the farming community to find a mutually acceptable way forward in this connection. The parties concerned should now use the two years available before the

withdrawal of maintenance is implemented and the new ELM scheme comes into operation to put in place whatever new arrangements are needed and affordable.

In any move towards the more natural flood management of the Valley, the need to safeguard key features of infrastructure, including the Arun Valley railway line, roads, waste water treatment works and power lines must be acknowledged. Similarly, the need to improve water quality in the river and to take into account both population growth upstream in the Horsham area, with greater quantities of waste water entering the river system, and the restoration or protection of other freshwater inputs into the Valley must also be recognised as key issues. Finally, the proposed construction of an A27 Arundel bypass has implications for the management of flood risk to people and properties in Arundel and in the Valley generally and discussions need to take place with Highways England to ensure that this is taken into account as more detailed plans are developed.<sup>20</sup>

19 The Planning Inspectorate, *Report to the Secretary of State for Environment, Food and Rural Affairs by Clive Neil BSc(Hon), CEng, MICE, MCIWEM, C.WEM: Land Drainage Act 1991 The River Arun Internal Drainage District (Abolition) Order 2017* (Bristol, February 2018)

20 Department for Transport, *Press Release: £250m Arundel bypass route revealed* (London, May 2018)

# Appendix 4:

## Detailed Scenarios

	Natural Environment	Farmers and Farmland	Wider Community
<b>Option 1: Do Nothing</b>			
<b>What this looks like</b>	<b>Short term implications</b>		
Active decision by the Environment Agency to cease maintenance in the sections of the Arun Valley in accordance with LTRAS.		No central coordination of tasks, activities and risk management functions.	Lack of a coordinated approach could lead to deterioration in community engagement meaning that their wider priorities are not taken into account.
A "Do nothing" approach would by default result in an unmanaged and uncontrolled partial re-naturalisation of the Arun Valley flood banks.		Capability to make improvements would be limited beyond those enforced by riparian rights and responsibilities.	
	<b>Medium to long term implications</b>		
There would be no strategic or coordinated approach and no formal management plan in place.	A possible "free for all" situation where maintenance is completed to varying standards on a piecemeal basis.	Changes to habitats and agricultural land as the "renaturalisation" by default shifts the river system but re naturalisation will be restricted to certain parts of the lower valley and only apply to connection to floodplain not other processes.	Potentially unmanaged impacts on road, rail, water and sewerage infrastructure leading to future risk of catastrophic failure.
All watercourse maintenance would be the individual responsibility of each riparian landowner.	Potential H&S risks to farmers and land managers during flooding.		Lack of "positive" decisions will result in neglect.
EA maintenance programmes will cease to operate.	Reductions in land value as farmland becomes more frequently inundated.	Connect parts of the riparian habitat of national or international importance with other anthropogenic influences before they could be improved (e.g. poor water quality).	Possible impacts on property, livelihoods, landscape and ecology from flooding water quality and impacts on other infrastructure...
Landowners will be responsible for their own asset maintenance.	Additional regulatory burdens with cross compliance and enforcement on individuals.	Over the longer-term a new "norm" will establish, which could either be positive (establishing a more resilient system) or negative. Timescales unknown creating uncertainty.	

	Natural Environment	Farmers and Farmland	Wider Community
	<b>Wider scale implications</b>		
	Ability to recover from a flood event compromised.	WFD and other drivers will continue to deliver improvements for water quality.	Timescale for "change" unknown? Communities/ individual landowners could undertake actions which will have wider implications on the "system".
	Viability of some farming compromised Limited support from authorities (restricted remit).	The features for which sites are designated could be adversely affected. Further research required into likely long-term impact. May be need for change in national policy to allow transition of habitats.	Wider scale socio-economic impacts not fully understood
	Potential funding to be met by the landowner or secured on an individual basis. Disputes resulting in litigation?	No evidence this will result in net gain to natural capital without significant changes to other anthropogenic impacts.	Risk to mental health and well-being of flood affected individuals.
		Does not facilitate adaptation to climate change	
<b>Option 2: Hold the line</b>			
	<b>Short term implications</b>		
Landscape of the Lower Arun valley maintained as an engineered landscape.	Public funding is unavailable to hold the line. Treasury spending rules will not justify the significant investment required.	Opportunity to preserve designated sites in their current location in accordance with current legal obligations.	Further investment in flood defence for Arundel Town may be available through this approach, however the detailed business case is as yet undefined.
Significant investment required to upgrade embankments and river capacity to accommodate high flows within the channel.	Delivery is likely to be either at the expense of private landowners or through generating substantial investment by third parties.		Local authorities would need to contribute partnership funding to achieve this outcome; however there is no budget or political support.
Future upgrades will need to take account of climate change, so embankments will need to be larger and river capacity deeper simply to maintain current levels of protection.	Potentially buys time to identify longer term solutions, however this option will itself take a long time to negotiate and deliver.		Small number of properties protected from flooding.
Combination of authorities and possible (new/ replaced) IDB with contributions from riparian landowners and other third parties.			

	Natural Environment	Farmers and Farmland	Wider Community
	<b>Medium to long term implications</b>		
	<p>Provides an opportunity to maintain productive farmland and land value.</p> <p>However no organisation has a specific mandate to deliver this outcome.</p> <p>High levels of ongoing cost to maintain structures in good working order.</p> <p>Requires an ongoing mechanism to fund maintenance work – still likely to be at landowner's expense?</p> <p>Costs involved are likely to outweigh the agricultural income opportunities?</p> <p>Continuing enforcement risk and risk of legal disputes.</p>	<p>New engineering project could cause significant landscape and visual impact within the National Park, requiring costly mitigation and offsetting?</p> <p>As the climate changes existing sites may no longer be suitable for the designated features of Arun Valley SPA SAC, Ramsar and SSSI so investment to preserve sites in situ may be in vain. Does not facilitate adaptation to climate change.</p>	<p>Continuing uncertainty of management oversight, responsibility and ongoing funding.</p> <p>Continuing contentious and divisive debate over management and spending priorities.</p> <p>Risk that wider community might think that nothing has changed and do not feel involved in the process</p> <p>Missed opportunity to enhance public recreation, health and well-being within the valley?</p> <p>Future schemes such as the A27 upgrade may offer opportunities for infrastructure development such as a tidal barrage however this is considered to be ambitious and hard to achieve within acceptable time frames.</p>
	<b>Wider scale implications</b>		
	<p>Future agricultural policy will focus on natural capital outcomes. A hold the line approach may therefore take away opportunities for local farmers and land managers to take advantage of new schemes.</p> <p>Missed opportunity to negotiate on wider scale business and development opportunities.</p>	<p>Adaptation to climate change constrained, impacting resilience of landscape, habitats &amp; species.</p> <p>Hold the line does not mitigate the risks of habitat and species deterioration due to climate change and so may lead to wider scale, longer term impacts.</p> <p>Proving otherwise will require assessment and modelling however funding is not available for this purpose.</p>	<p>If public funding is made available this would involve reduced spending and services elsewhere, which would not be advantageous to the wider community.</p> <p>Wider scale socio-economic impacts not fully understood – no clear sense of how this option will deliver benefits to wider society.</p> <p>Higher defences could result in a greater risk of catastrophic flooding if defences are breached, so risk of ongoing maintenance liability is also much greater?</p>

