Anglian (Eastern) Regional Flood & Coastal Committee

Friday 20 July 2018 at 09.30am

Suffolk County Council, Landmark House, Ipswich, Suffolk
We are the Environment Agency. We protect and improve the environment and make it a **better place** for people and wildlife.

We operate at the place where environmental change has its greatest impact on people’s lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

**Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.**

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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**Anglian (Eastern) Regional Flood & Coastal Committee (RFCC)**

**Friday 20 July 2018**

**Venue:** Landmark House Egerton Rd, Ipswich IP1 5PB

**Time:** 09:30 to 13:00 (lunch provided)

### General Business

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### Main Agenda Items

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**Tea and Coffee**

11:25

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**Visit to Ipswich Barrier – Including Update on the project from Andrew Usbourne**

14:00

### Date of Next Meeting

Friday 19 October 2018 – Committee Room 1, County Hall, Market Road, Chelmsford CM1 1QH
Attendees

Members:
- Paul Hayden (PH) Chairman
- Cllr Simon Walsh Essex County Council
- Cllr Mark Platt Essex County Council
- Cllr John Aldridge Essex County Council
- Cllr Mike Steptoe Essex County Council
- Cllr Gerard Rice Thurrock Council
- Cllr John Lamb Southend-on-Sea Borough Council
- Cllr Richard Rout Suffolk County Council
- Cllr Keith Patience Suffolk County Council
- Cllr Mick Castle Norfolk County Council
- Cllr Judy Oliver Norfolk County Council
- Angie Fitch-Tillett Environment Agency Appointee
- Richard Powell Environment Agency Appointee
- Tim Beach (TB) Environment Agency Appointee
- Andy Smith Environment Agency Appointee (coastal)
- Graham Underwood Environment Agency Appointee
- Rob Wise Environment Agency Appointee
- Vacant Environment Agency Appointee (conservation)
- Vacant Environment Agency Appointee

In attendance

Environment Agency:
- Charles Beardall (CB) Area Manager
- Peta Denham (PD) Area Flood Risk Manager
- Mark Johnson (MJ) Area Coastal Manager
- Graham Verrier (GV) Operations Manager (Norfolk & Suffolk)
- Dave Knagg (DK) Operations Manager (Essex)
- Aaron Dixey (AD) Programme Team Leader
- Mareth Bassett (MB) Eastern RFCC Secretariat
- Carol Mayston (CM) Eastern RFCC Engagement Officer
- Nicola China (NC) Levy Funded Officer
- Matt Butcher (MBu) Senior Officer Environment Programming
- Phil Lee (PL) Senior Communications Advisor

LLFAs and Coastal Authorities:
- Jon Wilson Essex County Council
- Matt Hullis (MH) Suffolk County Council
- Mark Ogden Norfolk County Council
- Richard Atkins Southend Borough Council
- Navtej Tung Thurrock Council
- Rob Goodliffe EACG, North Norfolk District Council and CPE.
- Paul Mackie Suffolk Coastal and Waveney District Council

If you are experiencing difficulties in getting to the meeting on the day or have to give last minute apologies, please call 07775 008305 and leave a message which will be passed on to the Chairman.
Anglian (Eastern) Regional Flood & Coastal Committee (RFCC)

Minutes of the Anglian Eastern RFCC Meeting held on Friday 27 April 2018 at Norfolk County Council, Martineau Lane, Norwich, NR1 2DH

Present: Paul Hayden Chairman
Claire Simon Walsh Essex County Council
Claire Mark Platt Essex County Council
Claire John Jowers Essex County Council
Claire Matthew Hicks Suffolk County Council
Claire Keith Patience Suffolk County Council
Claire Judy Oliver Norfolk County Council
Claire Mick Castle Norfolk County Council
Claire Gerard Rice Thurrock Council
Claire John Lamb Southend-on-Sea Borough Council
Graham Underwood Environment Agency Appointee
Sarah Wilson Environment Agency Appointee (conservation)
Tim Beach Environment Agency Appointee
Andy Smith Environment Agency Appointee (coastal)
Richard Powell Environment Agency Appointee
Angie Fitch-Tillet Environment Agency Appointee

In attendance

Environment Agency:
Mark Johnson (MJ) Area Coastal Manager
Peta Denham (PD) Flood Risk Manager (Essex, Norfolk & Suffolk)
Aaron Dixey (AD) Programme Team Leader
Mareth Bassett (MB) Eastern RFCC Secretariat
Carol Mayston (CM) Senior Engagement Advisor, Anglia East RFCC

LLFAs and Coastal Authorities:
Mark Ogden Norfolk County Council
Rob Goodliffe EACG, North Norfolk District Council and CPE.

Observers:
Tina Starling Environment Agency
Emily Clarke Anglian Water
Rob Wise NFU
Lucy Shepherd Essex County Council
Matt Hullis Suffolk County Council
Navtej Tung Thurrock Council
Neil Hoskins Southend Borough Council
1. **Apologies for absence and greetings to visitors**

1.1 The Committee received apologies from Cllr Mike Steptoe, Cllr Matthew Hicks, Dr Charles Beardall and Mr Graham Verrier.

2. **Declarations of Members’ Interests**

2.1 None

3. **Chairman’s announcements**

3.1 The Chairman opened by thanking the members from Norfolk County for providing the venue following the disrupted meetings over the winter. He mentioned that Mr Mark Johnson was on duty and would need to step out of the meeting for a National Duty Telecon, Mr Johnson agreed to update the Committee with the latest information from that telecon later in the meeting.

3.2 The Chairman went on to discuss some major developments in recent months including the 25yr Environment Plan from the Government, the new Flood Warning System and the Flood and Coast conference last month. He stated that there had been some useful sessions at the conference and that there was more information in the national update in the full paper pack. There was also a report from the 23 March planning session later on in the meeting.

3.3 The Committee currently has vacancies for six Environment Agency appointed members. Recruitment is in progress. The Chairman was disappointed that Mrs Wilson had chosen not to re-apply for her position. He thanked her for her hard work over the years and stated that she would be greatly missed.

3.4 The Chairman went on to mention that Mr Graham Verrier and Ms Peta Denham had swapped jobs for one year. So Ms Denham would be looking after Flood Risk Management and Mr Verrier was looking after the Norfolk and Suffolk Operations department.

3.5 Finally the Chairman declared that he was looking forward to the RFCC Annual Review on the 16 May. They had originally hoped to put together three smaller events in each county however they had settled on one larger event this year in Suffolk which he hoped all the Committee members and officers would be able to attend.

4. **Environment Agency announcements**

4.1 Mr Johnson gave an update to the Committee on behalf of Dr Beardall, who was not able to attend this meeting.

4.2 He opened by thanking Cllr Walsh for chairing the workshop to rejuvenate the Southend Strategy, which was now ready for the technical appraisal.

4.3 Mr Johnson mentioned that at the last meeting it had become apparent that some of the land earmarked for the Thurrock Regeneration project in Purfleet was in conflict with the site of the proposed new Thames Barrier. The EA does have an objection to the current planning application and Dr Beardall had been on a visit to the site.

4.4 We had disappointing news regarding the Heybridge Maldon flood storage scheme as the developer has decided not to progress with the wider flood alleviation scheme.
4.5 He went on to mention the strong easterly winds which had affected the east coast in
the previous month and the sad events at Hemsby as a result. Mr Johnson was aware
that some of the chalets had been demolished and stated the Environment Agency is
working with the community to assist them where we can.

4.6 Sir James Bevan had visited North Norfolk District Council to look at the Bacton Project
and saw the coastal erosion challenges that Mundesley is facing.

4.7 Mr Johnson welcomed Mr Robert Goodliffe who had recently taken over from Mr Bill
Parker as the Vice Chairman of the East Anglian Coastal Group and would be
representing the Group at the RFCC meetings.

4.8 He extended a thank you to Sarah Wilson from Dr Beardall for all the work she had
done during her time as a committee member.

4.9 Mr Johnson finished by congratulating the Chairman on behalf of Dr Beardall who had
been honoured with an OBE this year.

4.10 Cllr Lamb asserted that he would be interested to hear about the new flood barrier, he
asked the Environment Agency to make sure that the work taking place can involve the
Association of Inshore Fisheries and Conservation Authorities (IFCA). This is because
the cockle fisheries are already struggling with yield and he was concerned that this
would get worse and we need to ensure that the cockle beds have adequate clean
water while the works are being completed.

4.11 Mr Johnson assured the Committee that with any project the EA carries out, all aspects
of the local environment are considered. However, this is in the early days of planning
at the moment so nothing has been formally decided.

4.12 Cllr Lamb thanked Mr Johnson but affirmed he was just concerned that the fisheries
had not recovered from the last works there and wanted to ensure that this would be
considered.

4.13 The Chairman responded that he sits on the TE2100 steering group and they have
raised issues around engagement so this is being addressed there. There is a need for
them to keep talking to IFCA, local authorities and other groups so that they are not
forgotten.

4.14 Officers confirmed that the 2018/19 maintenance programme was now live online for
people to view.

5. Approval of minutes of meeting held on 20 October 2017

5.1 The Chairman stated that we were in an unusual position following all the disrupted
meetings in that we had three sets of minutes to approve. He proposed that the
Committee look at each set in turn and comment on accuracy and then look at the
action table to ensure that everything from the meetings had been completed.

5.2 A matter of accuracy from the minutes of 20 October Cllr Castle had been marked as
present however he was not at the meeting.

5.3 Resolution
Following the above amendment the minutes of the meeting held on 20 October
2017 were agreed as an accurate record.

6. Approval of minutes of Levy Vote meeting held on 24 November 2017
6.1 The minutes were approved as a true record.

6.2 Resolution
The minutes of the Levy Vote meeting held on 24 November 2017 were agreed as an accurate record.

7. Approval of minutes of FCRM Grant in Aid (GiA) Allocation meeting held on 25 January 2018

7.1 The minutes were approved as a true record.

7.2 Resolution
The minutes of the FCRM Grant in Aid (GiA) Allocation meeting held on 25 January 2018 were agreed as an accurate record.

8. Matters arising from previous meetings

8.1 Cllr Rice asked about page 3 minute item 4.4 where it talked about the Tilbury Barrier, he was aware that it was going to cost £14m with a £4m contribution from the Port of Tilbury and the remaining £10m from the Environment Agency. He asked where this money was and when it was likely to be spent.

8.2 Officers confirmed that £3m has been allocated for financial year 2018/19 and that spend was expected towards the end of the financial year.

8.3 Cllr Rice went on to mention that the roads and Anglian Water owned pipework within Tilbury were not currently adequate to cope with heavy rainfall. This had significantly increased the risk of surface water flooding in the area and properties are flooding as a result. He asked if improving these pipes was something that Anglian Water had programmed into their works and whether the Environment Agency had any powers to enforce this.

8.4 The Chairman suggested a joint meeting with Anglian Water to discuss this matter.
Action
Chairman to arrange a meeting between himself, Anglian Water, Cllr Rice and EA Officers to discuss a way forward.

8.5 Cllr Lamb pointed out that on page 20 items 2.3 and 2.4 of the minutes should have been an action for the Environment Agency officers to have a conversation with him. Agreed that this would be added to the actions for this meeting.
Action
Officers to contact Cllr Lamb to discuss whether there would be an overlap with the Team 2100 work and that being dropped back, as the work had now been moved into the local programme and Team 2100 would be delivering less for this area over the coming years.

8.6 The Committee checked the actions table on pages 23 and 24 and agreed that they had all been completed. Mr Smith confirmed that while people can still contact him regarding the building regulations the action could be marked as complete.

9. Members slot

9.1 Mr Powell confirmed that he is still having conversations regarding obtaining European Funding for environmental projects and would keep the Committee informed of progress.
9.2 Mr Smith gave an update from the Flood and Coast conference which he had attended. He wanted to convey his appreciation for the change of tone of the event in that Claire Dinnis and Sir James Bevan had mentioned the coast in both of their keynote speeches.

9.3 He went on to speak about the last Sizewell meeting which Ian Hodge also attended and they talked about the new perspective and they are looking to form a new group with lots of partners being involved.

9.4 Finally he told the Committee he had just returned from a two day trip to Scheveningen in the Netherlands to learn about how the Dutch complete their programme of works. Mr Smith explained that the Dutch have a different way of approaching this and have a different scale to that in the UK. In Scheveningen they had recently carried out some works and had completely reshaped the whole of the sea frontage in order to bring together multi benefits and ensure that money was spent in the best way possible. He did not know if this approach would be easy to do in the UK. He finished by asserting that this had been a very interesting trip and he would be preparing a paper that the Committee might be interested in reading.

9.5 Mr Goodliffe was welcomed for his first meeting as the East Anglian Coastal Group (EACG) representative and he updated the Committee on the outcomes of the EACG meeting of 13 April. He opened by informing the Committee that Coastal Groups are working with Environment Agency nationally to take forward a project on coastal protection assets (encompassing asset inspection and data management). A business case has been prepared and likely FDGiA cost is in the order of £3.4m nationally.

9.6 The Shoreline Management Plans (SMP) will have a refresh, this is not a full review but just a refresh of the current SMPs. Each coastal group will co-ordinate this refresh, working with the leads for each SMP. A SMP mapping digital project to make the information more accessible and interactive for members of the public, is also being considered.

9.7 The Group had received an interesting presentation from the Tendring District Council reclamation scheme which had in turn stimulated investment in the area and created regeneration as well as other benefits. This highlighted how coastal schemes can affect coastal towns and Mr Goodliffe wondered if this approach could be brought back to the Committee to use as a model for the future.

9.8 The Chairman mentioned that he had spoken to the Chief Executive of the local authority who had seen a vast improvement in health in the area. This was also true for schemes in other deprived areas like Lowestoft. He wondered if it would be worth investing in a review to look at how things improve in an area after a scheme has been completed, as he would like to see the true value of the work we deliver.

9.9 Mr Smith added that he wished he had the foresight to do this work when he had previously asked for investment in Felixstowe. He confirmed that Felixstowe had improved greatly since the investment in the flood defence scheme and finished by informing the Committee that Mott Macdonald was looking at carrying out an economic study in the area.

9.10 Cllr Jowers was delighted to inform the Committee that the permission had been granted for Cobmarsh, as discussed at the April 2017 meeting. As this was a repeat permission he thought that the cost of £44k to the MMO was a lot and that the local MP was aware of this. He mentioned that there would be more to say later about this project.
9.11 Thinking more about the flooding issues in Thurrock he wondered how you safeguard for projects which are 50 years in the future.

9.12 Cllr Jowers concluded by informing the Committee that this would be his last RFCC meeting. The Chairman and members thanked Cllr Jowers for his contribution over the years and agreed that he would be missed.

9.13 There was some discussion regarding how to get investment, with TE2100 seen as a good way forward, however we need to bring adaptation into our plans now and encourage the Government to look at investing for 50-100 years.

10. The next 6 year programme and Future pipeline (National Paper EFCC 18/01)

10.1 Mr Dixey took the Committee through the paper and explained that we are now in the fourth year of the six year programme. Mr Dixey talked though the GiA allocation for the current financial year, for both revenue maintenance and capital monies.

10.2 We need to start thinking now about what comes after March 2021 when the 6 year programme comes to a finish. Evidence is being gathered to inform discussions with Defra and the next bid to HM Treasury and the partnership funding policy is being looked at alongside the Agency’s Long Term Investment Scenarios. The 25 year plan will also have a bearing, with the benefits of natural assets being more widely recognised alongside the benefits of manmade assets.

10.3 Locally we provide evidence via projects which have been identified on the annual programme refresh, which has just started. We also need to think more about pipeline projects beyond 2021 and not shy away from those which do not score highly with the current partnership funding policy, as these may influence how this policy is shaped for the future. We are looking for as many projects as possible before the beginning of June.

10.4 On page 31 of the paper pack is a good description of the allocation process. Page 35 has a table showing the annual process for capital and revenue allocation and the role of the RFCC at each stage. There are also two good diagrams on pages 36-37 which had formatted badly in the document so were shared with the members after the meeting.

Action
Officers to send the two diagrams to the members with the minutes of the meeting.

10.5 At the end of last year it was announced that there was £76m of extra funding available nationally with £40m of this specifically for deprived areas and we have made a bid for funding for Great Yarmouth and Lowestoft projects. We are still waiting for ministerial decision on allocation of this money.

10.6 The Chairman pointed out that the programme refresh and the opportunity to comment on the next 6 year programme fits in with the Committee’s planning process and the planning day of the 16 May will give us a chance to talk to communities. This is a positive change from the annual panic we used to have to a cycle of planning and activities which are spaced throughout the year.

10.7 Cllr Castle put in a pitch for Great Yarmouth and stated that we need to take a proactive approach to represent the people living near the racecourse. There are regenerated brownfield sites with 1000 dwellings however little has been done since the days of EEDA and he would be happy to see a long term defence planned on the...
Cllr Lamb responded that it was good to hear and would like to see this positive move. He added that there is a need to understand climate change and how this will shape things in the future and also how this will affect coastal towns. We need to get other bodies like Network Rail involved as they are affected too, especially by surface water flooding which will in turn have an effect on fluvial flooding. He asked if the Environment Agency should or could be granted extra powers to provide flood storage areas.

Mr Smith stated that he had looked at the paper and could not find any pipeline programmes and was therefore happy that the officer had asked for them to be submitted. He was also pleased that areas like Lowestoft and Great Yarmouth were being considered. He asked for a workshop to talk about the next six year programme and discuss pipeline projects before the Committee lost the expertise of Cllr Jowers and Mrs Wilson. Mr Smith called for a mechanism to articulate the need for adaptation to be better considered within potential policy changes.

The Chairman agreed that this is a kick start to think about the programme and that is what the 16 May workshop event would be about. He hoped that it would help to inform the Local Choices and Levy discussions later in the year. He finished by saying it might be better to go with big ambitious projects.

Mr Beach agreed that was what he read in the paper and also agreed with Mr Dixey and was comfortable with what the Committee had been asked to do.

Cllr Rice added that Cllr Jowers had made a valid point about flood storage areas and it really came down to restricting residential development in flood risk areas and put commercial developments here instead. Cllr Rice also warned about developing in designated flood storage areas.

Cllr Castle replied that it was not simply about not building houses in flood risk areas but that regenerating communities was important and asked if new developments could include and pay for defences. He asked specifically about allocation of sites in the Local Plan for 1000 homes in the Yarmouth Waterfront Regeneration areas of Southtown, Cobholm, North Quay and The Conge where a levy per property could help generate sizeable contributions towards the Environment Agency’s ongoing capital scheme for riverside defences in the town.

Cllr Jowers stated that this was affected by the law of unintended consequences. Where there are good flood schemes in place but the developer says no to being involved in them. If the council then refuses the planning application this can have a negative impact on the local plan with big political ramifications and can mean the council is put into special measures. It is a difficult situation.

Mr Powell added that this moved the discussion into the realms of the political and the Committee may need to think outside the box to move this forward, which may prove to be a challenge.

Mr Smith concluded that the National Planning Policy Framework principles do not state that there should be no building in the flood plain, however, it does state that building works should be carried out safely, properties should be flood resilient and
resistant, including safe access and escape routes where required and any residual risk can be safely managed for the lifetime of the property.

10.17 Dr Underwood stated that after looking at page 34 of the paper pack he was concerned that we might lose sight of a project’s environmental benefits if we are not reporting them. He asked that if national assets are valuable, how environmental benefits will be reported in the future.

10.18 Mr Dixey assured Dr Underwood that we report to Defra on many things and that environmental outcomes are one of them as we have to consider them for all the projects we carry out.

10.19 Dr Underwood asked if the Committee could see a report on this, because he is leading on a project on this and it would be good evidence.

10.20 Mr Dixey agreed this would be possible.

**Action**

Officers to report on environmental benefits of projects at a later meeting.

10.21 Mrs Wilson communicated that this would be a useful report however the Committee should be mindful that some benefits are inherent and not measured. They could be in the narrative rather than in a report.

10.22 Dr Underwood replied that this would be important and fit in with work that Public Health England was doing which looked at the health benefits of projects.

10.23 Mrs Fitch-Tillett asked about some joint work to look at sharing knowledge and apply for funding to help the coastal town of Hemsby with a view to moving the chalets to a safer distance from the edge of the sand dunes.

11. **Update from workshop held on 23 March 2018 – including proposal for an Engagement Sub-group for approval (EFCC 18/02)**

11.1 The Chairman introduced this section of the meeting and mentioned that there was a decision to be made from this paper which would be taken in the next item.

11.2 The Committee reviewed the paper and briefly discussed items from the meeting. They noted the contents of the paper and the proposal for the Engagement Sub-group contained there-in.

12. **The Rolling 10 year forward plan update for the Committee (EFCC 18/03)**

12.1 Mrs Mayston gave the Committee a presentation showing them the new website that Cranfield University were putting together, this was shared to members after the meeting.

12.2 The Committee was informed that Cranfield University was planning to attend the event on 16 May and would be giving a presentation on the website. Members would have their own login for this and they would need to send their email address to Officers along with confirmation that they were happy for this information to be shared with Cranfield.

**Action**

Committee members to send login details to Mareth Bassett at their earliest opportunity.
12.3 Cranfield University is still uploading information from its servers to the internet host site, however the website is live and can be viewed. We will need to make a policy decision about who will ultimately have access to the site and what can be made publically open for anyone to view. There was good news that Cranfield has got some academic funding which it can use to fix glitches and add any content, which means we do not have to pay for this service. Other RFCC chairs are waiting for their access to be granted and if they decide to buy in then any associated costs will be shared by everyone involved.

12.4 The invitation for the event on the 16 May had been shared to members who were encouraged to attend and share with their contacts to ensure that this was a well-attended event and worth putting on.

**Action**
Committee members to reply to and share the event invitation.

12.5 Mr Beach spoke about engagement at the RFCC workshop on 23 March and stated at the time that we know engagement is happening but it is disparate. The aim of the proposed Engagement sub-group will be to bring this all together so that we are all working together. He suggested that the group have their initial meeting after the 16 May and report back to the Committee at the July meeting. He was happy to chair this group and was looking for any volunteers as long as the Committee gave permission for it to be set up.