	Natural Environment	Farmers and Farmland	Wider Community
<b>Option 3: Managed Re-naturalisation</b>			
Active decision to no longer maintain existing flood defences in parts of the lower Arun Valley allowing the river and floodplain to function naturally.	<b>Short term implications</b>  Land potentially at risk of acquisition by third parties.  Some landowners potentially subject to upfront costs in professional fees for dispute resolution.  Mental health and welfare implications for affected farmers and families.	Significant opportunity for biodiversity enhancement (provided other impacts are addressed as well), long term climate resilience and sustainability.	Unknown outcome for initial community engagement.
Targeted removal of existing embankments to create additional floodplain wetland habitats.		Significant upfront costs for modelling, design, consultation, dispute resolution and construction – not fully covered by SU3 investigation?	Proposal is highly likely to be contentious for communities directly affected.
Fully planned and costed approach to delivering extensive landscape scale habitat creation, which creates "room for the river" in line with the making space for water approach.		Funding previously available through European Union Natura 2000 however this may no longer be available post Brexit.	Welfare concerns for elderly and vulnerable individuals – risk of widespread furore if communications are handled badly.
Targeted mitigation and compensation for loss of land and property.		Likely support from Environment Agency, Natural England and others as proposal fits with statutory objectives and is likely to be partially funded via OM4/ Flood Defence Grant in Aid.	National press interest.
Unknown socio-economic outcomes for agriculture and local communities (worst case scenario considered in this table).			Political football as issue will span general elections.
			As with Option 1, lack of a coordinated approach could still lead to deterioration in community engagement meaning that their wider priorities are not taken into account.

Natural Environment	Farmers and Farmland	Wider Community
<b>Medium to long term implications</b>		
Major land use change associated with re-wilding the valley.	Potential to provide significant landscape scale opportunity however:	Risk of flooding to property and land potentially impacting livelihoods and businesses.
Potential compensation for land compulsorily acquired.	Risk lack of coordination, potential for isolation/fragmented approach.	Unknown impact on water quality (sediment/salinity).
Business change opportunities potentially negotiable on a case by case basis relating to impacts of change.	Process of naturalisation may still be unpredictable and hard to define in sufficient detail for public scrutiny.	As with Option 1, potentially unmanaged impacts on road, rail, water and sewerage infrastructure could still lead to future risk of catastrophic failure.
Loss of farming jobs from valley – fewer partners available in the local area, lack of local observations, more expensive local management costs, fewer animals available for grazing.	Potential impact on designated sites – complex legislative background may constrain options in SU3 – current legislation may not allow this option unless significant further work has been undertaken to reduce other anthropogenic impacts.	Possible enhanced opportunities for recreation and public access.
Few if any long term maintenance costs.		Possible job creation in tourism and land management.
		Possible to align large scale housing delivery targets and business improvement district and other investment in the valley e.g. From infrastructure providers such as Southern Water with substantial flood and habitat mitigation (creating winners and losers).
<b>Wider scale implications</b>		
Farming representative organisations likely to object to proposal.	Scheme may require very high level political support alongside statutory provision, which may constrain deliverability.	Risk of a legacy of negative opinion if poorly handled and insufficiently funded.
Transition costs due to disputes likely to impact on deliverability.		

	Natural Environment	Farmers and Farmland	Wider Community
<b>Option 4: Adaptive Management</b>			
<p>A planned approach which uses a combination of management techniques.</p> <p>This approach seeks to protect key areas of importance by upgrading local flood defence structures, but will also seek to create wetland habitats for flood storage for long term flood resilience.</p> <p>Gradual, targeted and managed interventions to increased flood resilience and facilitation of adaptation to climate change.</p> <p>A recognised and sustainably funded "Management Body or Partnership" in place to manage, lead and monitor the interests of all stakeholders.</p> <p>Over time options will be to reconnect floodplains allowing for more natural flood management and SuDs alongside traditional management.</p> <p>Socio – economic impact and natural capital assessment of this approach for the Arun Valley needs to be fully understood. (e.g. agriculture, local communities).</p>	<b>Short term implications</b>		
	Defra proposed system of Environmental Land Management (ELM) will encourage farmers to prepare Whole Farm Plans to support sustainable farming outcomes.	Feasibility assessment needed to identify potential options for natural flood management and reconnection of the floodplain.	Costed maintenance programme to be developed for critical existing flood defence structures (such as but not limited to Arundel Town and railway).
	The Adaptive Management approach will be consistent with ELM and will assist farmers in attracting public goods and services payments.	Natural capital benefits of Lower Arun formally defined and provided with targeted outcomes, linking with wider priorities of AVVG steering group members.	Funding shortfalls to be identified as part of this process.
	Through specifying targeted and coordinated actions designed to reduce flooding across the valley farmers will be assisted in developing tailor made solutions to reduce local flood issues.	Local measures designed in consultation with stakeholders would seek to improve resilience of Natura 2000 network and other natural capital assets.	Where public funding is unavailable alternative funding opportunities will be investigated and promoted. This may include a review of sustainable development opportunities within and surrounding the Valley to achieve community priorities.
	ELM buys time to identify longer term solutions and should provide tangible opportunities in the next few years.	Opportunity to use Arun Valley within Defra "Trials and Testing" developing new ways of working.	Public education, training and rehabilitation to be considered as options for management delivery.
		Fully identifies other anthropogenic impacts and solutions to them.	Approach will be fully consulted with local communities – ambition remains to achieve full parish council and local council representation.



Natural Environment	Farmers and Farmland	Wider Community
<b>Medium to long term implications</b>		
<p>Farming systems retained with Adaptive Management measures to provide improved on farm and off farm resilience (attracting public goods payments).</p> <p>Localised farming areas may no longer support agriculture but aim is to offset with wider opportunities and retain as many viable farming units as possible.</p> <p>Some farming areas defended through embankment restoration etc. with funding agreed on a case by case basis through ongoing work of the Management Partnership.</p> <p>Local business development opportunities from tourism, education, sport and rehabilitation available to estates and farmers in the Valley.</p>	<p>Facilitates adaptation to climate change in line with national policy.</p> <p>Allows time to implement solution to other compounding anthropogenic influences and fully mitigate impact on designated sites.</p> <p>Improved understanding of timescale and spatial mapping of a managed adaptation approach required through support from EA and other public authorities.</p> <p>Financial support needed for NFM plus maintenance of existing flood defence.</p>	<p>Supported by a holistic vision and strategy endorsed by all partners (via CMP or legacy mechanism)?</p> <p>Recognised Management Partnership in place to manage, lead and monitor the interests of all stakeholders.</p> <p>Partnership able to explore funding for programme of management and projects.</p> <p>Partnership to explore "value engineering" options to align with local authority priorities.</p> <p>Active engagement will all partners and landowners.</p> <p>Reconnect communities with river. Develop a "sense of place".</p> <p>Adaptive management approach would enable local communities to influence and inform management.</p>
<b>Wider scale implications</b>		
<p>Challenge to manage all expectations of so many potential partnersstakeholders? A new authority/organisation is likely to be complex. Potential for new disputes between landowners and new authority?</p>	<p>Fully conversant and compliant with legislation and regulation.</p> <p>Designed to produce a net gain in natural capital.</p>	<p>Other infrastructure – plans of other organisations such as SWS would need to take account of future plans &amp; secure funding to adapt.</p>

## **A VISION FOR THE ARUN VALLEY**

REPORT OF THE ARUN  
VALLEY VISION GROUP

JANUARY 2019

© 2019, Arun Valley Vision Group

Cover artwork: [rachelhudsonillustration.com](http://rachelhudsonillustration.com)

Photos: John Dominick

Designed and typeset by:



MINISTRY OF DESIGN

## SOUTHERN REGIONAL FLOOD AND COASTAL COMMITTEE

**Item no.** 16

**Date:** 15 July 2019

**Paper by:** Bryan Curtis, South East Coastal Group & Lyall Cairns, Southern Coastal Group

**Subject:** Coastal Group Update

### Recommendation

RFCC members are asked to note/discuss/endorse/provide steer on the following:

This summary provides an update on key developments in coastal work relating to the Standing Conference on Problems Associated with the Coast (SCOPAC), the South East Coastal Group (SECG) and Southern Coastal Groups (SCG).