12.6 The Chairman added that while we do not want to create lots of different sub groups he felt that this was an important one. He re-iterated that we do not want to duplicate engagement work already happening but bring things together and offer support and guidance where we can.

12.7 Cllr Jowers agreed that this was a good idea and could link us in with work being done by Parishes up to LLFA’s.

12.8 The Chairman stated that we are using lessons learned from the Cumbrian floods where authorities were doing a good job but were not linked together to work with communities. He hoped that this work would raise the profile of the RFCC and help people and communities to know who to come to for help. This was why the 10 year cycle, illustrated on page 46 of the paper pack, linked closely with the yearly EA planning cycle. He hoped that the Engagement sub-group would form an important link between the local communities/authorities and the Government.

12.9 The Committee were formally asked if they gave permission for the group and they all agreed that this should go ahead and Mr Beach should Chair it.

**Resolution**
The Committee approved the setting up of an Engagement sub-group with Mr Beach as the chair. Any volunteers to sit on the group should contact Mareth Bassett by 14 May.

12.10 Dr Underwood asked to see a draft terms of reference as he was keen to see what can actually be done. He was eager that this group should not raise expectations but be able to deliver what they set out to do.

12.11 The Chairman asked if Dr Underwood would help to put the draft terms of reference together as this should not duplicate work being done but they might need to map out what is there and start opening routes of communication. He saw this as a connective rather than a delivery role.

12.12 Dr Underwood was happy that this was the plan moving forward.
12.13 Cllr Oliver volunteered to be involved with this group.

12.14 Mrs Mayston concluded that the 16 May event was a good start to getting people involved and the Committee agreed.

13. Feedback from the RFCC National Conservation leads meeting – including update on Benacre

13.1 Mrs Wilson gave an update from the national conservation leads meeting. She informed the Committee that the conservation leads get together twice a year to discuss and look for multiple benefits from projects. Mr Johnson is the national Environment Agency representative for flood risk management at these meetings. Mrs Wilson was pleased to inform the Committee that many of the projects presented as case studies of good examples are from the Anglian (Eastern) RFCC area.

13.2 Mrs Wilson went on to give a presentation about Benacre which is an area losing beach and where the Environment Agency has had to put in rock protection for a pumping station, to give us time to decide what the next steps should be. In this area the Parish Council chair the meetings and they called the original meeting. The project is being led by Karen Thomas of the local IDB who is working with the Environment Agency, Waveney District Council and Natural England. The presentation was shared with the Committee after the meeting.

13.3 The Chairman was interested to see that there were discussions with all involved who were looking for one solution which would work for everyone.

13.4 Dr Underwood asked what timescales were they working to and when the final decisions would need to be made.

13.5 Mr Johnson answered that they are working to five years and hope that everything will be agreed by this time.

13.6 Dr Underwood asked if they thought that this would happen in the timescale.

13.7 Mr Johnson stated that the landowners are putting in some structures and that the Environment Agency are supporting them to do so but this cannot be rushed.

13.8 Mr Powell affirmed that this was great piece of work and a real model to use for the future, where possible.

13.9 Cllr Oliver asked to what extent was cost a driver for the various options identified.

13.10 Mr Johnson confirmed that cost was a central driver as it would cost £10m. This is now moving forward and the LLFA has invested £2m for highways as this is very close to the A12. There are also other and sources of funding being explored, including local landowners, to share the cost of the project. As the lines were drawn by the community rather than the Environment Agency the locals have bought into the scheme.

13.11 Cllr Lamb expressed an interest in how the Ness has changed over the years which bears a resemblance to Shoebury and he wondered if the rock wall placed there would help short-term.

13.12 The Chairman concluded that we needed to be thinking about longer term solutions to these type of problems such as adaptation rather than building manmade defences.
14. Update from Norfolk County Council

14.1 Mr Ogden was welcomed to the meeting and he gave the Committee a presentation detailing the current projects that Norfolk County Council is carrying out. He highlighted those where they are working collaboratively or have shared funding streams. The presentation was shared with the Committee following the meeting.

14.2 The Committee discussed Hemsby including the work which was needed and it was agreed that it was important to see what was possible. Mr Goodliffe is working with Defra on coastal adaptation and they are using Hemsby as a case study for this project.

14.3 The Chairman stated that the Committee has a role and if we have plans in place then there would be an opportunity to invest in areas like this.

14.4 Cllr Powell asked about the gabion baskets which had been used in a project, he wondered if any work was being done and what was going on at that time.

14.5 Mr Goodliffe answered that they had been installed at Scratby about three years ago and they now needed to be stabilised. They have found that they need to be deconstructed and rebuilt as they are not as effective in areas with a high tidal wave action.

14.6 Dr Underwood thanked Mr Ogden for the presentation and stated that looking at the maps in the presentation it looked like the greatest risk of flooding in the County was from surface water rather than rivers. He asked if there was any information regarding loss of drainage in towns and built up areas. Also were the Council confident in the modelling and engineering the designs for Suds.

14.7 Mr Ogden confirmed that they have a PhD student looking into this at the moment. They do not have any of the results as yet but this is an area that the Council is investigating.

14.8 Cllr Castle asked about the cabins sold recently in Hemsby and that nothing had moved since 2013 and the Pathfinder projects there. He went on to say that cabins lost in the erosion which had only recently been bought by their occupants was “scandalous” because after the 2013 event it was quite clear that there was no future for those homes perched on top of the dunes at Hemsby, and yet solicitors and other professionals supporting those transactions had apparently not made this clear to purchasers.

14.9 The Chairman replied that we have highlighted solutions, which have not been well received. These solutions are more about adaptation rather than hard defences and we need to talk about what we can realistically achieve, which is also affordable for this area.

14.10 Mr Powell added at this point that it had been a really good meeting and that a lot of dots had been joined up. He felt that we now have a good opportunity to make a difference over the next 20 years.

14.11 Mrs Mayston affirmed that we are learning from Cumbria and hoped that the Engagement sub-group will be more joined up and aware of what is happening across the board.
14.12 Mr Dixey believed that the large number of flood investigations already carried out by Norfolk County Council could be a source of new projects which could be added to the pipeline list.

14.13 The Chairman mentioned that the presentation showed properties flooding and that the Committee had made cash available for property level protection. There was money available for Norfolk which had not been used to date. He asked if there was anything that the Committee could do to help.

14.14 Mr Ogden thanked the Committee and was pleased to state that things were moving in the right direction. The new Environment Agency advisor was in post and the Council team was in a better place now.

14.15 Mr Hullis informed the Committee that they had started conversations with Essex County Council (ECC) for help and Mr Beach was also talking to the team in ECC to see how they are engaging with communities.

14.16 The Chairman added that the Essex team would be giving a similar update to this one at the meeting they are hosting in October.

**Action**

- Mrs Bassett to add this to the forward look for October.

14.17 Cllr Jowers stated that it had been an interesting meeting as the Committee had started to look at the whole picture and not just flooding.

14.18 The Chairman agreed and replied we need to have a structure in place to work with other partners like Anglian Water so that in turn we can support projects which benefit small numbers of properties.

15. **Forward look**

15.1 The Committee discussed this and added a couple of items for the July meeting in Suffolk.

**Action**

- Mrs Bassett to add the following to the July meeting agenda.
  - Draft terms of reference for the Engagement sub-group
  - Jason Coombes to put together a paper on the integrated maintenance programme with the IDB.

16. **Key Items from information papers**

16.1 The Committee noted the content of the information papers.

16.2 Cllr Jowers highlighted items 4.3 to 4.6 on page 60 of the paper pack regarding the West Mersea flood alleviation scheme which is the first self-managed flood barrier. This is a good example of engagement in an area with no formal flood defences and there is a community led group, which will be responsible for deploying the demountable defences in a flood event.

17. **Any other business**

17.1 Cllr Walsh mentioned the Nuclear New Build group which is a local government authority group, which is using the lessons learnt from the work done at Hinkley Point and Sizewell C to help inform how the Bradwell investigations move forward. He wanted the Committee to be aware, as this is a good forum to feed into.
17.2 Mr Johnson concluded the meeting by giving an update on the weather expected over the weekend. The prediction was for heavy rain and strong winds over the weekend and into the next week. The Environment Agency was expecting to issue some Flood Alerts on the coast. The Wells and Thameside Barriers would also be manned. He did not know if there would be any significant wave action near Hemsby but the Environment Agency was doing model runs and expecting officers to be around the area.

17.3 The meeting closed at 1pm.

Date of next meeting: Friday 20 July 2018 – Landmark House Egerton Rd, Ipswich IP1 5PB.
# ANGLIAN (EASTERN) RFCC ACTIONS – 27 April 2018

<table>
<thead>
<tr>
<th>Date of Meeting</th>
<th>Action Required</th>
<th>Who by?</th>
<th>Pending/ Why?</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 November 2017 RFCC Levy Vote/ EU Exit Meeting</td>
<td>4.4 An Overview of EU Exit for FCRM</td>
<td>Bill to circulate the House of Commons library briefing paper to members</td>
<td>Bill Parker</td>
<td>There is no evidence to suggest that this has been completed.</td>
</tr>
<tr>
<td>7.2 Members slot</td>
<td>Mr Smith referred to the papers regarding Property Flood Resilience Roundtable which is chaired by Graham Brogden.</td>
<td>Members</td>
<td>Members can still let Mr Smith know if they have any issues about building regulations however, it was agreed that this action could be marked as complete at the 27 April meeting.</td>
<td>Completed</td>
</tr>
<tr>
<td>27 April 2018 RFCC Meeting</td>
<td>Action Required</td>
<td>Who by?</td>
<td>Pending/ Why?</td>
<td>Completed</td>
</tr>
<tr>
<td>8.4 Matters arising from previous meetings</td>
<td>Chair to arrange a meeting between himself, Anglian Water, Cllr Rice and Officers to discuss a way forward. With regards to surface water issues in Thurrock where Anglian Water pipework is not adequate to cope with heavy rainfall</td>
<td>Paul Hayden: RFCC Chairman</td>
<td>Meeting being arranged. The action will be marked as complete when the meeting has happened and a way forward has been agreed.</td>
<td>Ongoing – Officers have arranged a meeting – further details will be provided at the meeting.</td>
</tr>
<tr>
<td>8.5 Matters arising from previous meetings</td>
<td>Officers to contact Cllr Lamb to discuss whether there would be an overlap with the Team 2100 work and that being dropped back, as the work had now been moved into the local programme and Team 2100 would be delivering less for this area over the coming years.</td>
<td>Mark Johnson</td>
<td>Completed – Mark Johnson called and spoke to Cllr Lamb on 6 June – no further action required.</td>
<td></td>
</tr>
<tr>
<td>10.4 The next 6 year programme and Future pipeline</td>
<td>Officers to send better formatted versions of the diagrams from pages 36-37 of the paper pack to members.</td>
<td>Mareth Bassett</td>
<td>Completed - email sent 3 May</td>
<td></td>
</tr>
<tr>
<td>10.20 The next 6 year programme and Future pipeline</td>
<td>Officers to report on Environmental Benefits of projects at a later RFCC meeting. To be added to forward look.</td>
<td>Mareth Bassett</td>
<td>Completed - added to the July meeting agenda.</td>
<td></td>
</tr>
<tr>
<td>12.2 The rolling 10 year forward plan update for the Committee</td>
<td>Committee members to send preferred login details to Mareth Bassett for the RFCC Observatory website.</td>
<td>Members</td>
<td>At the moment no login is needed as the site contains open data.</td>
<td>Completed for now until the login details are required.</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td>Responsible</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>12.4 The rolling 10 year forward plan update for the Committee</td>
<td>Committee members to attend and share details of the Engagement Event of 16 May</td>
<td>Members</td>
<td>Completed – event took place on 16 May</td>
<td></td>
</tr>
<tr>
<td>14.6 Update from Norfolk County Council</td>
<td>Similar update from Essex team requested for the October meeting and should be added to the forward look.</td>
<td>Mareth Bassett</td>
<td>Completed – Added to the Forward look for October</td>
<td></td>
</tr>
<tr>
<td>15.1 Forward look</td>
<td>Items to be added to the forward look for the July agenda. Draft Terms of reference for the Engagement sub-group and Paper in integrated maintenance programme with the IDB.</td>
<td>Mareth Bassett</td>
<td>Completed – Added to the July meeting agenda</td>
<td></td>
</tr>
</tbody>
</table>
**RECOMMENDATION**

The Committee is asked to:

A. Note the Communications Service level and support offered to the RFCC

1. **Purpose of the report and introduction**

1.1 This report introduces the work which has been undertaken to outline the communications support which should be provided by the Environment Agency to RFCCs.

1.2 This report document outlines the level of service the area Operational Communication teams and national Strategic Flood Communication team should provide to the RFCCs.

1.3 This document has been shared with all area communications teams and RFCCs and will be implemented from now onwards.

2. **Environment Agency communication support to Regional Flood & Coastal Committees - April 2018**

2.1 This document outlines the level of support the area Operational Communication teams and national Strategic Flood Communication team should provide to Regional Flood & Coastal Committees (RFCCs).

2.2 The objective of this guidance is to ensure we provide a consistent level of support to RFCCs across England, without compromising their independence.

*Note:* ‘FCERM’ = flood and coastal erosion risk management.

**The national FCERM Strategic Comms Team will provide the following service:**

- Act as single point of contact for national RFCC Secretariat lead
- Disseminate FCERM key messages to RFCC Chairs annually
- Attend RFCC Chairs meeting annually to present the Environment Agency’s FCERM Communication Strategy

**Area Operational Communication teams will provide the following service:**

- Act as single point of contact for area RFCC Secretariat
- Include RFCC quotations in appropriate press releases
- Prompt area teams to invite RFCC Chairs or key members to key capital programme milestone events, e.g. ground-breaking ceremonies and scheme openings
- Attend RFCC meeting annually to present the Environment Agency’s FCERM comms strategy (coordinated by the national Strategic FCERM Comms team)
- Provide ad hoc communication advice and guidance to area RFCC Secretariat and RFCC Chair where appropriate

2.4 **Managing potential conflicts of interest:**

RFCCs act as a critical friend / watchdog, overseeing the Environment Agency’s management of the capital investment programme. To avoid conflicts of interest, RFCCs
and Environment Agency communication teams should agree to liaise openly about any planned communications that may impact the reputation of the other so they can prepare in advance.

2.5 Environment Agency communication teams should not provide advice and support in situations where there could be a conflict of interests.

2.6 If in doubt, raise the issue with the national FCERM Strategic Communication team for advice and guidance.

Contacts – these are correct as of April 2018:

<table>
<thead>
<tr>
<th>RFCC</th>
<th>RFCC Chair</th>
<th>EA Area</th>
<th>EA Ops Comms area lead</th>
<th>EA area RFCC Secretariat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglian Central</td>
<td>Brian West Stuart</td>
<td>East Anglia</td>
<td>Elliot Furniss</td>
<td>Nigel Wood</td>
</tr>
<tr>
<td>Anglian Eastern</td>
<td>Paul Hayden</td>
<td>East Anglia</td>
<td>Elliot Furniss</td>
<td>Mareth Bassett</td>
</tr>
<tr>
<td>Anglian Northern</td>
<td>Eddy Poll</td>
<td>Lincs &amp; Northants</td>
<td>Fe Toussaint</td>
<td>Celia Strickland</td>
</tr>
<tr>
<td>North West</td>
<td>Adrian Lythgo</td>
<td>Cumbria &amp; Lancs and Gtr Manchester, Cheshire &amp; Mersey</td>
<td>Kate Humes &amp; Angela Rogers</td>
<td>Rachel Harmer</td>
</tr>
<tr>
<td>Northumbria</td>
<td>Phil Rothwell</td>
<td>North East</td>
<td>Lyndsey Clark</td>
<td>Joe Toman</td>
</tr>
<tr>
<td>Severn &amp; Wye</td>
<td>Anne Wheeler (to be replaced by Shirel Stedman on 1 July 2018)</td>
<td>West Mids</td>
<td>Jess Jacques</td>
<td>Michele Dutson</td>
</tr>
<tr>
<td>South West</td>
<td>Philip Rees</td>
<td>Devon, Cornwall &amp; Isles of Scilly</td>
<td>Lucy Voyle</td>
<td>Sarah Harding</td>
</tr>
<tr>
<td>Southern</td>
<td>Lorraine Brown (to be replaced by Martin Hurst on 1 July 2018)</td>
<td>Solent &amp; South Downs and Kent &amp; South London</td>
<td>Dean Rezzougui</td>
<td>Jo Matthews</td>
</tr>
<tr>
<td>Thames</td>
<td>Robert van de Noort</td>
<td>Thames and Herts &amp; North London</td>
<td>Jo Slimin</td>
<td>Karen Jouny</td>
</tr>
<tr>
<td>Trent</td>
<td>Vij Randeniya</td>
<td>East Mids</td>
<td>Jo Bainbridge</td>
<td>Dhiren Katwa</td>
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<tr>
<td>Wessex</td>
<td>David Jenkins</td>
<td>Wessex</td>
<td>Lucy Voyle</td>
<td>Hannah Ovett</td>
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<tr>
<td>Yorkshire</td>
<td>Colin Mellors</td>
<td>Yorkshire</td>
<td>George Hinton</td>
<td>Amer Bhatti</td>
</tr>
</tbody>
</table>

RFCC Secretariat lead: Becca Hartley

National FCERM Comms Manager: Gemma Sweet
3. Recommendation

3.1 The Committee is asked to:

A. Note the Communications Service level and support offered to the RFCC.

Phil Lee Team Leader Communications
RECOMMENDATIONS

The Regional Flood and Coastal Committee is asked to:

A. Ensure all Members are brought up-to-speed with this work, the opportunities for engagement over the summer and the timescales.
B. Discuss the outputs from the RFCC workshops they attended in June.
C. Tell us what would help them to engage their own networks.
D. Provide any further comments and reflections to the National FCERM Strategy team.

1. Background

1.1 The government committed in its 25 Year Environment Plan that the Environment Agency will revise the National Flood and Coastal Erosion Risk Management (FCERM) Strategy in 2019. The Environment Agency is doing that through collaboration with the very people who will be affected by it or play a part in its delivery, be that flood risk or coastal erosion. Appendix One, the Strategy Scope, is the result of the first phase of this collaboration.

2. Summary of Engagement Activities

2.1 Our approach is one of collaboration so engagement is key. We are now engaging more widely across the flood family to refine the long-term ambition and develop the ideas and actions to deliver it.

2.2 Our scoping phase ran until the spring of this year but we are now in the development phase. We have multiple working groups (c100 individuals) shaped around the core questions as defined in the scope in Appendix One. Appendix Two shows how this engagement will work over the summer. We will also be supporting sector specific engagement with groups - such as those we did for the Regional Flood and Coastal Committees (RFCCs).

2.3 Ultimately the Environment Agency will still need to make the decisions about what the strategy says. To prevent this being a ‘black box’ we have formed an Advisory Group to help provide assurance that partners’ views are being heard and to help us work through how to deal with conflicting opinions. This group is being chaired by Colin Mellors, Chair of the Yorkshire Regional Flood and Coastal Committee and member of the North Yorkshire and East Riding Enterprise Partnership.

2.4 Formal consultation is expected to be in December 2018 with final publication in 2019. Beyond this we hope the coalition of partners forming the Strategy will continue to work together on its implementation.
3. **RFCC Specific Engagement**

3.1 Throughout June and July 2018, we held, or are planning, a variety of engagement with RFCC Chairs and their Committees. This is outlined below:

- Webex held with RFCC Chairs (6 June) to update them on work so far, ahead of engagement with Committees.
- Workshops with RFCC Committees (one workshop repeated on 11, 18 & 20 June) to:
  - Raise awareness of the work done to date, scope and timeline for the development of the national FCERM Strategy.
  - Provide an overview of the engagement process and an understanding of how they can get involved.
  - Hear about what they would like to be different by 2050 in the way flood risk and coastal erosion is managed.
  - Seek feedback on their strategic ideas for change for managing flood risk and coastal erosion over the next 25 years.
- Reflections from Chairs (27 June) where we will present the summary outputs (**Appendix Three**) from the three workshops. This is an opportunity for Chairs to reflect on these outputs and provide further feedback and input to the strategy development.
- This paper to RFCC Meeting round (July) to get Committees’ reflections on the workshop outputs and to share context with Members who couldn’t attend the workshops. This is an opportunity for Committees to provide any further feedback via their secretariat to the National FCERM Strategy Team. The team will consider this feedback in developing the draft strategy for consultation.

3.2 We would welcome RFCC Committee Members’ support in helping to engage and inform their networks on this work. We have developed a standard pack of materials for individuals to use when engaging others which we can make available and the address for feedback is FCERMstrategy@environment-agency.gov.uk. One other suggestion discussed at the workshop was that we provide a short briefing note for councillor Members to share with their contacts, specifically at district and parish level. We would welcome feedback on whether this would be useful.

4. **RECOMMENDATIONS**

4.1 The Regional Flood and Coastal Committee is asked to:

A. Ensure all Members are brought up-to-speed with this work, the opportunities for engagement over the summer and the timescales.
B. Discuss the outputs from the RFCC workshops they attended in June.
C. Tell us what would help them to engage their own networks.
D. Provide any further comments and reflections to the National FCERM Strategy team.

CATH BEAVER  
Senior Engagement Advisor  
14 June 2018

Alison Baptiste  
Director of FCERM Strategy and Investment
**Flood and Coastal Erosion Risk Management Strategy**

**What’s it all about?**

The future is going to be challenging. Our climate is changing with increased risk of stormy weather and rainfall. Our population is growing. And society has high expectations. Between us we will face difficult decisions about how to manage the impact of this on flood and coastal erosion risk. We need a vision for the future - a strategy – to help us make those decisions in the right way.

**How can you get involved?**

People from across the flood and coastal community are coming together to discuss, develop and influence the strategy. We have widened our engagement out from our initial scoping group and now is the time to have your say!

We want to know: What is your ambition for flood and coastal erosion risk management in the future? What are your ideas for changes the flood family could make to help achieve that ambition? And what actions can you or others take to help deliver those ideas?

**What have we done so far?**

The government committed in its 25 Year Environment Plan that the Environment Agency will revise the National Flood and Coastal Erosion Risk Management (FCERM) Strategy in 2019. The Environment Agency is doing that through collaboration with the very people
who will be affected by it or play a part in its delivery, be that flood risk or coastal erosion. Our short-hand for this is the ‘flood family’.

We began this collaboration in 2017, working with a small group of partners from across the flood family to scope the questions we need to ask of ourselves. The group synthesised this into four core questions.

- **What do we all want to protect and how collectively can we fund it?**
- **How can we all put water at the heart of everyone’s decision making?**
- **What part do individuals, communities and businesses play? What should our expectations be of each other? How can we improve the way we work together?**
- **How do we develop the current roles and responsibilities of professional partners to be effective, simple and clear?**

**What’s next?**
The challenge is for us all to work collectively to identify what we want to change and how we might achieve it.

We want to think about three time horizons:
- **Long-term**: We will set an ambition for 2050. One that spans parliamentary terms and is long enough to take account of climate change.
- **Short-term**: It will be underpinned by an action plan for the next 5-10 years of the things we – the flood family – will commit to doing to move us towards that ambition. In that short-term our actions have to be viable within the current legislative and policy framework. But we also need an eye to more innovative or challenging ideas to explore now so they are ready for later years.
- **Future-proofing**: We will to test all actions against a vision of the future in 2100, so we can be confident our actions are robust whatever the future brings.

Our focus has to be on things we can do within the current legislative and policy framework; particularly when it comes to the short-term actions to meet our ambitions. There may be legislation, policies and facts we can’t change in the near future – we call these factors our ‘anchor points’.

If you want to get involved or find out more please contact: [FCERMSStrategy@environment-agency.gov.uk](mailto:FCERMSStrategy@environment-agency.gov.uk)
### July 2018 RFCC round

**Summary feedback from 3 RFCC workshops on the FCERM Strategy**

![Workshops images]

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<table>
<thead>
<tr>
<th>Date</th>
<th>Venue</th>
<th>Number of participants</th>
<th>RFCCs represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 June</td>
<td>London</td>
<td>16</td>
<td>Southern Thames, Anglian Central, Anglian Eastern, Northumbria</td>
</tr>
<tr>
<td>18 June</td>
<td>Bristol</td>
<td>25</td>
<td>Wessex, Severn &amp; Wye, Anglian Northern, Thames</td>
</tr>
<tr>
<td>20 June</td>
<td>Leeds</td>
<td>40</td>
<td>Yorkshire, North West, Trent</td>
</tr>
</tbody>
</table>

*Working together to manage flooding and coastal change*
Postcards from the future

- Water is considered before my development starts
- A nationwide body controlling all rivers and sewers has given cohesion to flood management
- A true and meaningful attitude to partnership working that includes communities at the heart
- Communities enjoy the open spaces created by making space for water
- Communities still at risk from flooding take responsibility and are part of the solution
- FCQM is dealt with at the catchment scale
- It is clear who is responsible and all agencies, council and residents work
- Everyone affected by flooding and coastal erosion understands the level of risk and who is responsible for what

Working together to manage flooding and coastal change

Ideas for change

Protection & funding

- Protect critical national infrastructure and urban centres to minimise risk to GDP
- Enable adaptation in those places that aren’t protected
- Funding levy hypothecated from business rates
- Reset criteria for FCQM funding
- More flexibility and agility to fund and protect at national and local scales
Ideas for change

Water focused decision making

- Persuade society that water is as important as NHS, security, transport, etc
- Water as a commodity, recognising the value globally
- Consideration of water is assured and supported by a regional water 'group'
- An organisation that would have accountability for development of place
- Working with nature to complement the infrastructure we need

Working together to manage flooding and coastal change

Ideas for change

Communities & businesses

- Understand user needs, tailoring our information/advice to better enable those decisions
- Education is key, for school children and for professionals
- Engaging communities and businesses to allow them to own and solve the issues

Working together to manage flooding and coastal change
Ideas for change

Roles & responsibilities

- Single-overarching water management authority with a clear overview role
- Make compliance and assurance a positive part of all water planning
- Greater clarity and join up needed
- A strategy for FCERM that takes account of everything and is funded at the right level

Summary of key points

- Issue of silos – a new body? One stop overview with clear leadership, accountability and assurance
- Longevity of view – not driven by the last flood
- Value and profile of water – so everyone changes how they see it and manage it – it’s known, accepted, loved
- Education is key
- Need to change the language we use to consequences and benefits
- Need for shared responsibility across all players
- Be ambitious, seek innovation in technology and thought
- Economy is critical – can’t be green if we’re in the red
- Integration at catchment level
Full reports for each of the workshops are attached to this document for reference.

See attachments in left hand tab.
RECOMMENDATIONS

The Regional Flood and Coastal Committee is asked to:

A. Support the Annual Refresh of the Capital Programme.
B. Support delivery of the 300,000 target.
C. Note the preparations for the next long term funding settlement through Spending Review 2019.
D. Note the in-year budget reductions.

1. Headline Messages

1.1 The current refresh of the capital programme is the most important to date as it will:
   a) ensure we achieve the 300,000 homes better protected target through the remaining 2 years of the programme; and
   b) be used to inform Spending Review 2019 to seek our next long term funding settlement for FCRM.

1.2 The Environment Agency is currently working hard to prepare for and influence government and HM Treasury on our next funding settlement.

1.3 Due to the Defra funding challenge (see section 5 below) there will be a £4.9m revenue reduction to flood and coastal risk management activities for 2018/19.

1.4 We are still awaiting a Ministerial announcement on the additional £40m capital funding for deprived communities, announced in the Autumn Budget 2017. We are expecting a decision before the end of the summer.

1.5 An overview of the capital and revenue allocation process for the year is set out in the April 2018 National Allocation paper, appendix 2. This should be used as a reference document throughout the year, as required.

2. Background

2.1 This paper provides an update on the capital and revenue refresh for the 2019/20 programmes. The refresh is also significant as it will help inform preparations for Spending Review 2019 (SR19). Government will make decisions on future funding for flood and coastal risk management (FCRM) as part of SR19.

2.2 The overview of the annual capital and revenue allocation process and what committee members can expect at each meeting is set out in the appendix of the April 2018 national allocation paper. This should be referred to throughout the year.

3. Annual Refresh of the 6 Year Capital Investment Programme

3.1 As set out in the allocation process appendix, April 2018, the July committee meeting is the opportunity for members to review any proposed new projects or changes to existing
projects proposed by all Risk Management Authorities (RMAs) before they are submitted to the national Programme Management Office (PMO). This forms a vital step in the development of the programme for the next and future financial years.

3.2 This year’s refresh process is particularly important. It will help ensure that we achieve the 6 year programme 300,000 homes better protected target by 31 March 2021 by funding schemes that are key to achieving the target. It will inform SR19 to seek our next long term funding settlement for FCRM. To do this we need to further develop the programme beyond 2021 and committees are being asked to review potential projects.

3.3 The timing of this year’s refresh is made more complicated by SR19. Area teams have been asked to provide details of current 6 year programme changes and pipeline projects by 6 July 2018, ahead of the normal schedule. This will enable the national team to submit information to Ministers before the parliamentary summer recess. This means this information has to be submitted ahead of the July RFCC Committee meetings. However, data within this submission will be caveated, and it will be made clear that it is based on best available information pre RFCC approval.

3.4 The formal programme allocation work for 2019/20 and 2020/21 will take place following confirmation of changes and endorsement from the RFCCs July committee meetings. This will then be shared with RFCCs for review at their October meetings.

3.5 We need to maintain the focus and momentum to achieve 300,000 homes better protected. This remains a challenging target for both the Environment Agency and other RMAs. We would welcome the Committee’s support to ensure that projects do complete on time in line with funding allocations.

4. Preparation for Spending Review 2019

4.1 A lot of work has been taking place to prepare for and influence government and HM Treasury on our next long term funding settlement.

4.2 The RFCC Chairs and 2 coastal representatives attended a workshop which was repeated on 2 days - 31 May and 8 June- to share their views on how the Environment Agency should approach SR19. Chairs identified key issues such as reviewing partnership funding rules, capturing wider benefits beyond homes, catchment based approaches, supporting deprived communities and the funding mechanisms for surface water flooding. A summary of the key outputs from these workshops will be shared by the RFCC Chairs.

4.3 We are working on a range of economic scenarios to demonstrate what the future programme could achieve and the associated costs. Our focus is on adjustments to the partnership funding formula and achievement of wider benefits to other infrastructure, environment and economic growth.

4.4 We are also working on revenue funding needs. Revenue funds most of our asset maintenance programme and our incident management preparedness and response activities.

5. Defra Funding Challenge 2018/19 and the impact on Asset Maintenance

5.1 Spending Review 2015 required Defra to make significant savings. The largest drop in funding was between financial year 2017/18 and 2018/19. The Environment Agency was asked to contribute to the savings required.

5.2 The FCRM share of the Defra group funding challenge is a reduction of £4.9m in revenue GiA. This is made up of a £2m reduction to on the ground (‘direct’) asset maintenance and a £2.9m reduction to all other teams funded by FCRM Grant in Aid (GiA).
5.3 The £2m reduction to ‘on the ground’ maintenance decreases the allocations RFCCs reviewed at their January 2018 meetings for some Committees.

5.4 We have applied the asset maintenance risk based allocation process to reduce previously agreed funding for 2018/19. This approach reduces funding to the lowest risk activities. To help manage transition to our new approach to asset maintenance allocation we had previously set a cap on reductions at 10%, this in effect ‘protected’ lower risk activity in some areas. To avoid making reductions to higher risk work we have lowered this cap to 15%.

5.5 As stated in section 4.2, a £2.9m reduction is required by all teams funded by FCRM GiA within the Environment Agency. The challenge for area teams is a 1.8% reduction from FCRM revenue GiA and 3.6% for national teams. No further savings should be made from the asset maintenance programme beyond the £2m already identified. Achieving 300,000 homes better protected and incident response remain the highest priority work areas.

5.6 The impact on the Committee areas is shown in the table below.

<table>
<thead>
<tr>
<th>Area/RFCC</th>
<th>Total ‘direct’ maintenance allocation 2018/19</th>
<th>Risk based reduction to ‘direct’ maintenance</th>
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<tbody>
<tr>
<td>Cumbria and Lancashire (North West)</td>
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<td>193</td>
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<tr>
<td>Devon Cornwall &amp; the Isles of Scilly (South West)</td>
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</tr>
<tr>
<td>East Anglia (Anglian Central)</td>
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<tr>
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<tr>
<td>Gtr Manchester Mersey Cheshire (North West)</td>
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<td>Hertfordshire and North London (Thames)</td>
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<td>Yorkshire (Yorkshire)</td>
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<tr>
<td><strong>Total, £k</strong></td>
<td><strong>103,700</strong></td>
<td><strong>2,006</strong></td>
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</table>
6. Autumn Budget Additional Funding

6.1 In the Autumn Budget 2017, £76m of additional funding was announced for FCRM. Since the last committee round in April, the remainder of the £36m to bring new schemes into the capital programme has been announced (27 March). A total of 25 new schemes received a share of the £36m. Full details of the announcement are available on gov.uk.

6.2 We are still awaiting an announcement on the additional £40m for deprived communities. The Minster has been reviewing the list of opportunities identified by local area teams and RFCCs and we are expecting a decision to be made by the end of the summer.

7. Capital Programme re-profiling

7.1 During the Autumn Budget 2017, our request to re-profile funding in the 6 year capital programme was approved by the Treasury. A combined £70m of GiA was moved out of 2017/18 and 2018/19 into 2019/20 to better reflect the project need identified in the previous refresh. This £70m in 2019/20 has yet to be allocated, and will take place through the current annual refresh process. It is imperative projects spend this allocation as we will not be able to change funding profile again.

8. Asset Maintenance Programme

8.1 As part of improving awareness and sharing information on maintenance activities we have published the asset maintenance programme on gov.uk. The programme is shared in a spatial format using GIS and allows the public to see exactly where we will be doing maintenance work and when we have completed it.

8.2 It is available on gov.uk or by searching for River and Coastal Maintenance Programme. This is a big step forward in presenting maintenance information to a wider audience.

8.3 As set out in the allocation process appendix (April 2018), the refresh of the revenue maintenance programme follows a slightly different timescale. Local area teams are currently reviewing their baseline programmes and maintenance needs for 2019/20, and for a further 4 years to inform the more detailed 5 year maintenance programme. Throughout August, the national team will work closely with area teams to quality assure the identified needs. The nationally prioritised indicative maintenance allocation will be shared with RFCCs at their October meetings.

9. RECOMMENDATIONS

9.1 The Regional Flood and Coastal Committee is asked to:

A. Support the Annual Refresh of the Capital Programme.
B. Support delivery of the 300,000 target.
C. Note the preparations for the next long term funding settlement through Spending Review 2019.
D. Note the in-year budget reductions.

JOHN RUSSON
Deputy Director Allocation and National Programme Management

Ken Allison
Director Allocation and Asset Management
14 June 2018
RECOMMENDATION

The Committee is asked to:

A. Support the local programme of NFM projects, funded in-part by Local Levy

1. Purpose of the report and introduction

1.1 This report is to update the Committee on the Natural Flood Management (NFM) proposals in Anglian Eastern RFCC.

2. Natural Flood Management (NFM) is not new.

2.1 NFM schemes are typically located in small watercourses higher in catchments reducing the risk of flooding for more frequent, lower level flood incidents. Using NFM to kick-start natural processes such as reconnecting floodplains and slowing the flow will over time lead to broader changes to the way we manage watercourses and achieve wider benefits.

2.2 Several projects within the Anglian Eastern programme already include NFM elements, for example, Debenham in Suffolk and Rawreth in Essex. Outside of the Anglian Eastern FCERM programme, standalone NFM projects have also been delivered by partners to help reduce risk to small communities.

Local levy funded NFM feature (attenuation pond) delivered by Suffolk County Council as part of the wider strategy for managing flood risk in Debenham.
2.3 Current FDGiA guidelines limit the ability to significantly fund standalone NFM schemes. However, increased public enthusiasm for NFM led to a Government announcement in autumn 2016 of a £15m centrally funded programme of NFM projects, which consisted of £14m for catchment scale projects and a further £1m for smaller, community scale projects. A number of local submissions were made for this money and in January 2017 the Committee consented to progressing some NFM projects to business case.

2.4 This nationally funded programme of NFM projects demonstrated a strong local demand and 12 submissions for community scale projects were received. However, with the national allocation being oversubscribed, only 2 of the 12 were permitted to progress further.
2.5 With a strong appetite for NFM demonstrated from a range of local partners, EA officers have worked hard to capitalise on the opportunity. Actions undertaken by EA officers to maintain momentum and enthusiasm for NFM include:

- Reviewing all projects on the existing programme for NFM potential i.e. to complement the wider flood risk management measures.
- Creating opportunity for community scale projects that were previously unsuccessful for the national pot of money, and
- Working alongside partners to help identify the potential for new community scale projects.

3. Local Levy and NFM

3.1 Local levy is administered by the Environment Agency in line with principles agreed by this Committee (Appendix 1). The Committee is updated annually with a list of projects seeking a Local Levy allocation for future years, or updated on a quarterly basis in the case of low value projects (typically less than £100k) that have been granted Local Levy in the current financial year.

3.2 A provisional request for Local Levy to support NFM projects across Norfolk, Suffolk and Essex was included in the Committee’s annual update (October 2017), and a call to partners for community scale projects was issued in December.

3.3 Uptake has once again been good with 23 proposals submitted for consideration. After screening to ensure the Local Levy principles are being met, a short list of 11 projects across have been recommended to progress to business case, these are:

- Thordon County Park, West Hordon, Essex
- Spains Hall, Finchingfield, Essex
- Highwoods, Colchester, Essex
- Rawreth, Rochford, Essex
- Roxwell, Chelmsford, Essex
- Upper Deben, Suffolk
- Halesworth, Suffolk
- Carlton Marshes, Oulton Dyke, Suffolk
- Walcott, Norfolk
- Camping Beck, Buxton, Norfolk
- Aldborough, Norfolk

3.4 Like the nationally funded projects these proposals were screened against a set of criteria that had to result in:
   a. Reduction in flood or coastal erosion risk.
   b. Improvement to habitats and increased biodiversity
   c. Filling evidence gaps
   d. Partnership working

3.5 The first business cases are being worked on now, ready for local assurance prior to expenditure taking place. Local Levy expenditure on any one project has been capped at £50k and each project is also required to undertake monitoring of the NFM feature. Monitoring will demonstrate how the assumptions on flood risk and wider benefits made within the business case will play out in real life.

3.6 Feedback has been positive, with strong landowner buy-in particularly evident on some projects. Once approved, project delivery will be undertaken by Lead Local Flood Authorities, Internal Drainage Boards, Essex Wildlife Trust, Essex and Suffolk Rivers Trust and Suffolk Wildlife Trust.

3.7 A typical project may have several components, for example, woody debris dams, reconnection of the flood plain or attenuation ponds. Two of the projects include the use
of beavers to create woody dams as part of a wider suite of measures. A project may be stand alone or complement an established flood risk management scheme.

3.8 The Local Levy initiative looks set to lever in significant contributions from partners attracted by the pioneering nature of the projects and the wider benefits provided, including from private consultancy. The shortlisted projects demonstrate how outcomes for communities and the environment can be achieved side by side, working with a range of partners who historically may not have been involved with FCERM projects.

3.9 Project locations, lead organisations and draft funding profiles for each project are set out in Appendix 2.

4. Government’s 25 year plan to improve the environment and NFM

4.1 The 25 year plan sets the ambition for government and will shape the way we work from now onwards, providing a living blueprint for the environment covering the next quarter of a century.

4.2 The plan calls for a step change in how we act, boosting productivity by enhancing our natural capital – the air, water, soil and ecosystems that support all forms of life – since this is an essential basis for economic growth and productivity over the long term. NFM and working with natural processes forms part of this ambition and is here to stay, but it is just one of the options on the broad spectrum of flood risk management options. As our knowledge on cost effectiveness and broader benefits is refined, our ability to implement government’s plan will improve. With Local Levy support we can be at the forefront of this advancing area of flood risk management and be early recipients of the benefits provided.

4.3 NFM is an increasingly important part of how we manage flood and coastal erosion risk. It can be installed in its own right, but is often a part of a more traditional engineered project. By working with natural processes we can protect people and property at the same time as improving the environment and play our part in delivering the Government’s 25 year plan.

5. RECOMMENDATION

5.1 The Committee is asked to:

A. Support the local programme of NFM projects, funded in-part by Local Levy.

Aaron Dixey – FCRM Programme Team leader
Nicki China – Advisor to Suffolk LLFA
Matt Butcher – Catchment Manager

Appendices
Appendix 1: Guiding Principles for use of Local Levy
Appendix 2: Project location, lead organisations and draft funding profile table
Appendix 1

**Guiding Principles for use of Local Levy:**

A. Local levy will be used to support projects and other activities where clear flood and coastal erosion risk management outcomes will be delivered (by reducing the risks from river, coastal, groundwater, surface water and/or reservoir flooding, or coastal erosion).

B. Priority will be given to partnership projects that tackle multiple forms of flooding/erosion, target households and businesses in areas of significant risk, or where there are opportunities to secure multiple / wider social, environmental or economic benefits (including improving the resilience of critical infrastructure), and/or funding for the community to provide an even greater return on local taxpayers money.

C. Local Levy will be utilised to support Risk Management Authorities progress the early stages of project development (i.e. to outline business case) to enable the Committee to develop the future programme and maximise Grant in Aid (GiA) income for local communities.

D. A proportion of the levy will remain unallocated each year for emergency works, or to enable new projects to be put forward by Risk Management Authorities and commenced within year, or to manage the uncertainties of funding.

E. Local Levy will be used (in exceptions) to help secure GiA for large, strategically important schemes where many properties are at risk and the local authority needs support and time to secure additional local funding.

F. The Committee supports the use of Local Levy for maintenance and replacement of flood risk and coastal erosion assets and systems to ensure the continued effectiveness of previous RFCC investments in flood alleviation schemes and coast protection. Where Local Levy is used, the Committee would expect the Environment Agency to identify the most cost effective way of achieving outcomes through partners, in house maintenance provision or procurement frameworks.

G. The RFCC will determine which projects to fund / part-fund through Local Levy along with any associated tolerances. The Environment Agency will manage actual levy contributions, and monitor and report to the RFCC any changes.

H. Over the medium to longer term (say minimum of a 5 year period) there will be a correlation between levy raised and levy invested in each Lead Local Flood Authority area (this may need to be 10+ years for Southend and Thurrock given the size of annual contribution and significant investment needed to maintain and improve their coastal defences/protection).

*These have been agreed at the January 2013 RFCC meeting;*
Appendix 2

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<tr>
<th>Essex</th>
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<th>2020-21 Local Levy (£)</th>
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<td>County Total</td>
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<td>162,000</td>
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* A decision is still to be made about which community to focus on based on where the risks are greatest.
Forward look (EFCC18/09)

All meetings starting at 9.30am and finish at 1pm (unless otherwise agreed).