**Introduction** – The Chairmen of the South East and Southern Coastal Groups are very pleased to be back and able to provide these updates. Since early last year, due to a change in national funding arrangements, the Coastal Group Chairmen's funding for the strategic links with the RFCCs was withdrawn. Since that time we have been busy trying to get it reinstated and finally we have been successful. Whilst details of this have yet to be confirmed, we have been advised that the funding stream has now been reinstated and the Chairmen of the Southern and South East Coastal Groups are pleased to be back providing the strategic link with the SRFCC.

The aim of this update is to provide a quick snapshot of what the coastal groups are currently dealing with and what are the hot topics at the moment. We must stress that this is not a substitute for the agenda, minutes and associated papers which are contained on our websites.

**Snapshot summary of the Coastal Groups activities for the last quarter (March to June)** – Priority for the individual coastal groups has been:

- Starting the Shoreline Management Plans Refresh with the first Technical Advisory Group and establishing first point contacts for each SMP together with future members of the Specialist Advisory Groups (AI complete);
- Representative attendance at appropriate Workshops, Forums, Steering Groups and Project Boards (Routine and listed below);
- Input into the Coastal Practitioners Workshop, May 2019 and Floods and Coast Conference 2019 June 2019 (Routine annual event);
- Group Business Planning;
- Assistance and development of the bid for collecting all flood and Coastal erosion risk asset data (High level strategic issue).
- Continued guidance into research projects (Routine many included in the list below);

- Consultation and Select Committee Inquiry responses detailed below (See list below);
- Understanding the skills and capacity situation in the SE of England(SCG);
- Beach access and beach safety (SECG);
- Emergency Marine Pollution readiness (SECG);
- Collecting feedback for the next bid of the National Network of Regional Coastal Monitoring Programmes (Complete but query whether the SRFCC would like to make a contribution of support to this?) and
- On going awareness raising and guidance for future adaptation policy and direction (Strategic issue).

#### **Recent Consultation and Select Committee Inputs:**

- Defra - Improving our management of the water in the environment Consultation Jan 2019 to Mar 2019. Collective Coastal Group Network (CGN) response sent.
- MHCLG - A Review of Local Authorities' Relative Needs - Consultation 2019 Collective CGN response sent.
- Environment, Food and Rural Affairs Committee (EFRA) inquiry into coastal flooding and adaptation to climate change (May 2019). CGN response sent. Further requests for specialist Officers requested but regrettably not from this region and
- EA Draft National Flood and Coastal Erosion Risk Management Strategy for England May/July 2019. CGN response sent.

**Dates of last meetings** – SECG 7<sup>th</sup> 11<sup>th</sup> July 2019 Canterbury and SCG 20<sup>th</sup> May 2019 Havant and SCOPAC Field Visit 21<sup>st</sup> June 2019.

**Future meeting dates:** - SECG 5<sup>th</sup> September 2019 TBC and 5<sup>th</sup> December 2019 TBC - SCG – 20<sup>th</sup> September 2019, 6<sup>th</sup> December 2019, and 20<sup>th</sup> March 2020 – Havant. All meetings, where possible, are arranged to be before RFCC meetings in a bid to advise of current issues.

#### **Recent National Links of Interest including consultations not included above:**

- Partnership Funding Review  
<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=19878&FromSearch=Y&Publisher=1&SearchText=fd2702&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>
- Thames estuary Partnership Estuary Edges Document  
<https://thamesestuarypartnership.org/our-projects/estuary-edges/>
- Planning for Coastal Change – Cornwall Council's position regarding proposals close to the shoreline [www.cornwall.gov.uk/coastalchange](http://www.cornwall.gov.uk/coastalchange) Consultation.

**Events:** Recent and upcoming Coastal workshops, meetings and events which coastal practitioners may be interested in (NB this is not a definitive list):

#### **Recent (March 2019 to June 2019)**

- CGN Chairs Telcon catch up 11<sup>th</sup> March 2019
- National NCPMS Appraiser Technical Group, TBC 12<sup>th</sup> March 2019 (cancelled)

- Coastal Assets Telcon 25<sup>th</sup> March 2019
- NCMP Strategic Board and coordination Group Workshop, Southampton 26<sup>th</sup> March 2019
- CIRIA Groyne Manual, Wallingford 28<sup>th</sup> March 2019
- ICE CM 2019 Organising Committee, Telcon 1<sup>st</sup> April 2019
- ICE CM 2019 Organising Committee London 10<sup>th</sup> April 2019
- SMP R TAG Webex 30<sup>th</sup> April 2019
- Coastal Practitioners Workshop 2019, Skegness TBC but current dates are 8<sup>th</sup> to 10<sup>th</sup> May 2019
- National NCPMS Appraiser Technical Group, TBC 14<sup>th</sup> May 2019
- LGA SIG SOG 24<sup>th</sup> May 2019
- FCERM Strategy Consultation Workshop, London 3<sup>rd</sup> June 2019
- CIRIA Water Panel, London 4<sup>th</sup> June 2019
- CIWEM RCG, Birmingham 5<sup>th</sup> June 2019
- Flood and Coast Conference 2019, Telford 18<sup>th</sup> to 20<sup>th</sup> June 2019
- LGA SIG during Flood and Coast Conference 19<sup>th</sup> June 2019

#### **Forward look (July 2019 to September 2019)**

- NCMP Strategic Board Teleconference 2<sup>nd</sup> July 2019
- SMP R TAG Meetings July and October
- SMP Review meeting for all the SMPs dates TBC
- ICE Coastal Management 2019 - 24<sup>th</sup> to 26<sup>th</sup> September 2019
- National NCPMS Appraiser Technical Group, TBC 10<sup>th</sup> September 2019
- ICE Coastal Management Conference, LA Rochelle 24<sup>th</sup> to 26<sup>th</sup> September 2019

**B Curtis, Chairman South East Coastal Group [www.se-coastalgroup.org.uk](http://www.se-coastalgroup.org.uk)**

**Lyall Cairns, Chairman Southern Coastal group**

**[www.southerncoastalgroup.org.uk](http://www.southerncoastalgroup.org.uk)**

**Cllr Mrs Mary Penfold MBE, West Dorset District Council, Chairperson SCOPAC**

**[www.scopac.org.uk](http://www.scopac.org.uk)**

June 2019

**Intentionally left blank**

## FCERM update paper

June 2019

### Planning for the future

#### Wainfleet flooding

Our teams have been working around the clock to respond to major flooding in Lincolnshire. Around 130mm of rain fell in two days – more than twice the monthly average for the area. 188 properties flooded across Lincolnshire, 54 from rivers and 133 from other sources. The rainfall caused a breach in the bank of the relief channel north of Wainfleet due to pressure from the water.

A multi-agency response saw an RAF Chinook helicopter brought in to reinforce the bank with more than 340 tonnes of bagged sand after residents in the village of Wainfleet were evacuated from their homes. We brought in ultra-high volume pumps to help the flood water drain away.