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Main Business Items</th>
<th>Information Items</th>
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<tr>
<td>19 October 2018 at</td>
<td>Essex County Council</td>
<td>Levy Setting and Vote - All</td>
<td>Developing the Anglian (Eastern) RFCC Programme</td>
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<td>Partnership Funding/Growth</td>
<td>Delivering the Anglian (Eastern) RFCC Programme</td>
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<td>LEP – Abigail Singleton/Keith Moore</td>
<td>FCRM Programme – In Year Position</td>
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<td>FCRM winter readiness training - James Williams/Charlie</td>
<td>FCRM Programme – In Year Position</td>
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<td></td>
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<td>Fisher</td>
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<td>Coastal Adaptation – Kellie Fisher</td>
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<td>Essex Strategy – Lucy Shepherd</td>
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<td>Update from Essex County Council – Lucy Shepherd</td>
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<td>16 January 2019 at</td>
<td>Norfolk County Council</td>
<td>Future Maintenance in Broadland options</td>
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<td>12 April 2019 at</td>
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<td>Update from Suffolk County Council – Matt Hullis</td>
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Other Meeting dates for 2018/ 2019

- Thursday 20 September 2018 – Local Choices, Environment Agency Office, Ipswich
- Friday 19 July 2019 – Essex County Council
- Friday 18 October 2019 – Norfolk County Council
- Monday 16 September 2019 – Local Choices, Environment Agency Office, Ipswich
List of Information Papers

Anglian (Eastern) Regional Flood & Coastal Committee (RFCC)

Friday 20 July 2018

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<tr>
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<td>1</td>
<td>Developing the Anglian (Eastern) RFCC Programme (INF/E135)</td>
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<td>Delivering the Anglian (Eastern) RFCC Programme (INF/E136)</td>
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<td>FCERM Program Update 2018/19 Quarter 1 – Current in-year position (INF/E137)</td>
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<td>Incident Response Paper (INF/E138)</td>
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<td>Implementation of the TE2100 Plan – 2018-19 Q1 Update (INF/139)</td>
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<td>Flood And Coastal Erosion Risk Management Update, June 2018 (INF/E140)</td>
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<td>Natural Flood Management Programme (INF/E141)</td>
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<td>8</td>
<td>Asset Management Strategy – ISO55000 (INF/E142)</td>
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1. Purpose of the report and introduction

1.1 This paper is to make the Committee aware of the new or emerging investment requirements since the last meeting and seek an appropriate steer around their inclusion within the programme along with informing the Committee of the partnership working currently underway.

1.2 The paper will continue to develop and provide an overview for all Flood and Coastal Erosion Risk Management (FCERM) projects as other Risk Management Authorities (RMAs) develop schemes through to business case approval for inclusion within the Programme.

2. General Local FCRM Updates

Implementation of asset maintenance protocol for uneconomic assets

2.1 Where we intend to stop maintenance of assets permanently, the ‘Protocol for the maintenance of flood and coastal risk assets’ (England only) obliges that we include this intent in the regional maintenance programme that is presented to and agreed by our Regional Flood and Coastal Committees (RFCCs) annually. This is also a requirement of the Flood and Water Management Act (2010) Section 23(1).

2.2 With that in mind, we are submitting this update of the Withdrawal of Maintenance Policy to fulfil this requirement and keep the Committee informed regarding our ongoing work. This follows on from our original paper of October 2007 and latest update of January 2017. The original paper was entitled ‘Withdrawal of Maintenance Policy’ and explained how we planned to implement Defra policy on uneconomic defences.

2.3 Since 2007, we have implemented this policy at a number of locations in the Anglian (Eastern) RFCC area. As the demand on our revenue income increases it is important that we use this money to best effect. As such we will continue to give notice of cessation of maintenance where it is no longer economic from a government funding perspective. The following information will update the Committee on sites
where cessation of maintenance has already been implemented and show sites where discussions are ongoing.

2.4 Sites where cessation of maintenance is being implemented

- Dedham Tilting Gate
- Little Braxted Gate
- Sudbury Croft Gates
- Toppesfield (Tinkers Lane)
- Boxted Mill
- Pitsea Fleet Pumping Station
- Battlesbridge Pumping Station
- Sandford Mill Gate
- Toppesfield Park Weir

Sites where cessation of maintenance is being considered but no formal consultation has taken place

2.5 15 private mill structures across Suffolk and Essex where legal agreements exist, in combination with various associated fluvial structures as part of the ‘Essex Mills Project stage 2’. Also other fluvial assets including seven on the lower Stour, three control structures on the mid Stour and two pumping stations on Canvey Island which have been identified as surface water pumping stations on the Anglian Water network. We are now actively considering minor tidal sluices on the coast as there are many that provide minimal flood and coastal risk benefit and we are struggling to finance their continued maintenance.

2.6 Our strategic plans and Asset Information Management System (AIMS) will be used to identify other areas where investment of government funds is uneconomic. These plans will advise the committee by identifying these sites and will enable the Committee’s funds to be used for best overall benefit.

Thames Estuary 2100 Plan Update

2.7 Please refer to information paper INF/E139 Implementation of TE2100 plan – 2018/19 Q1 update.

Nuclear New Build (NNB) - Sizewell C

2.8 We are re-mobilising the Sizewell C project team in readiness for re-engagement with the company. We have discussed project aspirations with NNB Sizewell C Co. and it is clear that they plan to engage with us on some key technical work streams that they plan to validate ahead of a further stage of pre-Development Consent Order consultation. Flood risk assessment and coastal processes/protection proposals are likely to be on the list for the purposes of verification and validation of their approach and we are preparing for this. It is possible that this work will not fully emerge for our review until later in the year, as it will take a little time for the company to determine their priorities, and their intended sequence of engagement with us.

Nuclear New Build (NNB) - Bradwell B

2.9 Site feasibility assessment work has begun and is currently looking into cooling water options. We expect investigations into platform height, flood risk and coastal process assessment work to follow. We will need to be involved in these investigations, providing advice and guidance to the company to ensure that the approaches taken to this assessment work are sound and legitimate.

2.10 Programme timescales are similar to those of the Sizewell C project. We had expected engagement to increase in 2018 with more significant technical interactions from Quarter 1 onwards and we were correct. Some significant work is now with us for assessment purposes, albeit more specifically within the cooling water work.
stream at this stage. This project remains at a very early stage. We do expect to become more fully engaged in the matter of flood risk, coastal processes and the approach to platform height assessment criteria, but this will probably be a little later this year.

**Nuclear New Build – Strategic**

2.11 The Government is launching a revision to the Nuclear National Policy Statement that provides the strategic position for new nuclear build at the nominated sites around the country. Sizewell and Bradwell will have to be re-assessed against strategic siting criteria, and we shall be involved in the review of submissions made by those nominating these sites for consideration. This work is expected in July/August and we will have only three weeks to respond. Preparations are being made to ensure that resource is available to carry out this work when it arrives.

**Rationalising the Main River Network – Pilot Project (de-maining)**

2.12 We continue to progress the de-maining pilot, which tests the approach, in focusing the Environment Agency’s resources in areas that present the greatest flood risk; whilst ensuring that lower risk watercourses are maintained according to local priorities.

2.13 The public consultation is complete for the Suffolk watercourses and the response document will be published soon. We will be opening up discussions with district councils on the byelaws and legal agreements necessary to provide for the environmental protection and mechanisms for transferring assets and responsibilities.

2.14 In Norfolk however, the Norfolk County Council’s Environment, Development and Transport committee declined to give their agreement in principle to proposals to demain the 11 watercourses in Norfolk. This has delayed the pilot and we continue to work with officers on this element. Our work with other partners including Internal Drainage Boards continues.

2.15 Where we can progress to a decision to demain a watercourse, the decision will now be scheduled for spring 2019. This is to allow for further engagement with Norfolk County Council and the district councils, which may need to take on byelaws.

**DEFRA catchment scale programme - Natural Flood Management (NFM)**

2.16 Natural Flood Management and Integrated Catchment Management East Anglian Roadshows are currently taking place across the country. The East Anglian Roadshow is taking place on 26 June, with people from various RMA’s, Natural England, Forestry Commission and the Environment Agency attending. The roadshows are aimed at raising awareness of Working With Natural Processes (WWNP) as tools to achieve a wide range of benefits for people and the environment. Information will be presented detailing how NFM is being delivered both nationally and locally, what the challenges are and equip delegates with the knowledge to plan and deliver their own worthwhile schemes.
3. Environment Agency Projects

Tilbury Dual Function Lock Gate Project

3.1 We are now half way through the tender period and are holding mid-tender review workshops to ensure Tenderers have understood the project brief. We are on track to appoint the contractor late summer 2018. The gates will then start to be installed in 2019. At the same time we are also continuing to work on updating the legal agreement, which is required before we appoint the contractor.

Great Yarmouth Framework for Action (Epoch 2)

3.2 Having largely completed the options appraisal, last quarter it was reported there were two flood compartments within Great Yarmouth where we were seeking to strengthen the economic case through undertaking further investigation of the defence and quay condition in order to potentially reduce construction costs. This work was completed successfully and costs have been reduced, however the economic case is still very weak for these compartments. Following discussion with the Large Project Review Group (LPRG) which will assure the business case, a way forward has been identified that will enable us to include the two compartments within the overall Full Business Case (FBC). The list of proposed works throughout Great Yarmouth is about to be issued to JBA Bentley for them to price for contractual purposes.

3.3 With regard to partnership funding, we supported Great Yarmouth Borough Council in their bid to the New Anglia Local Enterprise Partnership (LEP) and in May it was confirmed that £8.2 million would be provided to support the project. We are also expecting the project to benefit from funds provided from Defra towards scheme supporting economic development in deprived areas. Recent meetings we’ve had with quay owners and operators has identified a range of contributions in kind as well as some financial support.

3.4 The FBC is scheduled to be submitted to LPRG for assurance in early October 2018. Construction will be during 2019 and 2020.

Horning Flood Risk Management

3.5 Since the previous update Anglian Water Services (AWS) has carried out a further CCTV investigation and found a considerable volume of clear water entering the sewer at the top of Ferry Road. AWS is working with North Norfolk District Council to identify the source of this water and get this inflow stopped with the owners of the property.

3.6 In July, we are carrying out individual surveys for approximately 200 properties in and around Ferry Road, Horning. The surveys are to establish the floor levels and construction of these homes and businesses. The surveys will help us, and the owners/occupiers of the homes and businesses, to get a better understanding of the flood risk from the Broads.

3.7 We have sent out letters to all owners to get their permission to access and survey their property. The results of the surveys will be available later in the year and this information will feed into the initial assessment to reduce flood risk, which we are currently developing.

3.8 North Norfolk District Council is working on establishing the ownership and responsibility for the maintenance of Ferry Road and associated highways drainage.
3.9 The three key partners (Environment Agency, Anglian Water Services and North Norfolk District Council) are planning to carry out a multi-agency customer engagement event for local residents in the autumn. This will be once we have the results of the property surveys and Anglian Water and North Norfolk District Council have addressed local surface water issues.

3.10 Norman Lamb, the local MP and Horning Parish Council, have been kept informed of the progress that all the partners have made so far.

4. Risk Management Authority Updates

Essex County Council

Local Flood Risk Management Strategy Refresh

4.1 We will be conducting a partner consultation throughout July on our ‘refreshed’ Local Flood Risk Management Strategy (LFRMS). The new focus for the Strategy is to consider the general public, rather than risk management and regulatory bodies as our prime audience. It was locally felt that technical advice for partners and professional is already available within various other strategic documents and publications.

4.2 With the shift towards community and self-resilience, we felt it was more important to start increasing overall flood risk awareness amongst all our residents, specifically those 36,000 properties at potential risk of being directly affected by surface water flooding in Essex.

4.3 The document uses case-study based examples of the measures we have taken to achieve our objectives with a strong focus on how residents and community groups have worked with us to manage local flood risk. Information on our statutory duties, grant schemes and capital programme is now being translated into plain English. We feel it reads as a simple and focused commitment of what we can achieve in partnership with others.

Inserts from the ‘refreshed’ LFRMS.
4.4 We are progressing a S19 Flood Investigation in Highwood, near Chelmsford. This is in response to recent surface water flooding events that caused properties and gardens to flood along Highwood Road. The investigation is in the early stages, and we are mainly gathering and assessing data and engaging with the community.

4.5 The properties along Highwood Road flood when surface water spills across the adjacent field boundary behind the properties and enters the gardens. Historically there was a drainage ditch located along this boundary which has since been backfilled. We are working with the community and local authority to get the ditch re-instated as well as offering residents the opportunity to have Property Level Resistance measures installed by making a small financial contribution. We are aiming to have the draft Flood Investigation completed by August 2018.

**Essex County Council – Surface Water Management Plan (SWMP) Update**

4.6 The reviews of the Surface Water Management Plans (SWMP’s) for South Essex, Brentwood, Chelmsford, Colchester and Maldon have been completed and formally signed off in April 2018. The review of the Braintree and Witham SWMP is currently under procurement and is due for completion in the 2018/19 financial year.

4.7 We have reviewed the numbers of properties at risk of surface water flooding across Essex against the National dataset, 2013 update. The review has identified new Tier 1 and Tier 2 risk areas. We will be procuring a new SWMP for Clacton on Sea for delivery in the 2018/19 financial year. We are hopeful that the new Clacton SWMP will identify potential schemes that will strengthen our pipeline of projects on our Capital Programme.
**Essex County Council – Basildon Kingswood/SPONGE 2020**

4.8 The SPONGE 2020 project is progressing well and we have designs of the SuDs features which will be incorporated into the hospital grounds. Additional to the SPONGE 2020 on-site works we are also seeking to deliver off-site works in the Basildon, Kingswood Critical Drainage Area (CDA). The appraisal for these works is nearing completion and we have a selected preferred option that is cost beneficial. We are drafting an Outline Business Case (OBC) to submit to the Environment Agency for FDGiA contribution towards the capital costs of the project.

4.9 The scheme will use an existing redundant Anglian Water washland facility, which will be brought back on-line to store excess surface water during heavy rainfall periods. We have an agreed contribution from Anglian Water and plan to deliver the scheme in the 2018/19 financial year. When completed, the project will reduce surface water flood risk to 16 properties.

**Suffolk County Council – Sudbury and Great Cornard SWMP**

4.10 The baseline hydraulic model has been completed and the project is now progressing to investigate mitigation options. Ten initial high level options have been identified and scored based on ability to deliver as well as potential cost. Three options have been selected, two in Sudbury and one in Great Cornard, to be modelling to obtain their benefit to residential properties. Other sites will receive a desktop review to assess their potential impact to inform future works in the town.

**Suffolk County Council – Leiston SWMP**

4.11 The refined surface water hydraulic model for Leiston has produced a detailed picture of how water interacts with the urban environment. This is helping Suffolk County Council to investigate potential mitigation options for the town.

4.12 An initial assessment has highlighted a number of potential mitigation options to reduce pluvial flood risk to properties. The most effective option modelled is a combination of storage and redirection of overland flows in east and west of the town. The scheme has the potential to reduce risk to approximately nine residential properties from very significant flood risk. The next phase of the project is to undertake a detailed economic assessment of the options to understand if the scheme is cost beneficial and what the partnership funding gap is.

**Suffolk County Council – Pipeline Project Development**

4.13 We have been working on the development of a prioritisation programme for potential future flood risk management projects, identifying locations suitable for further investigation. A package of 14 outline benefit assessments has been delivered through the Environment Agency’s Project Delivery Unit (PDU). The aim of the studies was to highlight if a project would have the potential benefits to progress to initial assessment phase, leading to outline business case and capital investment.

4.14 Of the 14 outline benefit assessments the following four will be taken forward as initial assessments.

1. Cavendish
2. Hadleigh
3. Kesgrave
4. Stowmarket

4.15 An additional study area of Boxford will also be included; this is following on from a joint detailed modelling assessment of the river Box and Boxford ordinary...
watercourse. The other 10 sites will be progressed internally to produce a surface water management plan, investigate the suitability of property level protection/resilience or natural flood management options.

**Holistic Water Management Project**

4.16 Good progress is being made with delivery of natural flood management features to help reduce the flood risk to the village of Debenham ([www.greensuffolk.org/HWMP](http://www.greensuffolk.org/HWMP)). Traditional approaches to flood defence were deemed too costly, but holding back water in the upper catchment, in a series of large and small storage areas, will go a long way to reducing the flood risk.

4.17 These storage areas also trap sediments and pollutants; thereby helping to improve water quality in the river Deben whilst also providing new habitats. Three schemes are in the ground to date, the largest at Hill House Farm, which has received funding from multiple partnership, including East Anglian (Eastern) RFCC Local Levy.

4.18 An additional large feature at Mill Green Farm is in development with construction aimed for late summer/autumn 2018. There are ongoing discussions with landowners for other smaller-scale storage areas within the catchment. The Environment Agency is providing monitoring measures to provide evidence on the effectiveness of this approach. It is hoped that this will help expand the concept to other areas of the county. The project partnership, led by Suffolk County Council, is dependent on landowner co-operation and finding further sources of funding to undertake the works.

4.19 Another aspect of the Holistic Water Management Project relates to water resources. Suffolk’s innovative approach to environmental matters has once again been recognised at national level. As part of the Government’s 25-year Environment Plan, Defra has announced that the East Suffolk Catchment will be one of the first four areas to test new approaches to reforming water abstraction ([https://www.gov.uk/government/publications/water-abstraction-plan-2017/water-abstraction-plan-catchment-focus](https://www.gov.uk/government/publications/water-abstraction-plan-2017/water-abstraction-plan-catchment-focus)).

4.20 This not only recognises the importance of our precious water resources for public consumption, our economy, farming and the environment, but also gives a national profile for the Holistic Water Management Project. The latter has been looking at new
ways to secure water for irrigation in the Felixstowe Peninsula area, using water currently drained out to sea. It continues to make good progress and the national pilot will enable some of the regulatory hurdles to be more easily overcome.

**Norfolk County Council – Section 19 Flood Investigation Reports**

4.21 Heavy localised rainfall on the 2 June 2018 resulted in over 40 reports of flooding. Officers have been out to visit the affected communities to verify the reports and begin the investigation process. Currently over ten properties have evidence of internal flooding.

**Norfolk County Council - Interreg North Sea Region Water Sensitive Cities (CATCH) Project**

4.22 Norfolk County Council and Anglian Water have successfully secured €500,000 of funding to participate in the Interreg Water Sensitive Cities Project. The CATCH project officer is starting in post in July 2018 and will start stakeholder and community engagement.

**Norfolk County Council - Interreg North Sea Region Flood Resilient Areas by Multi-layEred Safety (FRAMES) Project**

4.23 The National Flood Forum, Norfolk County Council and Anglian Water have successfully secured €200,000 of funding to participate in the FRAMES Project. The project will focus on communities affected by surface water flooding in Great Yarmouth. The project officer for FRAMES has been in contact with the local community and is setting up trial installation areas for leaky water butts and raised water storage planters.

4.24 **Norfolk County Council – Business Case Package**

Norfolk County Council is currently in the process of progressing five Initial Assessments for Wymondham, Diss, Ormesby, Harleston and Caister through the PDU. Work will start on these shortly and should be completed by the end of December 2018. The initial assessments will investigate if viable flood protection schemes exist in those areas and will qualify for more detailed work hopefully leading to implementation.

**Waveney District Council and Suffolk County Council - Lowestoft Flood Risk Management Project: A strategic approach to Flood Risk Management**

4.25 Work is continuing on the development of the Outline Business Case (OBC) for the Lowestoft Flood Risk Management Project. The planned submission date will be September for the October meeting. As part of the process it is planned for LPRG to see a draft of the submission in July. A phased approach for delivery is being considered, with fluvial/pluvial elements and tidal flood walls being delivered in Phase 1. Planning permission for the Phase 1 elements of the project will be submitted in September 2018. A Transport Works Act Order is being developed for the tidal barrier.

**Tidal works**

4.26 Phase 2 non-intrusive ground investigation works have been completed and are informing project development and the refinement of alignments of the flood walls. Key landowners and tenants along the wall alignment have been met and Heads of Terms are being progressed. Meetings have also continued with stakeholders who are affected by the tidal barrier works. The response to these meetings has been positive and has helped to inform some key decisions around wall alignment and design. On 11 April a workshop was held with the Royal Norfolk and Suffolk Yacht Club and Associated British Ports (ABP) to review construction methodology for the flood walls and the tidal barrier. This again was extremely positive. A navigational
plan and navigational risk assessment will be required before the barrier construction methodology can be formally signed off. This simulation is being developed with ABP and is likely to be carried out by HR Wallingford.

4.27 It is hoped that construction start for the tidal flood walls will be in March 2019. This work is phased as some elements, due to their proximity to the main tourist area, will require winter working to minimise impact. The work to build the flood walls will be funded predominately through the New Anglia Growth Fund (£10m).

4.28 Work to construct the tidal barrier will depend on the additional funding being secured. Due to the operational nature of the port and the lack of opportunity to divert the channel, work will need to be done during winter months, phased over three winters with completion in 2023. Working during winter months means that the impact on the wind energy sector, which is extremely important to Lowestoft’s economy, is minimised. Due to the extended construction period and the innovative construction methodology that is required to deliver the tidal barrier with minimum disruption, project costs have increased by around £30m. The Project Board, Peter Aldous MP, Leader of Waveney District Council Leader Cllr Mark Bee, Cabinet Member and Planning and Coastal Management Portfolio Holder Cllr David Ritchie and senior management are aware of the increase in project costs and remain optimistic about the tidal barrier delivery. A funding strategy and approach is being progressed and additional resource to develop appropriate business cases has been recruited into the team.

4.29 Detailed design began week commencing 18 June. Further marine based intrusive ground investigations are needed and a legal agreement is being developed with ABP to enable this to happen.

4.30 As part of the work to engage with schools, Flipside, who are working with us on this piece of engagement, will be launching the Watertight for Words first art installation in Lowestoft on 28th June. This celebrates the students contributions to date and sets the scene for future involvement. Waveney District Council Chair, Cllr Frank Mortimer, will open proceedings. The project launch of the Waveney Wellington, an initiative by Ormiston Denes Academy School winners of the National School’s Takeover Day, will happen at this year’s Suffolk Coast Forum Annual Conference. Students will interview delegates present about their memories of flooding, filming these interviews to build an archive, which will be available on the project website.

Fluvial and pluvial element

4.31 Detailed design has already begun on this element of the project. Timescales for planning and Outline Business Case (OBC) are in line with the tidal works however, LPRG has already reviewed some supporting information to inform the OBC and provided comments. Conversations have begun with landowners and home owners affected by the work to progress Heads of Terms. Further work is required with home owners who are most vulnerable and have expressed an interest in installing Property Level Resilience measures.

Internal Drainage Board (IDB) Projects

Integrated Main River Maintenance Programme

4.32 To date in 2017/18 175KM of Main River has been scoped, identifying £200K of maintenance works for delivery this financial year. The IDB’s are now looking forward to the 2018/19 financial year and are developing the IMRM programme, building on the experiences and lessons learnt through 2017/18. A number of maintenance and
improvement schemes identified and scoped in 2017/18 are already included and approved for delivery.

4.33 A combined project is underway to map both Environment Agency and IDB maintenance programmes. This will allow us to identify where efficiencies can be made at the programme development stages.

Norfolk Rivers IDB (NRIDB)

River Wensum Restoration Project
4.34 The final phase of the project has been approved by the local EA team and now requires National Project Assurance Service (NPAS) assurance before work can start in September. Mitigation work to enable this final phase of the project to continue, is underway.

Broads IDB

Horsey boat dyke emergency works
4.35 Working with the business community and landowners, a temporary mooring and permissive path is being constructed to enable continuity of access. Broadland Environmental Services Ltd (BESL) is maintaining and monitoring temporary plug repair ahead of the main works. Contract documents and detailed designs have been produced and a September start date agreed. BESL will be mobilising plant and equipment to site in August, to facilitate a September start and a 12 week construction period.

Martham Staithe timber box culvert collapse
4.36 Following receipt of funding in February 2018, the culvert survey has been completed and the business case for the works submitted to the Environment Agency. We are now waiting to hear on the success of the funding application in the sum of £1m following NPAS assurance. As part of our contingency planning we have installed stop log channels to reduce flows in the event that failure of the culvert occurs prior to the scheme starting.

Waveney Lower Yare and Lothingland IDB

Benacre Pumping Station High-Level Options Appraisal.
4.37 The Waveney Lower Yare and Lothingland IDB has been progressing a study for the future management of Benacre pumping station and Kessingland Valley area on behalf of the wider risk management authority partnership.

4.38 The project has now reached an important milestone in that a key landowner-Benacre Estates- has identified their preferred option. The option is supported in principle by all Risk Management Authorities and Natural England. The project aims to develop an adaptive approach to coastal change through managed realignment and will deliver a potential 100ha of intertidal habitat. The proposal is considering a new setback defence in the Lothingland Valley to protect the A12 and a smaller defence near Kessingland to protect people and property in the village. Following a wider economic assessment of the area by Mott MacDonald there are excellent opportunities for new tourism offers and economic growth as a result of the scheme in addition to the flood risk and habitat creation benefits

4.39 We are now better able to take forward the appropriate studies required for Outline Business Case (OBC) for FDGiA. This is likely to take a minimum of 15 months. During this time the project will also need to address how we manage a coastal
protection frontage at Kessingland, which is owned and managed by Parkdean Resorts, which is also a project partner. The Water Management Alliance (WMA) will continue to project manage the project on behalf of the IDB and wider partnership. Discussions with the Environment Agency on how best to procure services to develop the OBC are underway. In discussions with partners we have agreements in principle for circa £80k of funding from the IDB, Waveney District Council, Suffolk County Council and Benacre Estates to support Business Case development.

4.40 The project team met on 8 March and the Project Board met in April. The project has strong support from local councillors and the MP Peter Aldous. We will build on the successful public drop-ins held in November 2017 with further local engagement over the coming months.

5. **RECOMMENDATION**

5.1 The Committee is asked to:

A. Note and support the progress with the appraisal stages of existing projects.
B. Note and support the engagement work being undertaken in order to develop the programme.

PETA DENHAM
Area Flood Risk Manager

MARK JOHNSON
Area Coastal Manager
RECOMMENDATION

The Committee is asked to:

A. Note the progress on the delivery of the programmes.

1. Purpose of the report and introduction

1.1 This paper is to update the Committee on our progress delivering projects in the revenue and capital programmes. We have provided an update where there has been a change since the last meeting.

2. Revenue

AIMS Planning

2.1 Our Asset Information Management System (AIMS) was rolled out in 2016/17. It's now fully operational and we are using it to issue routine and intermittent maintenance work to our staff out in the field. External contractors have received training and have been provided with login details to use the system. In line with existing guidance the post inspection process for assets below required condition is now live on AIMS Planning. We have received training on the new AIMS Planning allocation bidding tool which we are using to bid for the next 5 years of asset maintenance funding.

Norfolk

2.2 Following our routine inspection of our main river systems we have identified and removed additional fallen trees in flood risk areas. This work has been completed with guidance from our fisheries and biodiversity colleagues to minimise impacts on the environment.

2.3 Further repairs to the quay walls in Great Yarmouth have been completed following shipping damage and we are recovering costs through the ship company insurers.

2.4 We have been meeting with local residents, landowners, stakeholders and parish councils to discuss our planned routine maintenance work for 2018-2019 and also to understand the extent of flooding experienced over the Christmas and Easter periods.

2.5 We are preparing for the beginning of the in-channel weed cutting season with pre-start site visits, preparation of risk management paperwork and ensuring all plant, transport and site compounds are ready for July.

2.6 We have started improvements to three of the beach accesses along the Happisburgh to Winterton frontage including replacement of fencing, signs and installation of timber boardwalks.
2.7 We are also about to start repairs to 3 timber groynes on the Happisburgh to Winterton frontage. During routine inspections we found that they were below the required condition. These works will be completed by a contractor before the busy tourist season begins.

**Broadland**

2.8 With the capital improvement works mostly complete, our main activities involve the routine maintenance of the flood defences. Our annual grass cutting programme is well underway. Crest raising works between Wickhampton and Berney Arms on the River Yare and sites near to Blundeston and Barsham on the River Waveney have been completed. We have also completed the re-piling works at Hardley Quay on the River Chet. We are continuing to work at various sites implementing operational and public safety improvements. Our future revenue maintenance spend in Broadland will continue at around £2m per year until 2021, when the Private Finance Initiative contract with Broadland Environmental Services Ltd (BESL) comes to an end. We are actively working with BESL to plan for the end of the contract.

**Suffolk**

2.9 In Suffolk, we are preparing for our annual routine maintenance programme to begin, with many grass cutting works taking place in June. Our routine maintenance programme is much the same as last year, with the addition of more frequent operational checks in high risk areas.

2.10 The performance of our flood defence assets is currently at 97.9%. This is a slight reduction from our end of 17/18 year position, but is due to a busy inspection period throughout April and May. This is normal and we expect to repair several degraded assets in-year. Our end of year forecast is currently at 98.3%.

2.11 At Blyford Bridge, a guillotine gate needs replacing and we are developing a scheme to install a series of stepped riffles. Following consultation with Suffolk County Council (SCC) Highways we agreed on a painted coating to be applied to the bridge abutments which will enable us to proceed with a riffle sequence downstream of the road bridge. The final design and hydraulic modelling is being completed and will inform a short form business case.

2.12 We have recently re-assessed site access at our Rushmere Arch sluice and have produced a new access design to ensure it is safe for our field staff and asset inspectors. This will also ensure we can safely renew the gate lifting mechanism. We plan to start improvement works over the next few months, subject to obtaining consents and permission.

2.13 We have recently replaced missing groyne boards located on beach frontage at Felixstowe Ferry.

Recycled timber boards being installed at Felixstowe Ferry.
2.14 As part of the Asset Refurbishment Programme of Works (ARPoW) at Woodbridge our Water and Environment Management Framework (WEM) contractor has recently completed road resurfacing around Floodgate No 12 and the window covers at Ferry Quay were also replaced.

Looking ahead

2.15 Our planned CCTV inspection and clearance works at 31 sites will start in August 2018. This year, we have packaged the CCTV works across both Norfolk and Suffolk to ensure delivery is as efficient as possible. This work will be delivered through the new FCRM Operational Framework.

2.16 We have also compiled an Invasive Non-Native Species (INNS) package for both Norfolk and Suffolk, where 31 sites are to be treated.

2.17 We have drafted the scope of works to improve site access to at least eight MEICA structures. Site visits with the MEICA framework contractor will start week commencing 18 June, to finalise the options.

2.18 We plan to carry out engineering inspections at Larksman, Melton Spring Farm North and South sluices. We will also complete a principal inspection at the Dunwich River Sluice.

Essex

2.19 As part of the ARPoW our WEM contractor has completed works to refurbish the roof at Nayland automatic gates control station. The main element of the works involved replacing the failed roof with a precast concrete roof slab. Other tasks completed included installing a new drainage system and a replacement security fence. Works started on 19 March and were completed 11 April. Fencing work is still in progress. Four bat boxes and one bird box will also be installed at the site as part of the works.

Nayland gates control station roof refurbishment.
2.20 Canvey pumping station roofs – All sites have been done apart from complete replacement of roofs at Dutch Village and Hilton Pumping Stations which will be completed this summer.

2.21 Southend on Sea, Prittle Brook invasive species removal and desilt up to 150m of channel. Himalayan balsam had taken a hold in the centre of Southend by Priory Park. Our field team worked to clear the invasive species and disposed of all waste in the approved manner. Desilting this section has improved the flows around the main road of Victoria Avenue and restored the channel capacity.

Looking ahead

2.22 Parkeston pumping station at Harwich – The works to repair the outfall culverts and the isolation valves, due to start in April, has been delayed due to issues getting Network Rail approval. This, and the installation of the new generator, has had to be postponed due to UK Power Networks having a work compound which has restricted access over the winter to part of the site. We are also at an early design stage for an improved weed screen, which will also include the option for future automation if it can be shown to make savings on staff time and reduce flood risk.

2.23 Gardeners Farm (Near Goldhanger) - Revetment repairs had been scheduled for September 2017. However, this has been deferred until 2018 due to complications around the lifting operations the work requires. We will replace the failed Essex block work and lower the toe of the bank in one location. We will also carry out repairs to a number of holes that have formed in the revetment at Bounds Farm (immediately downstream) within the same project. We are currently considering design options and investigating the possibility of contributions from the land owner.

2.24 South Benfleet flood storage area needs some embankment repairs to resolve settlement. This will be carried out in Summer/Autumn 2018. Works have in-hand work to reinstate the design crest level at South Benfleet flood storage area. This is in
response to a matter in the interest of safety which was raised in the reservoirs most recent inspection under the Reservoirs Act 1975. We aim to start work in August 2018 with a duration of 8 to 10 weeks. The project will also include the provision of an emergency spillway on the eastern embankment.

2.25 Mardyke channel (to the north of Grays) de-silting was constrained by the weather earlier this year and so will now continue with contractors. The aim being to improve channel conveyance away from the upper parts of the catchment.

3. Capital

Environment Agency Projects Suffolk

Ipswich Tidal Barrier

3.1 Mechanical and electrical fit-out of the Ipswich barrier structure has progressed well and is now substantially complete. Control systems have been tested and sections of the Site Acceptance Tests have been completed and signed off allowing for the opening of the cofferdam.

3.2 At the end of April the cofferdam was flooded and the removal of the upstream and downstream sections of the cofferdam wall began. By the first week of May, the last of the downstream piles had been removed. The temporary navigation channel was then closed redirecting all river navigation through the new structure.

3.3 Piling work has once again begun on site installing the two cut off walls to the old navigation channel and connecting the West pier of the barrier to the west bank. Once this has been completed, backfilling of the old channel can start.

3.4 Over the next couple of months final fit-out of the control building will be completed including all the external cladding and exposed finishes. The associated manual flood gates will be installed and commissioned, and works will begin to prepare for the installation of the flood gate across the railway line at Griffin Wharf.

Environment Agency Projects Essex

Rolls Farm (south west of Tollesbury)

3.5 Currently progressing through tender stage with framework contractors.

Mundon Creek (south of Maldon)

3.6 We recently received and agreed a target price supplied by Jacksons and have progressed to construction stage. This is due for summer 2018 delivery.
Bradwell Marina (near to)

3.7 Currently reviewing budget pricing and scope of works to Bradwell waterside assets. Two assets with severe damage at the marina were removed from this project due to cost. These will need to be picked up as a separate project working in collaboration with the land owner who will carry out most of the earthworks.

Wallasea Island southern side

3.8 Located on the southern side of Wallasea Island; scheme to carry out high priority toe and revetment repairs to the flood defence. Works dropped from programme and will be completed by RSPB.

The Highlands to Malyons and Beeches scheme (west from Hullbridge)

3.9 The section of flood defence to the west of Hullbridge between Highlands to Maylons and Beeches has suffered significant damage requiring Essex block revetment repair and reinstatement of the eroded toe. The first phase of the works was completed between 5 June and 15 September 2017. The next phase of works requires significant quantities of imported material and we have completed ground investigation works to verify if material can be won locally by creating a borrow dyke. This would significantly reduce vehicle movements to and from the site. Phase 2 works are scheduled to start in summer 2018.

The South Benfleet Flood Storage Area

3.10 This comprises an on-line storage reservoir on what was originally a tidal creek. The reservoir drains Benfleet Creek through a flapped tidal outfall with a weed screen. Works to construct a new weed screen were completed at the end of last year. The works allow safe access for our operatives to clean the screen and comply with the Reservoir Act 1975.
3.11 Flood modelling is being undertaken for Laindon Barnes flood storage area to show its performance in the 1:10,000 year event (0.0001% annual probability). This is the reservoir’s ‘safety check’ flood as determined by its risk categorisation under the Reservoir Act 1975. The modelling work will being done through the PDU this financial year. This modelling may identify improvements to the reservoir in order to deal with a flood of this scale.

Team 2100 Update

Tidal assessments and investigations update

3.12 We have begun testing the thickness of the Purfleet and Grays sheet piles, using ultrasonic technology; this work should be finished by the end of June. We have also begun desk-based analysis of the ground anchors; physical testing of these anchors will follow in the coming months.

Appraisal and delivery update

3.13 We have recently completed detailed site investigations at Shellhaven Dam and West Thurrock main sluices and the final two outfalls that form part of the Essex Outfalls package; the next step is to look at the resulting short list of options in closer detail.

3.14 At Tilbury Docks, we have undertaken steel sheet pile thickness tests and detailed visual inspections on all the assets; we are currently drafting an engineering investigation report on our findings.

3.15 At Hadleigh Marshes we have completed non-intrusive geophysical investigations. Intrusive testing is scheduled to begin in August and last for approximately four weeks. At Canvey Island, a geotechnical ground penetrating radar survey has recently been completed along the southern shoreline frontage to check for voids beneath the seaward concrete walkway and revetments.

3.16 The Phase 4 Essex floodgates package is progressing with temporary floodgate decommissioning, floodgate replacement, and floodgate refurbishment works continuing through the summer for gates in the Purfleet and Grays areas.
4. Lead Local Flood Authority Projects

Norfolk County Council – North Walsham Drainage Improvements

4.1 Norfolk County Council has recently started work on increasing culvert capacity in the Lyngate estate to help relieve flooding to business properties who were affected in 2016 and 2017. We hope this will be part of a package of works including improvements to Anglian Water and Norfolk County Council drainage assets.

5 Internal Drainage Board (IDB) Projects

Integrated Main River Maintenance Programme

5.1 In 2017/18 Norfolk Rivers IDB (NRIDB) completed £88k worth of work on Main River. Over 35km of watercourse was assessed in April 2018, generating approx. 22km of maintenance worth circa £60K for the 2018/19 programme, including work on the River Tud, Wensum, Whitewater, Stiffkey and Bur.

5.2 In early May the Norfolk Rivers IDB completed the final phase of a 1.1km sustainable maintenance / restoration work on the River Whitewater at Great Witchingham. This scheme involved the installation of timber and gravel deflectors, berms, and glides, alongside riparian tree planting. This work, in combination with an increased maintenance regime through this programme, hopes to deliver significant long term benefits to conveyance through this area.

5.3 In February 2018 works were completed at Henham Park by East Suffolk IDB to remove significant blockages from 2.5km of the River Wang and 0.3km of the River Hen. This work was supplemented by £5k provided by the Environment Agency under the Water Environment Improvement Fund to install around 20 timber deflectors in channel for habitat improvement.

5.4 The work was publicised in a recent article in the East Anglian Daily Times, demonstrating the efficiencies and benefits that can be gained through close partnership working.

Norfolk Rivers IDB (NRIDB) and Norfolk Rivers Trust Silt and Run-off management Projects.

5.5 Norfolk Rivers Trust Silt Management Project – The Norfolk Rivers Internal Drainage Board (NRIDB) team continues to help Norfolk Rivers Trust in the design, build and supervision of projects across the region to capture and minimise silt entering our river systems.
5.6 The Norfolk Rivers IDB has designed and built a silt interception feature, which will significantly reduce run-off of silts and sediments into the river Munn and adjoining watercourses. A film of the silt trap construction is available on the Broadland Catchment Partnership and Water Management Alliance (WLMA) twitter feeds or on request.

Norfolk Rivers Trust/FWAG – Swannington Beck, silt trap interceptor
5.7 We have undertaken design, construction management and delivery of a large silt trap for FWAG at Swannington. The silt trap closes flow paths into the Swannington beck through containment and slowing of flows.

Manor Farm Silt Management Project, South Repps.
5.8 The Norfolk Rivers IDB has designed and built a silt and run off interceptor project, which will significantly reduce flows from a known water run-off carrier at South Repps. The design incorporates the re-profiling and cambering of an existing track in order to move water in a new direction and then making it fall into new drains and ponds, to slow the flow and remove silt.

Halvergate Marshes. High Level Water Carrier
5.9 Main construction work for 2018 started early May and will continue into the autumn. Twelve water control structures will be installed during this year’s work allowing for water levels in the new high level carrier and the wider marsh network to be controlled. Three new environmental scrapes will be created when sourcing clay material for new embankment. Scrapes created last year have already proved to be popular habitats for a variety of overwintering and nesting birds. Approximately 4km of embankment are to be constructed this year.
Hempstead Marshes Trial
5.10 A new water control structure capable of remotely controlling water levels and recording water quality data is planned to be installed within an IDB main drain by the end of June. Water levels will then be gradually raised and changes to water quality and levels will be monitored and assessed.

Norfolk Rivers IDB (NRIDB)
5.11 River Wensum Restoration Project – The design & modelling work incorporating the higher level stewardship scheme, has been completed and agreed with the Landowner. Works programme has been tendered. The final phase of the project has been approved by the Environment Agency and now requires NPAS assurance before work can start in September. Mitigation work to enable this final phase of the project to continue is underway.

Broads IDB
5.12 Horsey boat dyke emergency works – Detailed temporary works design is underway. Working with the business community and landowners, a temporary mooring and permissive path is being constructed to enable continuity of access. Broadland Environmental Services Ltd is maintaining and monitoring temporary plug repair ahead of the main works. Contract documents and detailed designs have been produced and a September start date agreed. BESL will be mobilising plant and equipment to site in August, to facilitate a September start and a 12 week construction period.

Recommendation

6.1 The Committee is asked to:

A. Note the progress on the delivery of the programmes

Graham Verrier
Norfolk and Suffolk Operations Manager

DAVE KNAGG
Essex Operations Manager
RECOMMENDATIONS

The Committee are asked to note:
A. the Quarter 1 2018/19 capital and revenue programming and budget position; and
B. the RFCC contribution to the overall national targets and programme performance to date

1. Managing the programme

1.1 To ensure we are able to manage the programme effectively it is recommended that at each meeting RFCCs will:
   - Note the programme, including the projects consented within the programme;
   - Confirm the programme remains deliverable and there is confidence in achieving the outcomes; and
   - Consider requests made for local funding.

1.2 This paper assists the Committee in the above by providing the last in-year update and capital and revenue programme position for financial year 2018/19. It contains the information as presented to the Environment Agency East Anglia Area, Business Board on 25 June 2018.

1.3 Please refer to the ‘Glossary of terms used in FCRM programming and financial management’ that is included in the members handbook.

2. Summary of 2018/19 (1 April 2018– 19 June 2018)

<table>
<thead>
<tr>
<th>Element</th>
<th>Report Section</th>
<th>Current Position</th>
<th>Mitigation</th>
<th>Level of Concern (LMH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant-in-Aid (GIA) Position</td>
<td>3</td>
<td>The current GIA capital forecast (all RMAs) is £24.8m, against a budget allocation of £21.0m.</td>
<td>We have opportunity for early utilisation of Local Levy if needed for projects that are funded from both sources.</td>
<td>L</td>
</tr>
<tr>
<td>Local Funding Position</td>
<td>4</td>
<td>GDC and IDBP is expected to be fully used. Local Levy is not expected to be needed to support the revenue maintenance programme during 2018/19.</td>
<td>N/A</td>
<td>L</td>
</tr>
<tr>
<td>Changes to project forecasts</td>
<td>5</td>
<td>Forecast of GIA has increased by £3.8m since the start of year allocation, mainly as a result of Ipswich Tidal Barrier, TEAM 2100, and the asset recondition programme.</td>
<td>Increases in forecast have largely been balanced out by reduction elsewhere. See 3 above for current 'over programme' position.</td>
<td>L</td>
</tr>
</tbody>
</table>
Efficiency Savings 6(a) There are no efficiency submissions for Q1. All RMAs need to remember to submit efficiency claims.

Financial Risk 6(b) There is approximately £1m forecast risk for underspend in the programme, however, this is not thought to be an issue against a backdrop of the current over-programme (see section 3). N/A

New projects 7 There have been no brand new projects with approval to spend this financial year (as of 19th June 2018). New projects to be introduced are agreed nationally each month and introduced if budget is available and outcomes are likely to be achieved.