In her opening remarks for this week's Prime Minister's Questions, Theresa May praised the work of the Environment Agency in dealing with the flooding. She said: "In recent days and weeks we have seen flooding across the country. This has been particularly severe in Lincolnshire. I pay tribute to the work of the emergency services, our military, the Environment Agency and all those working on the ground to help those affected."

#### Flood and Coast 2019

The Environment Agency convened the fourth Flood and Coast Conference from 18 – 20 June 2019 in collaboration with conference organisers Trio. The Advisory Committee have done an excellent job inviting presentations and papers which have shaped the conference programme.

This year's event supported the development and implementation of the new National FCERM Strategy and build on renewed energy in the public debate around climate change. Each day was focused on one of the themes from the strategy.

Day 1: A climate resilient nation: a shared vision to 2100

Day 2: Today's infrastructure resilient in tomorrow's climate

Day 3: Digital, skills and the work we need to do together to build a nation of climate champions

There were many great presentations, discussions and debates over the 3 days of the conference. Emma Greenwood, Youth MP for Bury, brilliantly illustrated what we need from a nation of climate champions. Emma challenged us all to talk about the decisions and actions we must take, make them real, show that everyone can make a difference and make it now. Her challenge to us to act on behalf of young people was inspirational.



## Draft FCERM Strategy 2100 consultation now live – have your say!

On 9 May we launched the start of our consultation on the draft national flood and coastal erosion risk (FCERM) management strategy for England. The draft strategy marks the culmination of engagement with over 90 organisations. In his climate change speech last year, the Secretary of State, Michael Gove, recognised that we need to “explore new philosophies around flood and coast management”. We are calling on people, businesses and partners to play their part by letting us have their views.

The draft strategy sets out a national ambition for England. Every place is different and there is no one size fits all solution to flood and coastal resilience. We need to put people and local communities at the heart of decision making. The strategy is a key commitment in the government's [25 Year Environment Plan](https://www.gov.uk/government/publications/25-year-environment-plan) (<https://www.gov.uk/government/publications/25-year-environment-plan>) and sets out how together we can reduce the risk of harm to people, the environment, and the economy from flooding and coastal change.

The draft strategy sets out a vision for “a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100”. It has three ambitions:

- Climate resilient places
- Today's growth and infrastructure to be resilient in tomorrow's climate
- A nation of climate champions, able to adapt to flooding and coastal change through innovation.

Make sure your views are heard by responding to our [public consultation](https://consult.environment-agency.gov.uk/fcrm/national-strategy-public) that closes on the 4 July.

<https://consult.environment-agency.gov.uk/fcrm/national-strategy-public>



**Flood and coastal change** affects us all.  
Have your say.

#FCRMStrategy2100

## Long Term Investment Scenarios (LTIS) 2019

LTIS brings together our understanding of long-term investment scenarios for flood and coastal erosion risk management (FCERM). It uses new climate change, population and mapping data to set out potential future scenarios, assessing the costs and benefits of long-term investment to meet these challenges.

LTIS is evidence which government and others will use to consider future policy and investment choices. LTIS 2019 has already been used as part of the evidence base for the FCERM 2100 Strategy.

We have published the LTIS 2019 key findings on gov.uk (<https://www.gov.uk/government/publications/flood-and-coastal-risk-management-in-england-long-term-investment/long-term-investment-scenarios-ltis-2019>) . We have also developed an interactive web-based visualization tool (<http://ltis.jacobsccloud.com/>) that draws on the 8,000 scenario outputs from some of the national LTIS outputs. The LTIS Visualizer will allows users to see the effects of national investment choices for different FCERM options, and find the mix of national investments that gives the best value for money.



**Contact:** Mike Steel - [mike.steel@environment-agency.gov.uk](mailto:mike.steel@environment-agency.gov.uk)

## Spending Review 2019

We are working with all departments across the Environment Agency and the Regional Flood and Coastal Committees (RFCCs) to develop a range of funding scenarios for consideration in Spending Review 2019 (SR19). We are listening to feedback and seeking to make changes to the partnership funding rules and key outcomes of the future investment programme. We are putting more emphasis on the wider benefits that flood and coastal erosion schemes achieve for people, the environment, local economy and other infrastructure such as schools, hospitals, road and rail. We are expecting the settlement to be announced in the Autumn Budget 2019.

**Contact:** Thomasin Meadley - [thomasin.meadley@environment-agency.gov.uk](mailto:thomasin.meadley@environment-agency.gov.uk)

## Apprenticeships

We have recently led the development of a new Level 3 Water Environment Worker Apprenticeship Standard. We are also in the process of confirming national training provision and plan to start enrolling apprentices in September 2019.

The Level 3 Water Environment Worker Apprenticeship Standard was created with partners from across the sector. We should see a range of public and private sector employers start to enrol their own apprentices onto this Standard later in the year. The Standard is designed to support the training and development needs of a range of occupations involved in the management of the water environment. The apprentices will focus on creating a safe environment where people can enjoy our water environments and the surrounding land and buildings, whilst protecting the environment, and creating habitats for species to thrive.

In 2020, government are introducing T Levels, which are two-year programmes equivalent to A Levels and to Level 3 Apprenticeships. We are looking at what role we could play in supporting T Levels and how they could attract and develop the next generation of climate change champions.

**Contact:** Paul Cross - [paul.cross@environment-agency.gov.uk](mailto:paul.cross@environment-agency.gov.uk)

## Working with others

### The 6 year Capital Investment Programme

We are in to the final 2 years of our 6 year capital investment programme and we remain on track to deliver our target of 300,000 homes better protected from flooding and coastal erosion by March 2021. Over the first 4 years of the programme, the Environment Agency and other Risk Management Authorities have better protected over 193,000 homes, against a target of 185,000 at this point in the programme. This is a significant achievement by all those involved.

We have also secured a total of £486m partnership funding contributions to date within the current 6 year programme. We are confident we will secure the remaining partnership funding contributions required, and meet our settlement condition of 10% capital efficiencies over the life of the programme. We remain confident we will reach our target of better protecting 300,000 homes by 2021. However, we will continue to work together with our partners across the country to manage capital programme delivery and put in place interventions to ensure a successful outcome.

Earlier this year, we published our updated capital investment programme on [gov.uk](https://www.gov.uk/government/publications/programme-of-flood-and-coastal-erosion-risk-management-schemes) (<https://www.gov.uk/government/publications/programme-of-flood-and-coastal-erosion-risk-management-schemes>) setting out the planned programme of works for the final 2 years. This is a live programme and is updated each year. We are about to commence our final refresh of this current 6 year programme.

**Contact:** Andrew Oram - [andrew.oram@environment-agency.gov.uk](mailto:andrew.oram@environment-agency.gov.uk)

### Natural Flood Management update

Natural Flood Management (NFM) provides the opportunity to manage flood and coastal erosion risk by protecting, restoring and emulating the natural processes of catchments, rivers, floodplains and coasts. In the 2016 Autumn Statement the government allocated £15m to 60 projects across England, creating the NFM programme, in order to learn more about these interventions.

As of May 2019, 50 projects have started work on the ground: 22 Catchment Projects and 28 Community Projects. Three of these have completed their works and are in their monitoring phase.

The photos below are of the “Upper Dane Slow the Flow Project”, a Community Project led by Cheshire Wildlife Trust. They show the site before and after the installation of the leaky structures. The measures have already been put to the test following heavy rain in Oakenclough, where they slowed water flow and the scrape filled up.