Partnership contributions 8 The non GiA contributions to the 2018/19 capital programme, including local levy, is currently forecast for is £2.3m. Although the partnership funding risk is low for the current year, identification of contributions for use in future years remains of paramount importance for the success of the programme. Considerable thought and training of officers is taking place to identify beneficiaries and understand how to gain partnership funding.

Outcome Measures 9 The outcome measure forecast for 2018/19 is 1074 (OM2 + 3), which is 14 higher than the start of year target of 1060. We continue to review projects to ensure that every outcome that can be claimed, is being claimed. Opportunity projects are being introduced into the programme as soon as we have good confidence that delivery will take place this financial year (see section 7 above).

KPI 962 (% of assets at required condition) 10 KPI 962 (assets at target condition) forecast is currently 96.2% against a target of 96.18%. Failure rates are still particularly high for this part of the country and the situation is closely monitored. We are mindful that the current good performance could easily be undermined by a flood event, as failure rates remain particularly high in this part of the country.

3. Grant-in-Aid Position

3.1 In Anglian (Eastern) RFCC the capital GiA budget across all RMAs is £21.0m. The latest forecast reported on 25 June 2018 shows an increase of £3.8m.

3.2 The largest component of the GiA budget reported in 3.1 above is for Environment Agency (EA) projects. For EA GiA the current budget is £18.2m against which the latest EA forecast for spending is £21.1m. This represents a forecast of £2.9m above the start of year allocation.

3.3 For EA GiA revenue maintenance the budget is £8.3m. The June 2018 forecast for revenue maintenance activities matches this budget - see figure 3.1 below.

Please note that revenue maintenance expenditure undertaken by RMAs other than the EA is not reported on in this paper.
3.4 The Internal Drainage Board (IDB) and Local Authority (LA) capital programmes for Anglian (Eastern) RFCC are represented below in Figure 3.2.

3.5 The IDB capital programme is forecasting £1.6m which is £1.4m greater than the start of year budget. The LA capital programme is forecasting £2.1m which is £0.5m less than the start of year budget.

4. Local Funding Position

4.1 Local Levy for 2018/19 is made up of the start of year balance transferred from 2017/18 plus the income expected for 2018/19, which together gave an affordable budget of £8.7m.

4.2 The RFCC has agreed to retain flexibility around the use of local levy for revenue maintenance activities and set aside £450k per year for use on revenue maintenance, if needed, this has not been needed for financial year 2018/19.
4.3 Forecast for Local Levy expenditure for 2018/19 is £1.6m of capital expenditure, this represents a reduction in forecast of £1m since the start of year.

4.4 General Drainage Charge (GDC) and IDB budgets are forecast to be fully used during 2018/19.

5. Changes to project forecasts

5.1 Project forecasts vary throughout the year as opportunities and risks materialise. The table below lists the largest project variances when compared to the start of year allocation. Please note these are total values across all funding sources.

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Change to forecast since start of year. Total funding from all sources. (£k)</th>
<th>Reasons for change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Recondition programme</td>
<td>4,141</td>
<td>Additional schemes included in year, as part of the over-programme to mitigate against reductions elsewhere in Anglian (Eastern)</td>
</tr>
<tr>
<td>Ipswich Flood Defence Management Strategy: Tidal Barrier</td>
<td>3,334</td>
<td>Delays to the works programme led to reductions in Q4 of 2017-18, and an increase to the 2018-19 forecast. The cofferdam has been opened for navigation and work has commenced on the West Bank Tie in walls. There remain issues with the Control Building. The doors and louvres are currently being installed. Works to the Middle Island flood walls are generally complete except for the installation of the manual gates. Work on the East Bank Flood Walls has generally been completed and the coping stones are being installed.</td>
</tr>
<tr>
<td>Thames Estuary Asset Management 2100 Programme (Essex works only)</td>
<td>1,185</td>
<td>Parts of this scheme have been accelerated. This has resulted in an additional 14 OM2 being delivered this financial year.</td>
</tr>
<tr>
<td>Coggeshall and Kelvedon community flood alleviation</td>
<td>875</td>
<td>This scheme will be delivered in partnership with Blackwater Aggregates, and better protect 80 homes. Options appraisal is now complete. The preferred option for local caravan site owners is more expensive, so the project has been delayed slightly to determine if additional funds an be raised locally to enable this to happen. The project is still on schedule for delivery before March 2021.</td>
</tr>
<tr>
<td>Seawick Sea Defence</td>
<td>-708</td>
<td></td>
</tr>
<tr>
<td>Mundesley Coastal Management Scheme</td>
<td>-861</td>
<td>Development of the Outline Business Case is progressing well and should be with National Project Assurance Service (NPAS) for a assurance soon. Once assured the project will progress more rapidly. Project is still expected to deliver before March 2021.</td>
</tr>
<tr>
<td>Heybridge FAS-Maldon DC</td>
<td>-1134</td>
<td>This scheme had an allocation to be delivered by Maldon District Council, which is no longer the case. A solution will now be delivered by the Environment Agency in future years.</td>
</tr>
<tr>
<td>Great Yarmouth Flood Defences – Epoch 2 – 2016 to 2021</td>
<td>-6,014</td>
<td>Delays in developing and completing the business case have meant that the main delivery phase will now take place during 19-20 and 20-21.</td>
</tr>
<tr>
<td>Lowestoft Flood Risk Management Project (LFRMP)</td>
<td>-9,721</td>
<td>Progress has slowed due to additional challenges on design and funding for the tidal element.</td>
</tr>
<tr>
<td>Bacton Gas Terminal to Ostend Coastal Management Scheme</td>
<td>-10,200</td>
<td>The ambitions programme to construct in the summer 2018 construction window has not been met, however, construction is now scheduled for summer 2019.</td>
</tr>
</tbody>
</table>

Figure 5.1: Key Project variances since 1 April 2018.
6. **Efficiencies and Risks**

6.1 There are no efficiency submissions for Q1, our aim is to achieve efficiencies equating to 10% of the GiA spend each year.

6.2 A project risk can be defined as an event which could negatively impact upon the scheme’s delivery. Some risks have the potential to affect the benefits of the scheme; whereas others can impact upon spend. Risk in the programme is managed throughout the year and, where realised, reported each quarter as significant change to project forecast (known as a programme variance) – see section 5.

6.3 Risk of underspend or overspend is monitored closely throughout the year – the ‘risk’ allowance for each project has been reduced throughout the year as confidence is gained around what can be achieved before year end.

6.4 The current forecast for financial risk (19 June) is for around £1m underspend should the risks materialise. However, when considered against the over programme (section 3) this is not considered to be a significant issue.

7. **Additional Projects within the Programme and other expenditure opportunities**

7.1 There have been no brand new projects with approval to spend this financial year (as of 19th June 2018).

8. **Partnership funding**

8.1 One of the 6 year capital programme settlement conditions was to secure more than 15% of partnership funding contributions. The non GiA contributions forecast for projects during 2018/19 are listed in table 8.1 below.

<table>
<thead>
<tr>
<th>Project title</th>
<th>Partnership funding forecast for 2018/19 £k</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public &amp; Private income</td>
</tr>
<tr>
<td>Lowestoft Flood Risk Management Project</td>
<td>764</td>
</tr>
<tr>
<td>Coggeshall and Kelvedon community flood alleviation</td>
<td>529</td>
</tr>
<tr>
<td>Hemsby Flood Risk Mitigation Project</td>
<td>113</td>
</tr>
<tr>
<td>Needham Market flood risk management scheme</td>
<td>68</td>
</tr>
<tr>
<td>Community Coastal Partnership Support Funding</td>
<td>35</td>
</tr>
<tr>
<td>Lowestoft temporary tidal flood barriers</td>
<td>15</td>
</tr>
<tr>
<td>Felixstowe North. Works to recharge, improve groynes and part seawall 2017.</td>
<td>15</td>
</tr>
<tr>
<td>RMA project support</td>
<td>12</td>
</tr>
<tr>
<td>Alde and Ore Futures - Managing the Coast</td>
<td>6</td>
</tr>
<tr>
<td>Surge - Maldon Wall (the Granaries) UR1451</td>
<td>3</td>
</tr>
<tr>
<td>Steeple Bumpstead Flood Risk Reduction</td>
<td>3</td>
</tr>
<tr>
<td>Debenham Flood Alleviation Scheme</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>764</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 8.1: Partnership contributions spent on projects during 2018/19*
9. RFCC contribution to national Outcome Measure delivery

9.1 The suite of Outcome Measures defined in the ‘Glossary of terms used in FCRM programming and financial management’ is included in the members handbook. Outcomes are used to highlight the benefits achieved by carrying out capital projects. Nationally, the commitment to government is that we reduce flood risk to 300,000 households between April 2015 and 2021. This Comprehensive Spending Review (CSR) period is the key target for all Risk Management Authorities and - to provide confidence in achieving this target, the figures are split down into individual years and RFCCs.

9.2 Figure 9.1 shows the outcome measures expected to be delivered in 2018/19. Current forecast is for achievement of 1074 OM 2+3, which is 14 greater than our target of 1060.

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Start of year target</th>
<th>OM2 Forecast</th>
<th>OM3 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipswich Flood Defence Main Stage-Tidal Barrier</td>
<td>1010</td>
<td>1,010</td>
<td></td>
</tr>
<tr>
<td>TEAM2100 Programme - Anglian Delivery</td>
<td>50</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1060</td>
<td>1074</td>
<td>0</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td>1074</td>
</tr>
</tbody>
</table>

Figure 9.1: Outcome Measures forecast for delivery in 2018/19

10. Asset Condition Performance

10.1 The revenue maintenance programme helps to prevent assets from falling below their target condition; whilst our capital recondition programme restores assets to their target condition. This is measured as KPI 962 (see Glossary of terms used in FCRM programming and financial management).

10.2 KPI delivery remains challenging due to failure rates and availability of staff in the Asset Performance teams. However, the forecast for KPI 962 is currently 96.2% against a target of 96.18%.

11. Recommendations

11.1 The Committee are asked to note:

A. the Q1 2018/19 capital and revenue programming and budget position; and
B. the RFCC contribution to the overall national targets and programme performance to date.

Aaron Dixey
FCRM Programme Senior Team Leader
RECOMMENDATION

The Committee is asked to:

A. Note and support the ongoing work of the local officers with our multi-agency partners across Essex, Norfolk and Suffolk
B. Note and support the community engagement work we undertake to improve community resilience
C. Note and support ongoing efforts to technically improve the warning service and make it more effective and accessible for the public and partners

1. Purpose of the report and introduction

1.1 This paper is to make the Committee aware of the ongoing work of local teams to build relationships with our partner organisations to ensure efficient and effective multi-agency responses to flooding; improve awareness and resilience in our communities at risk and to maintain and improve the technical capabilities of the flood warning service in Essex Norfolk and Suffolk.

2. Incident Response

2.1 The Easter bank holiday saw heavy rainfall which kept our incident room open throughout the weekend. We issued 3 warnings on the River Chediston, Stour Brook and the Rivers Wid and Can along with 14 alerts across Norfolk, Suffolk and Essex, however there were no reports of property flooding.

2.2 We issued more flood alerts in response to spring rainfall at the end of April and due to tidal forecasts we manned all of the Thameside and Tilbury barriers in Essex and worked closely with our partners to keep them informed of the situation on Canvey Island. In Suffolk we helped our partner Waveney District Council to close the flood gates at Felixstowe.

2.3 One of our ADMs (Area Duty Managers) James Mason, was dispatched for a week in June to support the Environment Agency’s response in Sunderland to a large waste fire. When he got back to East Anglia, James was keen to share the benefits of his experience. He said “thanks to the ConOps (Concept of Operations) work and role harmonisation through the Major Incident Ready project, it was easy to pick up the reins quickly”. Oliver Harmer (North West Area Director) and his team couldn’t thank the mutual aiders enough for their support. He said, “the duty teams were all great”. The Environment Agency’s capacity to provide mutual aid for all types of incidents nationwide is much appreciated by our
colleagues. It puts us in a very good position to provide support where it’s needed and in maintaining a professional and resilient incident response both locally and nationally.

3. Community Engagement Activity

3.1 Our community outreach is continuing over the summer. Throughout July and August the Environment Agency will have stands at the Indian Summer Mela in Ipswich, Tendring show, ‘Get ready for Summer’ in Maldon and the Clacton air show. The stands will run fun activities aimed at children increasing their knowledge of what we are doing for them and their families. Our officers on the stand will provide the public with information and someone to talk too about the environment and what the Environment Agency does for them.

4.0 Training and exercising

Training with Partners

IREACT

4.1 The Environment Agency recently attended a workshop and field exercise organised by an EU funded project called I-REACT (Improving Resilience to Emergencies through Advanced Cyber Technologies). The project aims to improve how societies respond to incidents by using new technologies such as smart phone apps and drones. The event took place on 13 and 14 June and included a session in the Ipswich Area Incident Room which enabled the I-REACT project to demonstrate their new system in a live environment as well as review systems and technologies already available, used by Environment Agency. As part of the field exercise, we deployed Community Incident Officers (CIOs) with mobile devices and the Collector App, the Incident Command Unit (ICU) and displayed data via our Incident Management (IM) Portal and Drone platforms.

Sizewell Communications Exercise – Eagle Prepared 18

4.2 We participated in Exercise Eagle Prepared on 7 June. We used the exercise as an opportunity to practice the communication channels we would use during an incident at the Sizewell power station. The exercise went well and everybody finished the day more confident about how we would communicate important information should an incident occur.

Gt Yarmouth

4.3 On 25 July Great Yarmouth Borough Council, the Fire and Rescue Service, Norfolk Police and Great Yarmouth 6th Form College are participating with us in Exercise Dolphin. We will be testing the use of a new strategic equipment holding zone and command point for the area, which is not in danger of flooding. We will include details of how the day goes in the October papers.

Environment Agency Internal Training

Concept of Operations (ConOps)

4.4 All elements of the ConOps training have now been successfully delivered across East Anglia and our implementation and embedding of principles continued through the delivery of desktop exercises in April. Exercise Integrum was undertaken at both Ipswich and Brampton Offices to practice ‘cell escalation’ which included running through our response to flood and environment incident scenarios.

Flood Warning Duty Officer harmonisation training

4.5 We have carried out training to inform and update our flood warning staff to newly defined but nationally consistent role profiles. This standardises role responsibilities and activities and enhances interoperability across the Environment Agency. This will benefit our area should we require support during incidents.
Incident Operations

4.6 Following the contingency testing of flood boards at Woodbridge, as reported in April’s RFCC paper, on the 13 July we will conduct an early morning exercise involving the closure of Wells sliding floodgate. This will include the contingency operation around a variety of failure modes and is the latest contingency procedure testing of our most strategically important assets. In addition to this and as part of our readiness for the winter, our operations staff will be undertaking a review of all our response procedures during the next few months.

4.7 In June one of the national Incident Command Unit (ICU) vehicles visited our Ipswich office. This allowed staff to understand the technology and facilities that are available as the ICU acts as an extension of our incident room’s capabilities near the scene of an incident. We will be acquiring one for East Anglia by the end of 2018 and it will be available for use during environmental or flood related response operations.

4.8 We are planning a variety of field site visits for our office based duty staff as part of their familiarisation training in the autumn, which will enhance their decision making through improved local awareness.

5. RECOMMENDATION

5.1 The Committee is asked to:

A. Note and support the ongoing work of the local officers with our multi-agency partners across Essex, Norfolk and Suffolk.
B. Note and support the community engagement work we undertake to improve community resilience
C. Note and support ongoing efforts to technically improve the warning service and make it more effective and accessible for the public and partners

Peta Denham
(Area Flood Risk Manager)

Graham Verrier
(Norfolk & Suffolk Operations Manager)

David Knagg
(Essex Operations Manager)
RECOMMENDATION

The Committee is asked to:

A. Note and support the progress with the Thames Estuary 2100 (TE2100) Plan.
B. Note and support the engagement work being undertaken in order to develop the TE2100 Plan.
C. Note and support the progress developing the Thames Estuary Asset Management (TEAM) 2100 programme

1. Purpose of the report and introduction

1.1 To update the Committee on progress of the TE2100 Plan

2. Thames Estuary 2100 Plan

2.1 Implementation of the Thames Estuary 2100 Plan

The Thames Estuary 2100 team has updated the Implementation Plan for 2018/19. We recently ran two focus groups of key representatives from councils across the plan area, with the aim of gauging councils’ understanding of the plan and obtaining feedback on the objectives allocated to them. We wanted to understand any constraints to progress along with preferences for engagement and reporting. Based on the feedback we are now looking at how we can improve our engagement with the councils as well as amending and finalising the objectives before rollout over the next month.

2020 Review

2.2 We are currently developing the scope and setting up a project team for the 2020 review. This will be the first full review of the Thames Estuary 2100 Plan (the Plan) 10 years after it was initially developed. The project will involve a full review of the 10 indicators of change as set out in the Plan, which will give us an understanding of how the estuary is changing. The indicators include growth, sea level rise, changes in weather, policy and perception of flood risk. Based on the findings from this work, we will review the recommendations made in the Plan and determine whether they are still appropriate. We will work with our partners to deliver this review and the result will be an updated version of the Thames Estuary 2100 Plan which is likely to be published in 2021/22.

Engagement

2.3 In January, Essex County Council kindly hosted a meeting for local authority officers and members to enable a detailed update to be given by Environment Agency officers on both the Plan delivery and TEAM 2100 progress. There was good post-
presentation discussion and thanks to Councillor Simon Walsh for enabling the event to happen. We are currently planning the next engagement steps to keep the group informed.

2.4 In February members of the Thames Estuary 2100 team delivered a well-received training course for internal teams, at our Kelvedon office, as part of a number of workshops around the estuary. The training was designed as a refresher of the Plan and gave an overview of what is currently happening, the roles and responsibilities of different teams and a summary of the defences in the estuary. A number of group activities got the participants thinking about how the plan is already incorporated into their day jobs and ways to improve delivery. The training was also designed to gather feedback from internal teams on ways to develop relationships and consistency across areas. The Thames Estuary 2100 team will be using this feedback to improve our engagement both internally and with our partners.

Working with students

2.5 This year we have been joined by two undergraduates working on the Environment Agency’s FCRM foundation degree, who have both worked directly on the Thames Estuary 2100 project. We have also developed links with universities across the country, with university students carrying out dissertation projects which will contribute to our research needs for the 2020 review. This includes a Masters Student from Northumbria University studying Disaster Management and Sustainable Development, looking at perception of risk of both flood risk and climate change in the Thames Estuary.

Area update

2.6 Our East Anglia area teams, working with the Thames Estuary 2100 team, continue to engage with key stakeholders relating to safeguarding land for a potential future Thames Barrier. Discussions are ongoing with the Local Councils on both sides of the river where a future barrier could be located and with the developers of significant proposals and projects; both during pre-application and formal planning application stages. This includes continued engagement relating to the regeneration proposed at Purfleet, the development of a new port terminal on the site of the Tilbury power station (Tilbury 2) and at the pre-application stage for Tilbury power station.

2.7 As reported at the last RFCC meeting we have objected to the Purfleet redevelopment outline planning application, given the lack of safeguarded land for the future Thames barrier. We continue to engage with Thurrock Council and the developers to discuss the land requirements we will need to construct and operate a future barrier, which is currently proposed to be used for high density housing. We have taken account of advice from the Port of London Authority on navigational limitations. We have been working closely with the developers to try to find a more appropriate use for this land (which accords with the anticipated programme for the construction of a new barrier) to prevent future and significant disruption to the future community at Purfleet. We have commissioned independent regeneration advice to help explore these potential options. We have proposed a meeting with the Council and developers in late June to discuss this further.

2.8 Whilst we remain committed to trying to resolve this issue with the Council/developers within the context of the planning application, time to try and find a solution is reducing, with the potential for a decision at planning committee from as early as July.
2.9 We have now agreed the hydraulic flood modelling for the entire Purfleet site, which has allowed us to begin reviewing the supporting flood risk assessment. We also have outstanding objections to the outline planning application on flood defence design and ecology. Our objection on the Water Framework Directive has now been addressed.

2.10 On 6 April 2018 we responded to the reserved matters application for zone 1A of the Purfleet development. We have objected to the reserved matters application, in line with our approach to the outline planning application, over the lack of allowance for the future barrier. In addition, we have objections to this application on flood defences and Flood Risk Assessment (FRA); although this position will be reviewed in line with our assessment of the FRA for the whole development now the modelling has been approved.

2.11 The Tilbury 2 Development Consent Order examination is ongoing and will end on 20 August 2018. To date we have responded to the four written deadlines. We have also responded to two sets of questions set by the examining authorities and attended the first two days of oral hearings; further oral hearings are set for 27 and 28 June. We continue to work with the applicants regarding them producing a statement of common ground. Whilst some issues remain, the principle being taken to resolve these is agreed and much of the detail will be covered under protective provisions. We have agreed a Memorandum of Understanding (MoU) with the developer over the option for the future barrier at Tilbury, which is to be signed off in June. The MoU approach at Tilbury reflects the option for the future barrier at Tilbury; however our approach to the Purfleet planning applications reflects our preferred option for a future barrier at Long Reach (Purfleet).

2.12 Members of our Thames Estuary 2100 and Essex Asset Performance teams met with the applicants for Tilbury 2 on 22 May 2018 to discuss their flood risk design and how these could fit with the overall Thames Estuary 2100 Plan. As explained above, the details regarding flood defences at the site will be covered by protective permissions and detailed designs will need to be approved in the future.

**Thames Estuary Asset Management (TEAM) 2100 Programme**

2.13 We are now into our fourth annual plan. Most projects in Essex remain in appraisal stage with delivery programmed from 2019/20 onwards.

2.14 We have begun desk-based analysis of the ground anchors; physical testing of these anchors will follow in the coming months.

2.15 For the Essex Outfalls package of work, we are now entering the optioneering stage, which will begin with developing a long list of options for appropriate works at each site.

2.16 At Tilbury Docks, we have consulted Historic England and Port of Tilbury on our options for Tilbury Cruise Terminal and World’s End Pumping Station. We held a very positive meeting with the Port of Tilbury in May to update on the significant package of works within the Tilbury area and to seek opportunities for collaborative working and Port of Tilbury support of the TEAM2100 programme.