We recently published the monitoring guide summary. This will support project teams to select the appropriate monitoring to be able to evaluate the effectiveness of the NFM measures. The guide will be supplemented with a series of workshops around the country and a webinar to help project teams get the best from it.

**Contact:** Margarita Papadopoulou - [margarita.papadopoulou@environment-agency.gov.uk](mailto:margarita.papadopoulou@environment-agency.gov.uk)

## **Asset Management Open Data**

Asset Management is now sharing its inventory, capital and maintenance programmes as open Linked Data via [data.gov](https://environment.data.gov.uk/asset-management/index.html) (<https://environment.data.gov.uk/asset-management/index.html>). This service allows members of the public to view the work we do in an open and transparent way and check what we are doing in their local area. Customers can also access the data in the correct format to integrate the data seamlessly into their data services. The site has been popular, with over 41,000 data requests in a single week. This has reduced the requirement for our staff to supply the data manually, and making us a more digitally-enabled organisation.

**Contact:** Dave Hornby - [david.hornby@environment-agency.gov.uk](mailto:david.hornby@environment-agency.gov.uk)

## **HS2 update**

We are supporting Lead Local Flood Authorities with their regulatory function with work relating to High Speed Rail. This stems from Schedule 33 of the High Speed Rail (London to West Midlands) Act 2017 where we have inherited an enhanced strategic overview role.

Schedule 33, Part 5 sets out that the Local Drainage Authority must have regard to conditions issued by the Environment Agency or must consult the Environment Agency in respect of their own conditions. Full wording can be found [here](https://www.legislation.gov.uk/ukpga/2017/7/schedule/33/enacted) (<https://www.legislation.gov.uk/ukpga/2017/7/schedule/33/enacted>).

The practicalities of how we work are still being established, but we are planning workshops with a selection of Lead Local Flood Authorities to agree standards to which HS2 Contractors will adhere. This will cover their role in respect of ordinary watercourse consenting but also surface water drainage.

**Contact:** Johnathan Austin - [Johnathan.austin@environment-agency.gov.uk](mailto:Johnathan.austin@environment-agency.gov.uk)

## **Property Flood Resilience (PFR) Pathfinder - Boosting action to make homes and buildings more resilient to floods**

We are encouraging collaborative working with Lead Local Flood Authorities (LLFAs) on PFR through the Invitation for the Expression of Interest to secure funding.

Grant funding of up to £700,000 will be available to each of the three PFR Pathfinder projects nationally, starting this year and running to April 2021. The LLFAs will be required to establish a self-financing professional Hub for the longer-term which will lead on local innovation to help enhance the future take-up of flood resilience techniques in properties. The funding will be provided to LLFAs in three selected locations to support the creation of the Hubs and the delivery of measurable behaviour change, demonstrator property, and enduring technical and professional resources.



The Invitation for the Expression of Interest is live from 20 May - 28 June for LLFAs to bid for. The project will fund three individual Pathfinder Projects, which must be led by LLFAs. We are encouraging bids from a consortia of LLFAs located within the same Regional Flood and Coastal Committee (RFCC) area. Ideally the services the Hubs provide should cover the entire geographical RFCC area in which they are located or a clearly identified sub-region of that RFCC area.

Assessments will be made nationally and the three successful project locations will be announced by Therese Coffey MP in July 2019. It is expected that work will begin immediately following this announcement.

**Contact:** Rob Alexander - [robert.alexander@environment-agency.gov.uk](mailto:robert.alexander@environment-agency.gov.uk) or Josie Bateman - [josie.bateman@environment-agency.gov.uk](mailto:josie.bateman@environment-agency.gov.uk)



## Coastal Practitioners Conference 2019

This year, Lincolnshire and Northamptonshire Area hosted the 2019 coastal practitioners' conference. Coastal group Chairs and coastal experts from the Environment Agency met in Skegness to hear from partners about flood risk and coastal change, emergency planning and beach management along the Lincolnshire coast, enabling growth in seaside towns and work on the Wrangle Wash Banks. We also launched the new FCERM strategy with a video message from Emma Howard Boyd. The programme included visits to Gibraltar Point Nature Reserve, sea defences at Ingoldmells and the Boston Barrier. This annual event is a great opportunity to share knowledge and good practice and celebrate the work we do together for communities in iconic coastal locations.

**Contact:** Rachel Hill - [rachael.hill@environment-agency.gov.uk](mailto:rachael.hill@environment-agency.gov.uk) and Mark Adams – [mark.adams@environment-agency.gov.uk](mailto:mark.adams@environment-agency.gov.uk)

## Next Generation Supplier Arrangements

Our new Collaborative Delivery Framework, and specialist Marine and Coastal and Modelling and Forecasting frameworks, have now been awarded and are available for use by Risk Management Authorities. An online workshop session has also been scheduled for Wednesday 3 July where you can learn more about these frameworks. If you have not already received the briefing, or would like to join the session, please contact your local Environment Agency Area team, or send an email to the NGSA email address.

**Contact:** [NGSA2019@environment-agency.gov.uk](mailto:NGSA2019@environment-agency.gov.uk)

## De-maining update

The Environment Agency wants to strengthen local decision making around flood risk management by ensuring the right bodies are managing the right watercourses. We have been working with internal drainage boards (IDBs) and lead local flood authorities (LLFAs)/district councils to pilot re-designating sections of watercourse in a number of locations across England, from main river to ordinary watercourse – known as de-maining.

The South Forty Foot Catchment pilot in South Lincolnshire is now complete and the watercourses and assets have been successfully transferred to the Black Sluice IDB. This was the first pilot to complete the main river variation process.

We have decided to de-main the watercourses in Stour Marshes, Kent and the Isle of Axholme, North Lincolnshire. Assuming we don't receive any appeals in the next few weeks, we hope to have transferred the watercourses and associated assets to the relevant IDBs by the end of July.

As de-maining represents a change in who does what, it is important we work with local partners to ensure that the right arrangements are in place to manage watercourses in the right way. We have agreed with local partners to pause de-maining in Norfolk and Suffolk so that more time can be spent reviewing these arrangements. We will revisit this decision later in the year.

We have undertaken lessons learned workshops and writing a report evaluating the pilots. We aim to report to the evaluation of the pilots to the Minister by the end of June 2019. As de-maining is only part of an overall landscape of options for management of low risk watercourses including decommissioning, PSCAs and withdrawing from maintenance, we will now review the role of de-maining in the context of our overall Flood and Coastal Risk Management Strategy.

**Contact:** Lucy Roberts - [lucy.roberts@environment-agency.gov.uk](mailto:lucy.roberts@environment-agency.gov.uk) or Rachael Hill [rachael.hill@environment-agency.gov.uk](mailto:rachael.hill@environment-agency.gov.uk)

## Research and publications

### Reservoir Safety

We recently published our Biennial Report on Reservoir Safety 2017-18, which can be found here: <https://www.gov.uk/government/publications/reservoir-safety-biennial-report>

In summary:

- The Reservoirs Act 1975 is used to minimise the risk of uncontrolled releases of water that could result in loss of life.
- The Environment Agency is the Enforcement Authority in England.
- Over the last two years we have seen improvements in the level of compliance with the Reservoirs Act 1975.
- Non-compliance in 2017 and 2018 has been maintained at its lowest ever recorded levels across England due to a mixture of advisory and regulatory action taken by the Environment Agency.
- All Environment Agency reservoirs were compliant during 2017 and 2018.
- Our regulatory effort continues to be focused on those sites posing the highest risk to life.
- We have issued more formal notices when compared to the last biennial report.
- In two non-compliant cases we used our emergency powers to make those reservoirs safe.
- There were 23 reported incidents during 2017 and 2018. It was one of these incidents that required us to intervene to empty the reservoir. However, most incidents are limited in scale, are well managed by the reservoir owners and do not result in a complete failure of the dam or reservoir.

**Contact:** Tony Deakin - [tony.deakin@environment-agency.gov.uk](mailto:tony.deakin@environment-agency.gov.uk)

### Research News - Latest edition published

Issue 30 of Research News – the annual newsletter publication from the Joint Research and Development Programme - has recently been published. The newsletter highlights some of our completed and ongoing research projects – as well as guest articles from some of our partners. This issue includes articles on the future of flood hydrology, implications of climate change, defence failures around transitions, coastal squeeze and compensatory habitat and the mental health consequences of flooding. Hardcopies of the newsletter will be available at the Flood and Coast 2019 conference and you can sign up to receive future editions (as well as our research outputs) via our website (<http://evidence.environment-agency.gov.uk/FCERM/en/Default/FCRM.aspx>).



## **Social inequalities for flooding still exist but progress has been made**

We have recently re-examined the social distribution of the likelihood of flooding. The analysis examines if flood risk exposure is concentrated among more socially deprived communities.

Statistical analysis was used to update a study published by the Environment Agency in 2006 which found evidence in support of the presence of flood risk inequalities in England. We will use the findings to update the evidence base on the social distribution of flood risk and the associated decision-making rules for investment.

In summary:

- There is an inequality in terms of social deprivation and flood risk exposure from all sources of flooding. This means that people from areas that are classed as more deprived disproportionately face more flood risk than those in less deprived areas. This is the case when taking into account nearby flood defences.
- Deprived coastal communities still experience significant inequalities for high and medium likelihood of flooding. These inequalities within coastal communities are more pronounced than those in inland ones.
- The inequalities found within rural areas are greater than those in urban areas.
- The size of the inequality is smaller than the 2006 study. This is primarily because the National Flood Risk Assessment now takes into account the risk reducing capability of nearby flood defences and thousands of schemes have been put in place over the past decade.

The findings from this analysis suggest that recent investment has been relatively successful in addressing social deprivation and flood risk exposure inequality for the 20% most deprived areas in England. There are, however, still significant inequalities in rural and coastal areas in England.

**Contact:** Michael Hall - [Michael.Hall2@environment-agency.gov.uk](mailto:Michael.Hall2@environment-agency.gov.uk) or Peter Bailey - [peter.bailey@environment-agency.gov.uk](mailto:peter.bailey@environment-agency.gov.uk)

# Programme Glossary

## RFCC Reference Paper

### EA South East Areas

**KSL** – Kent South London and East Sussex

**HNL** – Hertfordshire and North London

**SSD** - Solent and South Downs

**T** - Thames

## Principles

### National Refresh

- Deliver the consented programme as previously agreed
- Accelerate schemes from the consented programme within the RFCC boundary to meet RFCC GiA bottom line
- Re-allocate potential under spend to other Areas to deliver the consented programme within the RFCC boundary
- Accept new projects into the consented programme
- RFCC Local Choices will be applied once National prioritisation has been finalised

### Programme updates

- Acceleration or deceleration of schemes to take advantage of contributions or efficiency opportunities, including packaging.
- Re-profiling of schemes to allow continuity of delivery, smoothing out resource requirements.
- Strengthening opportunities to mitigate risk in the form of spend and outcomes.
- Long term planning and approaches to develop the future pipeline of schemes.
- Enable both steady investment in small and medium projects and progress on larger schemes,
- Balancing FCERM Grant in Aid (GiA) and contributions across the six year programme budget to enable delivery

## Local Levy

Levy should be used to deliver the greatest benefit through the programme and would look to support the following types of project:

- Small schemes with balanced geographic spread.
- Pipeline and project development work (irrespective of RMA) of single and packaged works.
- Detailed design to get projects spade ready.
- Projects that lead directly to risk reduction.
- Ensure that levy is not over committed into the future.
- Ensure a mix of schemes on the programme that deliver both high outcomes and address lower scoring Risk Management Authority local priorities that would otherwise remain unfunded without significant contributions.
- Not be allocated to Capital Maintenance of existing assets.
- Prioritise schemes with previous spend so as not to waste previous levy investment.
- Plan for a six year programme of levy investment assuming the maximum available levy income option for the six year planning period.

The proposed Local Levy bidding timetable would be twice annually in April and October to allow bi-annual refreshes of the levy programme. This would keep the programme up to date and allow flexibility of funding to meet emerging risks. The committee also agreed to a revised procedure for bidding for local levy, as follows:-

- All RMA's complete a Project Mandate & Partnership Funding calculator for all levy bids and think about project outcomes/benefits.
- Projects are Peer reviewed at Officers Working Group before being put forward to RFCC Sub Committee for Review and Full Committee for funding approval.
- Should there be insufficient funding available to fund all new projects in a year then prioritisation would be through PF score or moderation evidence.
- Approved projects are initially placed into year 7 of the SRFCC programme unless emergency works and will be looked to be accelerated forward in the programme as funding permits.
- In Feb/March Officers Working Group will check all projects for deliverability for the coming financial year.
- Projects that haven't spent their allocated levy in the previous financial year will need new approval to spend in the next year rather than being automatically rolled over, starting from 2017.
- There would be development of a reserve list of on the shelf projects developed for each year, to replace those that for whatever reason are unlikely to be delivered as planned. Approval of these projects into the programme would be determined by RFCC subcommittee and full committee approval.
- Emergency levy funding could be allocated at any of the normal committee meetings or by a specially organised virtual meeting should the need arise.
- In year there would be an expectation of each project reporting quarterly to the Officers working group, RFCC sub committees and full committee on; spend, progress and any issues or successes.

## Project Status

This refers to the Gateway that a project has achieved so far. As part of good project management, we identify key milestones within a projects lifecycle and track the progress of each project as they achieve them to ensure that they are progressing as planned. The key milestones or Gateways are:

### **Gateway 0 (GW0)**

Before a project can be put onto the Capital Programme to bid for allocation, it must be approved by the Regional Programme Manager who assesses whether the scheme is a viable project from a very simple form that identifies the need for a scheme to be implemented that would reduce flood or erosion risk in an area.

### **Gateway 1 (GW1) Business Case and Financial Approval**

This is a review point, that after some initial assessment of the scheme and the identification of preferred options, the business case of the scheme is assessed by the Project Review Board (PAB) or the Large Projects Review Board (LPRG). If the business case is approved then the scheme receives approval to spend Flood Defence Grant in Aid (FDGiA). A scheme at this point can then start to spend funds that have been allocated to it.

### **Gateway 2 (GW2) Detailed Design**

When a project has reached this stage then the preferred option for alleviating the flood risk has been thoroughly designed in accordance with the business case. The scheme cannot progress from this stage without the approval of the Senior User who is ultimately accountable for delivery of the scheme.

### **Gateway 3 (GW3) Contract Award**

Before the contract for building or delivery of the scheme can be awarded to the contractor, we ensure that everything is in place so that the Environment Agency will receive value for money. The scheme will not progress unless we can assure this.

### **Gateway 4 (GW4) Readiness for Service**

This is essentially the point at which the construction phase has been complete and at which defences are deemed as "watertight" and fully operational.

### **Gateway 5 (GW5) Contract Complete**

This stage is reached when we are happy with the scheme that has been constructed to the standard set out in the Business Case. Any defects found would have been resolved and we are happy for the contractor to send us the final bill.