2.17 Tilbury Fort Power Station is progressing through the appraisal stage. The team is currently analysing the shortlist options through engineering, buildability, environmental and whole-life cost assessments. We are currently finalising the structural and geotechnical stability analysis of the Tilbury Fort frontage and looking to present these results in June.
2.18 At Hadleigh Marshes we have completed non-intrusive geophysical investigations. Intrusive testing is scheduled to begin in August and last for approximately four weeks.

2.19 At Canvey Island, after two successful workshops, work is progressing on the appraisal report and outline design options. No further testing is required at this time. We are keen to ensure a partnership approach to delivering the required works with respect to the development of the Canvey Seafront Masterplan commissioned by Castle Point Borough Council. Therefore, we held a productive workshop in March with officers and members of Castle Point Borough Council to explore possible options for revetment replacement along the southern frontage of the Canvey Island tidal defences.

2.20 We have recently begun appraising Benfleet, Fobbing and Easthaven barriers and their associated fixed defences, primarily floodwalls. For the first stage of this appraisal we will carry out topographic surveys and site inspections over the summer.

2.21 We are looking to work in partnership with beneficiaries throughout the Thames Estuary, to explore potential contribution options to deliver the TEAM2100 programme. We joined our Sustainable Places Account Manager to meet the South East Local Enterprise Partnership’s (SELEP) Strategy Manager in April and gave a high-level introduction to the Thames Estuary 2100 plan and the TEAM 2100 programme. The discussion was well received and we were referred to the chair of the SELEP Housing & Development sub-group (HDG), as it was felt this was the best forum to engage with SELEP representatives. The HDG is predominantly made up of Senior Management/Director/Chief Executive level colleagues along with a mix of public and private sector organisations (local councils and developers). We had a positive introductory telecom with the HDG chair in early May, again giving a high-level introduction to the Thames Estuary 2100 Plan and the TEAM 2100 programme. The main outcome of this discussion was an invitation to the next HDG meeting on 12 September 2018 for TEAM2100 to provide a short introductory presentation to explore shared areas of interest. This will predominantly look to secure funding opportunities to support the TEAM2100 programme and enable strategic conversations to collectively deliver the aspirations of the TE2100 plan for the remainder of the century.

2.22 We have been provided with a contact within Network Rail to organise a meeting to allow us to have an initial high-level strategic conversation regarding tidal flood risk in the Thames Estuary. We will discuss how we can work together to deliver the TEAM2100 programme and the TE2100 plan to best protect people, infrastructure, the environment and the economy from the devastating impact of flooding.

Best practice

2.23 TEAM2100 recently won the innovation award at the Institution of Civil Engineers (ICE) awards. We have submissions in for several others including Royal Society for the Prevention of Accidents, British Construction Industry and New Civil Engineer’s TechFest.

3. RECOMMENDATION

3.1 The Committee is asked to:

A. Note and support the progress with the Thames Estuary 2100 (TE2100) Plan.
B. Note and support the engagement work being undertaken in order to develop the TE2100 Plan.
C. Note and support the progress developing the Thames Estuary Asset Management (TEAM) 2100 programme

Mark Johnson - Area Coastal Manager
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RECOMMENDATION

The Regional Flood and Coastal Committee is asked to:

A. Note the June 2018 Flood and Coastal Erosion Risk Management News and Updates.

1. Introduction

1.1 This paper provides the June 2018 Flood and Coastal Erosion Risk Management News and Updates across government and the Environment Agency.

2. General Update, Key Articles to note

2.1 In this paper:

Planning for the future
- FCERM Strategy
- Flood and coastal erosion risk management – the next long term funding settlement
- Next Generation Supplier Arrangements (NGSA)
- Project Application and Funding Service

Working with others
- Rationalising the main river network (demaining)
- Empowering children and young adults to be ready for flooding
- Property Flood Resilience roundtable
- Natural Flood Management and Integrated Catchment Management Roadshow
- Flood Hydrology Road Map

- Environment Agency Coastal Practitioners Conference 2018
- International Update

Incident management and resilience
- Incident Management Portal wins award
- UK climate projections update
- Publishing Asset Maintenance data

Legislation
- Refreshing the Suite of Shoreline Management Plans
- Environmental Permitting Regulations

Useful links
- FCERM Research News
- John Curtin Blog
3. Planning for the future

**Flood and Coastal Erosion Risk Management Strategy**

3.1 The future is going to be challenging. Our climate is changing with increased risk of stormy weather and rainfall. Our population is growing. And society has high expectations. Between us we will face difficult decisions about how to manage the impact of this on flood and coastal erosion risk. We need a vision for the future - a strategy – to help us make those decisions in the right way.

3.2 We worked with a small group of partners from across the flood family to scope the questions we need to ask of ourselves. The group synthesised this into four core questions:
- What do we all want to protect and how collectively can we fund it?
- How can we all put water at the heart of everyone’s decision making?
- What part do individuals, communities and businesses play? What should our expectations be of each other? How can we improve the way we work together?
- How do we develop the current roles and responsibilities of professional partners to be effective, simple and clear?

3.3 People from across the flood and coastal community are coming together to discuss, develop and influence the strategy. Now is the time to have your say! We have set up a number of working groups and will be engaging with key sectors in the “flood family” – please let us know if you want to get involved or want some more information.

**Contact:** FCERMStrategy@environment-agency.gov.uk

**Flood and coastal risk management – the next long term funding settlement**

3.4 Our ambition is that the Environment Agency continues to have a long term funding settlement for all FCRM revenue and capital which aligns to our strategy aims and delivers more for the environment and people for every £ spent. We will do this by being prepared to inform Government decisions in Spending Review 2019.

3.5 We are now half way through our 6 year FCRM capital programme and have started to influence the next long term FCRM funding settlement. This is an opportunity to build on the successes of the current 6 year programme, whilst considering what needs to change to enable us to keep delivering for future need.

3.6 We have set up a joint EA/Defra Future FCERM funding project which will inform Government decisions about future funding for FCERM beyond 2020 (maintenance) and 2021 (capital).
Future funding need will be informed by:

- Long Term Investment Scenarios (LTIS) - which confirm that future capital and revenue investment needs to continue to increase to sustain or reduce existing levels of risk
- The 25 Year Environment Plan - which encourages a catchment based approach and more use of natural flood management solutions to protect and enhance the natural environment for future generations
- Potential amendments to the current partnership funding approach
- Acknowledging the role of flood and coastal risk schemes in wider economic development
- Capital support and national programmes including future systems requiring capital investment, to support incident and asset management.

Contact: jenny.hill@environment-agency.gov.uk

**Next Generation Supplier Arrangements (NGSA)**

3.7 Currently the majority of the Flood and Coastal Erosion Risk Management (FCERM) capital programme is delivered through the Water and Environment Management (WEM) framework. The WEM framework expires in July 2019, providing us with an opportunity to review how we do things. The future NGSA approach will be a combined procurement model, utilising existing approaches for large bespoke or minor works with a new Collaborative Delivery Framework (CDF) replacing WEM.

3.8 A significant proportion of the capital programme will be delivered through the new CDF by 6 Combined Delivery Teams (CDTs). Each CDT will be made up of both Environment Agency and delivery partner staff. There will be a separately appointed consultant and contractor in each CDT, sharing project and programme risks and rewards through financial incentive arrangements aligned to delivering our corporate objectives and value for money. The framework is being designed to allow for other Risk Management Authorities to join this collaborative way of working to allow us to work together to maximise our outcomes.

3.9 Our procurement notice was submitted to the Official Journal of the European Union in January, kicking off the formal procurement process for the CDF. Suppliers reviewed this submission and those that were interested completed a selection questionnaire. This has been evaluated, and a shortlist of bidders are being invited to the next stage of the process, where they’ll be asked to submit a detailed tender. For both Contractor and Consultant Lots, we have shortlisted 4 bidders for each of the 6 Collaborative Delivery Teams (CDTs), as set out in the figure below:

![Diagram showing CDTs and bidders]

We are finalising a procurement strategy for the supporting frameworks, including client support, mapping and modelling and specialist coastal.

Contact: thomasin.meadley@environment-agency.gov.uk
Project Application and Funding Service

3.10 The recently-published FCRM capital programme projects have now been uploaded to the Project Application and Funding Service (PAFS) on GOV.UK. PAFS is the online service that enables Risk Management Authorities to bid for government Grant-in-Aid for flood and coastal risk projects. All projects have now been reverted to ‘Draft’ status to allow project managers to update their project details ahead of the formal start of the annual capital programme ‘refresh’ in April. We are also looking to capture any new projects to inform our pipeline of work beyond the current 6-year (2015-16 to 2020-21) investment programme.

3.11 Risk Management Authority colleagues wishing to gain access to PAFS can register via the ‘Request an Account’ link on the GOV.UK page or email PAFS-support@environment-agency.gov.uk.

Contact: steve.sargeant@environment-agency.gov.uk

4. Working with others

Rationalising the main river network (de-maining)

4.1 We have completed the consultation on 3 of the pilots in South Forty Foot (Lincolnshire), Stour Marshes (Kent) and Suffolk (East Anglia). We received 16 responses and will publish the consultation response documents in May 2018 on GOV.UK. We feel that the low level of response to the consultations was due to the early engagement e.g. the public drop-ins organised by ourselves and our partners prior to the formal consultation allayed many concerns from landowners and communities. There was a mixture of comments but the responses did not include any significant new evidence or grounds for us not to progress the de-mainments once we have received the full agreement from partners.

4.2 Once we have agreement from partners we will formally publish a decision notice which will be followed by a 6 week appeals process. Providing there are no issues during the appeals process de-maining would then take place.

4.3 We are continuing to have discussions with partners in the remaining 2 pilots in the Isle of Axholme and Norfolk and providing we have agreement from partners, we will consult on the proposals this summer.

4.4 Before the end of the year we will undertake a full lessons learnt exercise, evaluate the pilots and update the Minister. We will make a business decision regarding future main river variations following the evaluation process and feedback from the Minister.

Contact: lucy.roberts@environment-agency.gov.uk or rachael.hill@environment-agency.gov.uk

Empowering children and young adults to be ready for flooding

4.5 Children will soon be ‘flood ready’ thanks to new evidence-based engagement material for Environment Agency staff to use in schools, with youth organisations and at events. It has been produced to give children a role as ‘active citizens’, not ‘passive victims’, in line with Lancaster University’s research. It is also shaped by the Duke of Cornwall Community Safety Award completed by youth organisations, and informed by the Key Stage 2 geography curriculum where relevant. The material includes My Family Flood Plan, a refreshed Flood Game, Emergency Bag activity and a ‘Flood Ready’ Certificate.

4.6 Alongside this, nine online classroom-ready GCSE/A Level Geography teaching resources about flood and coastal erosion risk management have been produced in collaboration with the Geographical Association.
Property Flood Resilience roundtable

4.7 The industry led property flood roundtable has just published its first year report. It details the significant achievements of the group implementing the Action Plan developed by Peter Bonfield and launched by Minster Coffey in November 2016. Solid achievements include: a BRE training course for Flood Surveyors; a new web portal; and a community project in Carlisle. The group now has around 40 members in the core roundtable with as many other participating in one or more of the 6 task groups led by different organisations. The Environment Agency lead on Task Group 5 which covers behaviour change. BRE have also developed a demonstration property on their site which won an award at the 2018 Flood and Coast conference.

4.8 Mary Dhonau is holding an event in Carlisle to celebrate the completion of the second project in the Cumbria Resilient Showcase project, which is part of the Roundtable activities.

Contact: Robbie.Craig@defra.gsi.gov.uk

Natural Flood Management and Integrated Catchment Management Roadshow

4.9 We are in the process of delivering 14 roadshows on Working with Natural Processes/Natural Flood Management (WWNP/NFM). At these event we look in detail at the newly published WWNP Evidence base.

4.10 The aim is that attendees will understand and feel able to champion the use of WWNP/NFM as a tool which can achieve a wide range of benefits for people and the environment (including flood risk management) by taking an integrated approach to catchment management.

4.11 The majority of the events took place in May and June, but there is one final event on 14 September at the Urban Hotel in Grantham. If you would like to attend please email WWNP@environment-agency.gov.uk, and in your email header, list the location and date.

Flood Hydrology Road Map

4.12 We plan to work with others to outline a future vision for flood hydrology in the UK and agree on prioritised actions and research needs to move us towards that vision.

4.13 Flood hydrology underpins all of our inland flood risk work. We use hydrology to convert rainfall and snow into flows for forecasting purposes or to estimate long-term flood risk. We also use hydrology to understand how catchments respond to changes in landscape, to understand the role of lakes and groundwater and to design and manage dams and urban space.

4.14 Many of our current methods are based on approaches that were developed in the 1990s and much of our current scientific understanding still dates back to the 1970s. We are now aware that risk changes over time and we need an approach that can reflect that. We also want to understand how flooding works across an area and what we can achieve by making interventions in the catchment. The National Flood Resilience Review calls for an
ambitious long-term approach to improve the way we look at hydrology and meteorology. Together, this has all led to the commissioning of these strategy and research road map projects.

4.15 We want to change mind-sets to alter the way we approach hydrology so it can be fit for both current and future flood risk management. We’ll be working with Natural Resources Wales, Scottish Environment Protection Agency, Northern Ireland Rivers Agency, academia and industry.

4.16 Our objectives
- To create a vision for flood hydrology 10-20 years from now
- To develop a list of prioritised user needs and actions we can take to address them.
- To develop a list of prioritised research needs to influence UK research
- To build links to create a robust community of flood hydrology expertise with a champion.
- To improve awareness and understanding of the impacts of flood hydrology in the flood risk industry.

Contact: anita.asadullah@environment-agency.gov.uk

Environment Agency Coastal Practitioners Conference 2018
4.17 The Environment Agency’s coastal practitioners got getting together with RFCC coastal leads, invited guests from local authorities, Defra, Natural England and Natural Resources Wales for their annual conference on 18 -20 June in Hythe, Kent. The event was an opportunity to discuss and share good practice. This year’s themes included coastal overview, beach management, research and innovation and coastal management past, present and future.

4.18 The Conference also included coastal site visits to the Dungeness Shingle Beaches, Dymchurch Sea Defence Scheme and the Lydd Ranges/Broomhill Sands Scheme.

Contact: andy.crates@environment-agency.gov.uk

International Update
4.19 We welcomed several international guests at the 2018 Flood & Coast conference. Many attendees enjoyed Jeff Lindner’s account of the impact of Hurricane Harvey on Houston and we received great feedback from Dutch colleagues who attended a workshop on Incident Management, which was held alongside the conference.

4.20 April’s international highlights included us hosting the first Levee Safety Partnership meeting of 2018. This is group of levee experts from the US Army Corps of Engineers, Rijkswaterstaat of the Netherlands and the Environment Agency, who share and develop levee best practice. The outcomes of last autumn’s comparative levee inspection exercise, which won a prize at Flood and Coast 2018, was a key topic for discussion. A joint paper on the outcome will be published in due course.

4.21 In May we were invited by the Foreign and Commonwealth Office to attend the conference for Caribbean Overseas Territories disaster managers, ahead of the 2018 hurricane
season. We heard about the terrifying and devastating experience of hurricane’s Irma and Maria along with the some of the response challenges. Our presentation on Flood incident management in England was well received, with particular interest in our communications approach.

Contact: ruth.allin@environment-agency.gov.uk

5. Incident Management and resilience

Incident Management Portal wins award

5.1 The Incident management portal has revolutionised the way we capture and use information during incidents. We can now get data from smart phones, drones, CCTV and social media from the incident into the 21 incident rooms across the country in real-time. This enables a better understanding of what’s happening during the incident; aids decision making and communications with partners and to the media.

5.2 The portal is used by over 2200 field staff and 225 mapping and visuals officers (MAVOs). We have already collected data including photos, videos and flood outlines from over 3000 locations across the country, increasing our understanding of the impacts of incidents.

5.3 The Incident Management Portal has been awarded a ‘Special Achievement in Geographical Information Systems (GIS) Award’, at the 2018 International ESRI User Conference in recognition of its outstanding use of GIS technology.

5.4 Jack Dangermond, President and Founder of ESRI, said: “The work of the Environment Agency stood out from more than 100,000 other applicants and I would like to congratulate you on a job well done.”

5.5 The next phase of the project will be looking at how we can apply this capability to other aspects of the Environment Agency’s work.

Contact: rob.jones@environment-agency.gov.uk and nick.jones1@environment-agency.gov.uk

UK climate projections update

5.6 The new climate projections, UKCP18, will be publically released in a ministerial launch in late November 2018. All UKCP18 datasets and accompanying products (user interface, guidance, etc.) will be released in late November, with the exception of the high resolution (2.2km) dataset, which will be released at a later date. From now until launch, the UKCP18 project will be in a phase of testing and evaluation of the projections and their delivery systems such as the website, science reports, data access and guidance. Climate science and data sets will be subject to an additional period of focussed climate science analysis. During this testing phase, contributors to Climate Change Risk Assessment 3 (CCRA3) and government bodies including the Environment Agency will be able to use the datasets to shape upcoming research and climate impact studies.

5.7 The datasets due for release in November include:

- Updated marine projections out to 2100 (10km) and new projections for mean sea level rise to 2300;
- Updated probabilistic projections over land (25km);
- New global climate projections (60km); and
New high resolution projections (12km).

5.8 The Environment Agency has started planning how we prepare in more detail and looking at what the results might mean for FCERM. This includes a research project to determine how climate allowances for fluvial and coastal flooding may change under UKCP18. We are working with our climate change research team to develop a detailed timeline and dependency tree for how the outputs will affect ongoing work/projects and our guidance.

Website: https://www.metoffice.gov.uk/research/collaboration/ukcp
Contact: ukcpproject@metoffice.gov.uk

Publishing Asset Maintenance data

5.9 At the end of March, we published the new interactive map of the Environment Agency’s Annual Flood and Coastal risk management (FCRM) asset maintenance programme for April 2018-March 2019 on GOV.UK. The map covers maintenance of channels, flood defences and structures on Main River and the coast and will be updated quarterly to show progress.

5.10 In addition to the map, the data is available as an Application Programming Interface (APIs). APIs are another way of providing the data so that it can be used by others to develop applications.

5.11 This is the first phase in publishing Asset Maintenance data. The next steps is to publish the 5 year maintenance programme by the end of the summer. Alongside this we are also looking at how to improve the existing service. You can find the programme here.

Contact: claire.hainsworth@environment-agency.gov.uk

6. Legislation

Refreshing the Suite of Shoreline Management Plans

6.1 The Environment Agency is co-ordinating a refresh of Shoreline Management Plans (SMPs) covering the English coast, which will be steered and delivered by Coastal Groups. This refresh will ensure that the current SMPs – developed between 2006 and 2012 - are fit for purpose in the coming years. We also want to make SMPs more accessible, in part through improved online presentation for the public and local authority planners.
6.2 SMPs set out a long term direction of travel for managing flood and erosion risk along the coast, and inform investment decisions. They need to provide confidence in the broad management approaches chosen, and be flexible enough to accommodate new circumstances and evidence.

6.3 The refreshed SMPs will take account of new guidance, monitoring and modelling, as well as political changes and the results of trials of different approaches to coastal adaptation. They will reflect:
- the latest science, monitoring and innovation;
- the ongoing evolution of the coast;
- local developments and priorities being set out in Local Plans;
- the content of other plans and strategies;
- developments in operational policy, particularly on funding and delivery of FCERM;
- progress in delivery of the SMPs.

Contact: nick.hardiman@environment-agency.gov.uk

Environmental Permitting Regulations

6.4 The Environment Agency has introduced new charges for permits for people to work in, over or near Main Rivers and sea defences. These changes mean our regulatory role is no longer subsidised through public money, so that government funding is invested directly on reducing flood risk and enhancing the environment. Activities which pose the greater risk to flooding and the environment incur higher regulatory charges, we’re working with our customers to explain how the changes impact them.

6.5 When we talked to our customers during the consultation period, several questions were asked in relation to future Regulatory Change. In response, we’ve devised a programme to review the regulations. The challenge is to make changes that meet the needs of the customer but ensure we maintain and mitigate the flood and environmental risks posed by those working in or near main rivers and sea defences. Defra has already consulted on minor changes to the regulations. Although these changes are small, overall they will make it easier for people to work in rivers.

6.6 This year, we also plan to review and extend our Standard Rules permits. This lowest cost permit allows customers to follow an agreed set of conditions in order to carry out an activity with minimal risk. We’ve received feedback that the current standard rules are too restrictive and prevents our customers applying for this type of permit. We'll initially engage with our customers to help shape changes before setting up a Public consultation this summer.

6.7 We’re also keen to explore how catchment scale permits can make it easier for land owners to obtain permission for activities on reaches of river. Catchment permitting enables multiple landowners to apply for a number of flood risk activities within a single permit. This will create efficiencies as we can assess all activities as part of a single consultation exercise. This benefits the customer as the permit will cost less. Our project teams will also be investigating the benefits of catchment permitting with the aim to make the process simpler.

Contact: joe.march@environment-agency.gov.uk

7. Useful links

FCERM Research News

7.1 The latest edition of FCERM Research News is now online: http://evidence.environment-agency.gov.uk/FCERM/Libraries/FCERM_Documents/Issue_29_-_March_2018.sflb.ashx. This newsletter details the work of the Joint R&D programme which serves EA, Defra, NRW
and Welsh Government along with all other England and Wales Risk Management Authorities. It provides highlights of recent and ongoing work and links to external research influence. We also have a newly launched Twitter account -there you can find out more about what we get up to and receive alerts of publications and other news: @FCRMResearchEA.

Contact: andy.moores@environment-agency.gov.uk

Engineers and the Environment – natural allies in our fight for a more flood resilient nation

7.2 John Curtin’s most recent GOV.UK blog talks about bringing together engineering and environmental disciplines, the importance of working alongside other organisations and how the new FCERM Strategy will be developed collaboratively to achieve the environmental improvements set out in the 25 year environment plan.