### **Gateway 6 (GW6) Project Closure**

This stage is reached when we have finalised all financial and contractual issues. The project can then be formally closed.

## Funding Codes

Funding codes help us to understand the type of works that the project is undertaking.

**BRG** - works to bridges that enable FCRM activities, such as widening to increase flow rates etc.

**CFMP** – Preparation of Catchment Flood Management Plans that are used to support Coastal Flooding and Erosion projects and /or strategies (EA only)

**CM** – Capital Maintenance. These works reinstate the Standard of Service of a Flood Defence asset in full, and preserve its design life. It returns the asset to its original design performance and does not increase or decrease the standard of service of the asset. It includes:

- the refurbishment at the end of the asset's design life
- the complete replacement at the end of the asset's design life or
- where the cost of the work is greater than 20% of the current replacement cost of the asset.

**CR** - Carbon reductions

**DEF** – Works to change (usually improve) the current standard of service/protection of a Flood Defence asset or to create a new Flood Defence asset.

**ENV** – Environmental projects not delivering SSSI remedies or net BAP habitat gain.

**FFIM** – Flood Forecasting and Flood Incident Management projects.

**FISH** – Projects to provide fish or eel passage or screening provision

**GW** – Ground water projects

**HAB** – Habitat Creation

**HT** – Hydrometry and telemetry

**MAP** – These works produce Flood Risk Maps that are used to identify/support other works/strategies. (EA only)

**OR** – Orphan reservoirs

**PLP** – Property level protection

**REC** – Recondition work. These projects maintain the standard of protection of existing assets as CM projects but are only corrective infrequent and one-off activities that restore the Standard of Service of failing Flood Defence assets. It includes:

- infrequent planned and recurring activities identified when the asset was commissioned as being required within its design life and which are undertaken at greater than five-yearly intervals

- activities where the cost of the works is no more than £100k (above this it is CM)
- activities where the cost of the works is no more than 20% of the overall current replacement cost of the asset; (above this it is CM)
- activities where the cumulative estimate of repair costs over a five-year period does not exceed 30% of the current replacement cost of the asset
- where small value assets are part of a large asset group (a major asset), the replacement cost of the asset group is considered against the cost of the individual works.

**SMP** – The production Shoreline Management Plans and Coastal Monitoring Programmes that are used to support Coastal Flooding and Erosion projects and /or strategies.

**SRO** – Surface run-off (surface water flooding) projects

**STR** – Strategies. Strategies are only required for complex flood or coastal erosion risk situations where problems and potential solutions may relate to a series of interconnecting compartments or frontages. They look to the long term in more detail than a CFMP or SMP which may recommend further development of a strategy.

**STU** – Stand alone Studies. Studies are only for essential stand alone work which does not lead to or generate further work or projects.

**THMS** – Capital Costs for Thames Estuary 2100 (TE2100), Thames Gateway, Olympics projects (EA only)

**WFD** – Water framework directive

**WLMP** - Water Level Management Plans

**WR** – FCRM contributions to Water Resources-led projects within the Agency (EA only)



## Outcome Measures

<b>OM1</b>	The ratio of the whole life present value benefits (Pvb) to the whole life present value costs (Pvc) from projects in the FDGiA capital investment programme.
<b>OM2</b>	Number of households moved out of any flood probability category to a lower probability category.
<b>OM2b</b>	The number of households moved from the very significant or significant probability category to the moderate or low probability category.
<b>OM2c</b>	The number of households in the 20% most deprived areas moved out of the significant or very significant probability categories to the moderate or low probability category.
<b>OM3</b>	The number of households with reduced risk of coastal erosion.
<b>OM3b</b>	The number of households protected against loss in 20 yrs from coastal erosion.
<b>OM3c</b>	The number of households in the 20% most deprived areas protected against loss in 20 yrs from coastal erosion.
<b>OM4a</b>	Hectares of water dependent habitat created or improved to help meet the objectives of the Water Framework Directive.
<b>OM4b</b>	Hectares of intertidal habitat created to help meet the objectives of the Water Framework Directive for areas protected under the EU Habitats/Birds Directive.
<b>OM4c</b>	Kilometres of rivers protected under the EU Habitats/Birds Directive improved to help meet the objectives of the Water Framework Directive.
<b>OM5</b>	The proportion of households and businesses in highest risk areas that receive the Floodline Warnings Direct (FWD) service.
<b>OM6</b>	Proportion of residential units within planning decisions where the application has been refused or has been amended in line with Agency advice.

## KPI Measures

Measure Ref	Description
870	We determine land drainage consents and byelaw applications within standard of service (Management Information)
880	We undertake the risk-based programme of visual inspection of flood defence assets
885	We complete our required public safety re-inspections on time
891	NFCDD holds up to date event and modelling data and metadata is recorded
902 (National Ops only)	More properties (homes and businesses) at high risk of flooding (Flood Zone 3) are registered to receive our flood warnings[OM6]
905	The proportion of communities that received an appropriate warning
912	Our flood and coastal risk management programme delivers economic benefit [OM1]
930	More households built or converted before January 2009 will have moved out of any flood probability category to a lower one
931	More households built or converted before January 2009 will have moved from very significant or significant flood probability category to the moderate or low category
932	More deprived households will have moved from very significant or significant flood probability category to the moderate or low category
933	More households built or converted before January 2009 are better protected against coastal erosion
934	More households built or converted before January 2009 at risk of coastal erosion within twenty years are better protected

935	More deprived households built or converted before January 2009 at risk of coastal erosion within twenty years are better protected.
950	BAP Habitats and species that we lead on are recovering or increasing [OM5]
961	More of our 'high consequence' flood risk management systems are at or above the target condition (Business Information)
962	We maintain our flood and coastal risk management assets at the required condition
965	We increase the number of households benefiting from flood risk management assets and channels that are at their required condition.

## Maintenance Terms

### True Commitment

Legislative requirements that could result in a challenge of the Environment Agency which would incur substantial costs if they are not undertaken during the financial year in which the funding is requested.

Contractual obligations, supported by suitable documentation, entered into in good faith by all parties at the behest of the Environment Agency or one of its partners. These may or may not result in significant penalties arising should funding be withdrawn.

### Deliverable Need

The funding needed by the Region to achieve their targets as identified in the Corporate Strategy and the Service Levels, and

The funding required to meet the other demands of the Region (where these exceed the above)

The sum of the above must equate to an amount of work and activity that can be delivered by the Region with the effective and efficient use of their resources (including any temporary manpower) during the financial year in which the funding is requested. The sum must also be aligned to the requirements of the Corporate Strategy and contribute to the reduction or management of flood risk within the Region.

### **Minimum Need**

The lowest unavoidable cost to maintain a system in the short term accepting that the standard of service may decline as a result. This need does not assume step changes in current standards of service arising from the system being abandonment or ceasing operation.

### **Identified Need**

The lowest whole life cost to provide the required Standard of Service. This will reflect:

the best balance of maintenance and replacement over the whole life period  
best practice adopted in compliance with health, safety and environmental (HS&E) requirements

The appearance and operation of the site should reflect best practice for a public organisation and positively contribute to the site's social and recreational impact

### **Frequent Maintenance**

Activities that support the Standard of Service of an asset by reducing the rate of deterioration.

Frequent Maintenance provides for efficient, effective and safe operation in a cost-effective manner. It includes annual and recurring planned activities undertaken every 5 years or less such as:

regular work to sustain the asset's Standard of Service  
annual operation and maintenance of FRM assets  
routine activities to comply with statutory obligations

### **Intermittent Maintenance**

Infrequent and one-off activities and projects that support the standard of service.

This covers:

infrequent planned and recurring activities identified when the asset was commissioned as being within its design life and which are undertaken at greater than five-yearly intervals  
activities where the cost of the works is no more than 20% of the overall current replacement cost of the asset  
activities where the cumulative estimate of repair costs over a five-year period does not exceed 30% of current asset replacement cost of the asset

### **Refurbishment**

Reinstate the Standard of Service of the asset in full and its design life.

Refurbishment returns the asset to its original design performance. It does not increase or decrease the Standard of Service of the asset.

This includes:

refurbishment at the end of the asset's design life  
complete replacement at the end of the asset's design life  
activities where the cost of the works is greater than 20% of the current overall replacement cost of the asset

## Flood Zones

Flood zones are divided areas of the natural floodplain presented in map format. They divide the floodplain into 3 areas / zones that represent different levels of flood risk, not taking into account the presence of flood defences. The zones are shown as shaded areas on a map and are used by the local planning authorities when considering planning applications.

**Zone 1** - is un-shaded and shows areas with the lowest probability of flooding from rivers and the sea, where the chance of flooding in any one year is less than 0.1% (i.e. a 1000 to 1 chance).

**Zone 2** - is shaded light blue and shows the area between zone 1 and zone 3. This represents an area with the chance of flooding in any one year between 0.1% and 1% fluvial or 0.5% tidal (i.e. between a 1000 to 1 and a 100 to 1 fluvial or 200 to 1 tidal chance). The outer edge of this zone is referred to as the 'Extreme Flood Outline' (EFO).

**Zone 3** - is shaded dark blue and shows areas with the highest probability of flooding. The chance of flooding in any one year is greater than or equal to 1% (i.e. a 100 to 1 chance) for river flooding and greater or equal to 0.5% (i.e. a 200 to 1 chance) for coastal and tidal flooding.

## Risk Bandings and NaFRA Data

NaFRA shows the likelihood of flooding across England and Wales and can be combined with property data to determine the economic damages from flooding, therefore giving us a picture of flood risk. It is one of the Environment Agency's key datasets. It works out the probability of flooding from rivers and the sea, considering the location, type and condition of defences and maps these on a 50m x 50m grid in three probability bandings:

Low	0.5% (200 to 1) chance of flooding each year or less.
Moderate	Between 0.5% (200 to 1) and 1.3% (75 to 1) chance of flooding each year.
Significant	1.3% (75 to 1) chance of flooding each year or greater.

Unlike the Flood Map, NaFRA takes into account the presence and condition of flood defences and their effect on flooding.

The Flood Map is an example of deterministic flood mapping: giving a 'yes or no' answer to the question 'Am I at risk of flooding?'. NaFRA is an example of probabilistic flood mapping, describing the overall risk, rather than the risk associated with a specific event or scenario.

## General Glossary

Term	Definition
AMP	Asset Management Plan - water company
AMP5	Asset Management Plan 2010/2015
AStSWF	Areas Susceptible to Surface Water Flooding
ALEHM	Assoc of London Environmental Health Managers
BEE	Best Estimate of Expenditure
CDA	Critical Drainage Area
CFMP	Catchment Flood Management Plan
CIRIA	Construction Industry Research and Information Association
CIL	Community Infrastructure levy
CLG	Government Department for Communities and Local Government
Defra	Department for Environment, Food and Rural Affairs
DCLG	Department for Communities and Local Government
DG5 Register	Register of properties which have experienced sewer flooding or those which are 'at risk' of sewer flooding more frequently than 1:20 yr event
EA	Environment Agency
FBC	Full Business Case
FCERM	Flood and Coastal Erosion Risk Management
FCERM FDGiA	Flood Defence Grant in Aid
Flood Risk Area	An area determined as having a significant risk of flooding in accordance with guidance published by Defra and WAG.
Flood Risk Regulations	Transposition of the EU Floods Directive into UK law. The EU Floods Directive is a piece of European Community (EC) legislation to specifically address flood risk by prescribing a common framework for its measurement and management.
Fluvial Flooding	Flooding resulting from water levels exceeding the bank level of a main river
FMfSW	Flood Map for Surface Water
FRMS	Flood Risk Management Systems
FRR	Flood Risk Regulations
FWMA	Floods and Water Management Act
GLA	Greater London Authority
HWC	Highland Water Contributions
IBA	Indicative Baseline Allocation
IDB	Internal Drainage Board
ITA	Indicative Tailored Allocation



IUA	Indicative Unscheduled Allocation
IUD	Integrated Urban Drainage
LB	London Borough
LDF	Local Development Framework
LFRZ	Local Flood Risk Zone
LFRMS	Local Flood Risk Management Strategy
LFRP's	Local flood risk partnerships
LiDAR	Light Detection and Ranging - Airborne laser scanning of topography
LLFA	Lead Local Flood Authority
LRF	Local Resilience Forum
MLE	Most Likely Expenditure
MTP	Medium Term plan
NaFRA	National Flood Risk Assessment
NFRMS	National Flood Risk Management Strategy
NRD	National Receptor Dataset – a collection of risk receptors produced by the Environment Agency
OBC	Outline Business Case
OWG	Southern RFCC Officer's Working Group
OMs	Outcome Measures
PR14	Price Review 14
PA	Policy Area
PAB	Project Assurance Board
PFRA	Preliminary Flood Risk Assessment
PPS25	Planning and Policy Statement 25: Development and Flood Risk
PLP	Property Level Protection
PR09	Price review 09
PSO	Environment Agency Partnership & Strategic Overview
RHCP	Regional Habitat Creation Programme
RMA	Risk Management Authority
RPIA	Revenue Projects Indicative Allocation
RFCC	Regional Flood & Coastal Committee
SAB	SUDS approval body
SFRA	Strategic Flood Risk Assessment
SOC	Strategic Outline Case
SoP	Standard of Protection (NB water utilities - standard of service)
SuDS	Sustainable Drainage Systems
SW	Southern Water Company
SWMP	Surface Water Management Plan
TfL	Transport for London

TWUL	Thames Water Utilities Ltd
WaSC	Water and Sewerage Company
WFD	Water Framework Directive

## Project management roles

### Project Executive

A Project Executive is accountable for successfully delivering a project. This person usually:

- controls the resources allocated to a project;
- receives progress reports from the Project Manager;
- escalates issues for resolution.

The Project Executive usually chairs the Project Board.

### Project Board

A Project Board is a group of people who collectively monitor and control a project's overall progress.

### Senior supplier

A senior supplier is a member of the Project Board. This person:

- provides knowledge and experience of the main disciplines involved in producing a project's deliverables;
- represents the suppliers' interests within a project;
- provides supplier resources.

### Senior user

A senior user is a member of the Project Board. This person is accountable for:

- ensuring that users' needs are correctly specified;
- the solution meets the users' needs.

### Project Manager

A Project Manager has the authority and responsibility to manage a project day-to-day. This person must deliver the required products, within the constraints agreed with the Project Board.

### Project Office

A Project Office provides central resources for a project and works for the Project Manager. They control the project management process, including:

managing the plans; managing the risks and issues; servicing the Project Board.

### Project team

A Project team is a group of people with appropriate and complementary professional, technical or specialist skills. This team, managed by the Project Manager, is responsible for carrying out the work detailed in the project plan.

The size of a Project team depends on the type of work required for a project.