ALISON BAPTISTE
Director of Strategy and Investment
June 2018
RECOMMENDATION

The Regional Flood and Coastal Committee is asked to note:

A. The NFM Programme objectives and progress
B. The challenges of maintenance and liability and current guidance
C. The next steps for learning and development from the NFM programme

1. Background

1.1 This paper has been produced in response to a request at a previous RFCC chairs meeting to better understand the Natural Flood Management (NFM) Programme, and the challenges it faces associated with future maintenance.

1.2 The programme is moving from its development phase to delivery phase. Key challenges have included quantifying value of interventions and assuring business cases; building partnerships with organisations best placed to deliver NFM interventions; and developing plans for monitoring the impact of NFM measures over time. This paper provides an update on the programme and then focusses on the challenge of:
   • Agreeing appropriate maintenance of interventions after installation
   • Evaluating potential liabilities and agreeing responsibilities

2. The NFM programme: objectives and progress

2.1 Government funded a £15m Natural Flood Management (NFM) Programme to make NFM interventions across England and test their effectiveness. The projects were selected to fulfil 4 criteria specified by Defra:
   • reduce flood and/or coastal erosion risk;
   • improve habitats and increase biodiversity;
   • contribute to research & development; reducing the evidence gap for NFM; and
   • promote partnership working.

2.2 The £15m funding announced in July 2017 is shared between catchment and community scale programmes. Catchment scale projects are managed by Risk Management Authorities (RMAs) such as the Environment Agency (EA) and local authorities in partnership with Natural England and Forestry Commission. The community scale projects are mostly led by local environmental charities and community groups.

2.3 There are 60 projects in total in the programme, 26 catchment scale, and 34 community scale. The map attached in Appendix A shows where they are.
Catchment scale programme

2.4 Works have already started at Shipston, Warwickshire and Evenlode, Oxfordshire. Of the 26 projects, 20 have approved business cases. Of those yet to be approved:

- 2 are with project teams following first review last financial year
- 1 of the Yorkshire business cases will be submitted in May, as planned
- Bacton Sand Engine (Norfolk) will be approved in 2018/19. NFM funding is supporting a much bigger scheme (£9m of contributions alone).
- Marine Pioneer - Taw/Torridge (in Devon, local authority led) and Radcliffe and Redvales (in Greater Manchester, EA led) is expected in May 2018.

Community Scale programme

2.5 Of the 34 community scale projects, all have full financial approval and 32 of the projects will begin work in this financial year.

Salmons Brook is a larger project and has been assured by LPRG and has full financial approval. 6 of the projects have a legal agreement in place with the lead organisation (in the form of a grant “deed”, with appropriate terms and conditions) to claim the funding to begin work. 7 projects won’t need that (they are working with local authorities). This leaves 21 projects where the legal agreement is still to be completed. This step is underway in all cases.

2.6 The dates for construction start and construction finish in Appendix B were agreed with project teams following challenges from Minister Coffey in January 2018. We are now committed to meeting these deadlines.

2.7 It’s worth noting that NFM interventions are also being delivered as part of the wider 6 year programme. These are sharing learning with and from the NFM programme and will complement evidence directory. Examples of these include Leeds Phase 2, Oxford and Leicester FRMS as well as some smaller scale Local Levy funded projects which weren’t successful for the NFM competition.

3. Maintenance

3.1 One of the challenges faced by the project teams relates to ongoing maintenance of the interventions. Questions of what maintenance is required, who is responsible and who will pay, need addressing. Defra’s NFM funding is for a specific period of time, ending in March 2021 (the same time as the 6 year Capital Programme). Project teams are clear that there is no commitment beyond this time.

3.2 The questions in 3.1 are applicable beyond the NFM programme too. Our National Asset Management team is considering this along with developing the Asset Management Handbook to include some NFM interventions. Maintenance needs and costs associated with NFM interventions depend on each individual circumstance. Interventions that restore naturally functioning river systems or landscape features may need little or no future maintenance.

3.3 Many of the interventions in the NFM programme are on ordinary watercourses or in the landscape away from rivers. This means that they are lower risk systems, likely to play a modest role in managing risk and may not attract significant sums of funding for maintenance from central government. As changes in land management funding take place, it is possible that agri-environment funding may play a larger role in helping to sustain some of these features to help achieve a range of public benefits.
4. Liability

4.1 Liability is about who has responsibility if things go wrong. The concerns raised so far include if somewhere floods as a result of NFM works, which may not have done before their installation, who’s responsible? This is separate to ‘maintenance liability’ for these projects.

4.2 We will do what we can to support the community groups in their decision making to reduce risks. As part of the programme they are required to procure insurance to cover themselves in the unlikely event things go wrong.

5. Guidance on managing risks and liabilities

5.1 We are launching a quick-guide for Environment Agency staff and their partners to help understand and manage potential risks and liabilities associated with NFM interventions. The guide makes use of material developed as part of our “working with natural processes” evidence directory.

5.2 Our guidance advises project teams to review potential legal financial and reputation risks as NFM interventions are planned. Careful design, proper engagement of land-owners and managers and clear communication about future maintenance costs can manage these risks. If teams have concerns they should seek legal advice.

6. Next Steps

6.1 The NFM programme has some way to go before the projects start to yield data about the interventions. But we don’t have to wait that long to start learning lessons.

6.2 We will produce an interim review by the end of 2018. This will focus on the development of the programme (allocation, assurance and reporting). The report will share practical lessons.

6.3 We are asking projects to give an update on the profile and timeline of their projects. This mirrors the refresh process for the Capital Programme, and is working to the same timetable.

6.4 There is currently around £350,000 of unallocated funding for the NFM programme. This was held as a contingency in consultation with Minister Coffey. Now is the time to allocate this funding, and we will be working with the existing project teams to offer them the chance to explain what they could use some extra funding for. This will be complete by the end of summer 2018, so that allocations can be part of the 2019-20 project budgets.

6.5 Minister Coffey has requested 6 monthly programme reports. The next is due in July 2018, and will update her on the latest forecasts of funding, outcomes and milestones.

7. Recommendations

7.1 The RFCCs are asked to note:

A. The NFM Programme objectives and progress
B. The challenges of maintenance and liability and current guidance
C. The next steps for learning and development from the NFM programme

Author: Jon Hollis, Natural Flood Management Programme Manager
Sponsor: Alison Baptiste, Director of FCERM Strategy and Investment
Date: 29 May 2018

Appendix A – Project Location Map
Appendix B – Programme Position
### Appendix B – Programme Position

#### Catchment scale programme

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Start Date</th>
<th>Full Business Case</th>
<th>Strategic Outline Case</th>
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## Community Scale Programme

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### Total

- **1,590**: 194 | 719 | 460 | 211 | 1,595 | 778 | 1,011 | 620 | 395 | 2,914 | 7,402
RECOMMENDATION

The Regional Flood and Coastal Committee is asked to note:

A. The progress being made in the Asset Management Strategy

1. Introduction

Background

1.1 This paper gives an introduction to modernising FCRM asset management

1.2 In East Anglia we are great at managing our FCRM assets, but we can be even better. Last year, following a number of independent reviews and increased funding, the Environment Agency published our 5 year FCRM asset management strategy. This set out ambitious plans to be even better at managing our assets and achieve our vision of becoming industry leaders.

1.3 Key outcomes set out in the strategy include:
   - Reliable, resilient assets
   - Optimise value from assets
   - More properties protected
   - Greater transparency
   - Enhanced skills
   - Better quality data and information

1.4 We are already doing great work towards excellent “whole life” asset management and achieving these outcomes. For example we are:
   - Using new systems to plan, publish and deliver our large maintenance programme.
   - Refurbishing existing and construction new assets as part of the capital programme.
   - Strengthening our capital refurbishment and revenue maintenance programmes
   - Focussing on “strategically important assets”.
   - Developing and exercising asset contingency plans & operational action plans.

ISO55000 Asset Management Standard

1.5 Following a commitment by Directors, we will be seeking ISO55000 certification in December 2018. This is an international standard which sets out best practise in whole life asset management. Although not the final destination, certification will demonstrate that we are on track on our asset management journey.

1.6 To achieve this benchmark we will need to be consistent in our approach across the organisation, which means working to our “asset management model”, as shown below. The diagram below (Fig 1) shows our AM System model. It includes all of the activities that are fundamental to adopting a full lifecycle approach to managing our assets.
1.7 The System follows the concept model from the Institute of Asset Management, and has 6 high level themes, and 15 sub processes which cover both the end to end process of managing assets, and also the supporting activities that are fundamental to achieving this effectively and consistently.

1.8 The System has been developed to manage all assets with a flood risk purpose, as defined in our Asset Information Management System (AIMS). It includes all teams that help us deliver FCRM asset management.

1.9 It does not currently include the management of other EA assets (e.g. fleet, hydrometry and telemetry, navigation).

Which teams and assets does this apply to?

1.10 The improvement programme and the ISO55000 certification applies to all flood risk assets on Main River and the coast, including those owned and maintained by 3rd parties. It doesn’t currently include:

- Coastal protection assets.
- Surface water flood risk assets and assets on Ordinary Watercourses.
- Water, land and biodiversity assets (hydrometry, telemetry and navigation).

1.11 Environment Agency Operations and FCRM teams clearly play a leading role in managing our flood risk assets and are “in scope”. Other teams also play an important role, providing “specialist services”. These include National Capital Project Management Service, Hydrometry & Telemetry (H&T) and Fisheries Biology & Geomorphology (FBG) teams.

2. The Asset Management Framework

2.1 The Asset Management Framework (Figure 2) is a useful way of illustrating the line of sight within FCRM asset management, and how the EA’s corporate objectives are translated into AM strategic objectives in the national planning cell, and then turned into tactical delivery objectives in the area planning cell.

2.2 It shows where the governance structure fits in to assure activity at the appropriate level, the main area delivery activities, and also highlights the specialist services we use to help deliver our overall AM objectives. These are all contained within the AM System, as demonstrated by the red boundary.
Figure 2 – FCRM AM Framework
Specialist Services & Activities

2.3 Specialist services are those teams which are essential to helping us deliver our AM objectives, but are not in the direct line management of the AM System or asset owner and so do not have direct accountability for the asset.

2.4 They often have a wider remit than just delivering FCRM asset management, such as our legal or estates teams, or are external companies such as the contractors who deliver some of our maintenance activities.

2.5 The current list of our specialist services are:

- National Environmental Assessment Service/Fisheries Biodiversity and Geomorphology.
- NCPMS (& Supply Chain)
- Procurement
- Flood Resilience –wider engagement role
- Estates/Legal
- Finance
- National Ops Delivery & PDU
- Hydrometry and Telemetry
- Public Sector Cooperation Agreements (Risk Management Authorities)
- Team2100
- Externally contracted maintenance/minor scheme delivery

2.6 There are agreements in place between the asset/AM system owner and the specialist service to agree what is to be delivered and assure the end result meets the objectives.

2.7 A key example of this would be the arrangement with the specialist service NCPMS. The expectations of NCPMS with regard to the work they do on FCRM assets (Capital design & build) are laid out in their own service levels, and at a scheme level, the asset risk is controlled by the Senior User, who works on behalf of the asset owner to handover a scheme to NCPMS for delivery, monitors the asset during the life of the project, and signs off the scheme on completion as part of the handback process. This is a well-used and documented process.

The Scope of ISO55000 Certification

2.8 Our initial certification will only focus on our management of FCRM assets. We will need to provide evidence of how we do things now, i.e. our ‘as is process’, and also that we have a plan of continuous improvement in place.

2.9 The national teams who are directly responsible for the AM system will be expected to explain how the system works to achieve our AM objectives, and how it is monitored and assured.

2.10 The area teams who support the asset owner will be expected to provide evidence of how the system works at an area level, and how they are complying with the relevant processes and guidance.

2.11 The specialist services will be expected to explain how the relationship works between themselves and the asset owner, and how risks are managed. They will not be expected to explain or provide evidence of their day to day activities/or compliance with their own processes/guidance. In ISO55000 terminology, these specialist services are termed ‘outsourced’.
RECOMMENDATION

The Regional Flood and Coastal Committee is asked to note:

A. The progress being made in the Asset Management Strategy

Author
Martin Howarth
Asset Management Lead, East Anglia
Environment Agency
## Anglian (Eastern) Regional Flood & Coastal Committee (RFCC)
**Friday 20 July 2018**
**Venue:** Landmark House, Egerton Road, Ipswich, IP1 5PB

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<td>2. Declarations of members’ interests</td>
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<td>3. Chairman’s announcements</td>
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<td>7. Members’ slot</td>
<td>All</td>
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<tr>
<th>Main Agenda Items</th>
<th>Lead</th>
<th>Page</th>
<th>Timing</th>
</tr>
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<tbody>
<tr>
<td>8. Feedback from the Anglian Eastern RFCC Annual Review Event, held on 16 May, including next steps</td>
<td>CM / PH</td>
<td>-</td>
<td>10:20</td>
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| 9. Update from the Engagement sub-group  
  - Terms of reference  
  - Future planning from group | CM / TB | - | 10:30 |
| 10. Communications service level paper and update (EFCC 18/05) | PL | 17 | 10:40 |
| 11. Developing the FCERM Strategy (EFCC 18/06) | PD | 21 | 10:50 |
| 12. FCRM Capital And Revenue Programme Refresh And Next Long Term Funding Settlement For FCRM. (EFCC 18/07) | AD | 31 | 11:10 |
| 13. Natural Flood Management (EFCC/08) | NC / MB | 35 | 11:40 |
| 14. Update from Suffolk County Council includes information on the Holistic Water Management Project | MH | - | 12:10 |

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<tr>
<th>General Business</th>
<th>Lead</th>
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<th>Timing</th>
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<tr>
<td>15. Forward look (EFCC 18/09)</td>
<td>All</td>
<td>41</td>
<td>12:30</td>
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<tr>
<td>16. Key Items from Information Papers</td>
<td>All</td>
<td>43</td>
<td>12:40</td>
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<tr>
<td>17. Any other business</td>
<td>All</td>
<td>-</td>
<td>12:50</td>
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**Lunch**
13:00

Visit to Ipswich Barrier – Including Update on the project from Andrew Usbourne
14:00

**Date of Next Meeting**
Friday 19 October 2018 – Committee Room 1, County Hall, Market Road, Chelmsford CM1 1QH

**Information Papers (for noting only)**
- Developing the Anglian (Eastern) RFCC Programme (INF/E135)
- Delivering the Anglian (Eastern) RFCC Programme (INF/E136)
- FCERM Program Update 2018/19 Quarter 1 – Current in-year position (INF/E137)
- Incident Response Paper (INF/E138)
- Implementation Of TE2100 Plan – 2018/19 Q1 Update (INF/E139)
- Flood And Coastal Erosion Risk Management Update, June 2018 (INF/E140)
- Natural Flood Management Programme (INF/E141)
- Asset Management Strategy – ISO55000 (INF/E142)
Glossary of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABCs</td>
<td>Area Base Controllers</td>
</tr>
<tr>
<td>ABD</td>
<td>Areas that Benefit from Defences</td>
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<tr>
<td>ABI</td>
<td>Association of British Insurers</td>
</tr>
<tr>
<td>ADA</td>
<td>Association of Drainage Authorities</td>
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<tr>
<td>AFFS</td>
<td>Anglian Flood Forecasting System</td>
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<tr>
<td>AIP</td>
<td>Asset, Investment and Planning</td>
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<td>ASM</td>
<td>Asset Systems Management</td>
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<td>ASP</td>
<td>Asset Safety Process</td>
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<td>Biodiversity Action Group</td>
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<td>BAP</td>
<td>Biodiversity Action Plan</td>
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<tr>
<td>CFMPs</td>
<td>Catchment Flood Management Plans</td>
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<tr>
<td>CGLA</td>
<td>Capital Grant in Aid</td>
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<td>CHaMP</td>
<td>Coastal Habitat Management Plan</td>
</tr>
<tr>
<td>CIL</td>
<td>Community Infrastructure Levy</td>
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<tr>
<td>CLG</td>
<td>(Department for) Communities and Local Government</td>
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<tr>
<td>COBR</td>
<td>Cabinet Office Briefing Room</td>
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<tr>
<td>CRFCC</td>
<td>Central Regional Flood &amp; Coastal Committee</td>
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<tr>
<td>CSR</td>
<td>Comprehensive Spending Review</td>
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<tr>
<td>DEFRA</td>
<td>Department for Environment, Food and Rural Affairs</td>
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<tr>
<td>EA</td>
<td>Environment Agency</td>
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<tr>
<td>EELGA</td>
<td>East of England Local Government Association</td>
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<tr>
<td>ERFCC</td>
<td>Eastern Regional Flood &amp; Coastal Committee</td>
</tr>
<tr>
<td>EFRA</td>
<td>Environment, Food and Rural Affairs select committee</td>
</tr>
<tr>
<td>EMF</td>
<td>Elected Members Forum</td>
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<td>ERYC</td>
<td>East Riding of Yorkshire Council</td>
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<tr>
<td>FAS</td>
<td>Flood Alleviation Scheme</td>
</tr>
<tr>
<td>FCERMF</td>
<td>Flood Risk and Coastal Erosion Risk Management</td>
</tr>
<tr>
<td>FCRM</td>
<td>Flood and Coastal Risk Management</td>
</tr>
<tr>
<td>FCRPF</td>
<td>Flood and Coastal Resilience Partnership Funding</td>
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<tr>
<td>FDGIA</td>
<td>Flood Defence Grant in Aid</td>
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<td>FIDO</td>
<td>Flood Incident Duty Officer</td>
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<td>FIM</td>
<td>Flood Incident Management</td>
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<tr>
<td>FRM</td>
<td>Flood Risk Management</td>
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<tr>
<td>FRMS</td>
<td>Flood Risk Management Strategy</td>
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<tr>
<td>FRM&amp;DM</td>
<td>Flood Risk Mapping and Data Management</td>
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<tr>
<td>FWD</td>
<td>Floodline Warnings Direct</td>
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<td>FWIP</td>
<td>Flood Warning Improvements Programme</td>
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<tr>
<td>FWMA</td>
<td>Flood and Water Management Act</td>
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<tr>
<td>GDC</td>
<td>General Drainage Charge</td>
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<td>GIA</td>
<td>Grant in Aid</td>
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<tr>
<td>HCA</td>
<td>Homes and Communities Agency</td>
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<tr>
<td>HECAG</td>
<td>Humber Estuary Coastal Authorities Group</td>
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<tr>
<td>HIRP</td>
<td>High Impact Refurbishment Programme</td>
</tr>
<tr>
<td>IDBs</td>
<td>Internal Drainage Boards</td>
</tr>
<tr>
<td>IDD</td>
<td>Internal Drainage Districts</td>
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### Glossary of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFCA</td>
<td>Inshore Fisheries and Conservation Authorities</td>
</tr>
<tr>
<td>IROPI</td>
<td>Imperative Reasons of Overriding Public Interest</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>LA</td>
<td>Local Authority (County, Borough or District Council)</td>
</tr>
<tr>
<td>LDF</td>
<td>Local Development Framework</td>
</tr>
<tr>
<td>LiDAR</td>
<td>Light Detection and Ranging</td>
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<td>LLFA</td>
<td>Lead Local Flood Authorities</td>
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<td>LNP</td>
<td>Local Nature Partnership</td>
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<td>LPA</td>
<td>Local Planning Authority</td>
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<tr>
<td>LRF</td>
<td>Local Resilience Forum</td>
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<td>LTIS</td>
<td>Long Term Investment Strategy</td>
</tr>
<tr>
<td>LTP</td>
<td>Long Term Plan</td>
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<tr>
<td>MAFPs</td>
<td>Multi-Agency Flood Plans</td>
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<tr>
<td>MEICA</td>
<td>Mechanical and Electrical, Instrumentation, Control and Automation</td>
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<tr>
<td>MMO</td>
<td>Marine Management Organisation</td>
</tr>
<tr>
<td>MORI</td>
<td>Market and Opinion Research Institute</td>
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<tr>
<td>MTP</td>
<td>Medium Team Plan</td>
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<tr>
<td>NAFRA</td>
<td>National Flood Risk Assessment</td>
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<tr>
<td>NAO</td>
<td>National Audit Office</td>
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<td>NCPMS</td>
<td>National Capital Programme Management Service</td>
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<tr>
<td>NFCC</td>
<td>National Flood and Coastal Committee</td>
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<td>NFCDD</td>
<td>National Flood and Coastal Defence Database</td>
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<td>NFU</td>
<td>National Farmers Union</td>
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<td>NIA</td>
<td>Nature Improvement Area</td>
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<td>NORA</td>
<td>Nar Ouse Regeneration Area</td>
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<td>NRE</td>
<td>National Resilience Extranet</td>
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<td>NRFCC</td>
<td>Northern Regional Flood and Coastal Committee</td>
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<td>NRG</td>
<td>National Review Group</td>
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<td>OM</td>
<td>Outcome Measure</td>
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<td>OPUS</td>
<td>Operation Public Safety</td>
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<td>PAB</td>
<td>Project Approval Board</td>
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<td>PAR</td>
<td>Project Appraisal Report</td>
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<td>Partnership Funding</td>
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<td>Preliminary Flood Risk Assessment</td>
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<td>Planning Liaison</td>
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<td>PPS25</td>
<td>Planning Policy Statement 25 - development and flood risk</td>
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<td>RBD</td>
<td>River Basin District</td>
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<td>Regional Environmental Protection Advisory Committee</td>
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<td>RFCC</td>
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<td>RFERAC</td>
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<td>Risk Management Authorities</td>
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<td>Regional Spatial Strategies</td>
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<td>SAB</td>
<td>SUDS Approving Body</td>
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<td>SAC</td>
<td>Special Area of Conservation</td>
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<tr>
<td>SAMP</td>
<td>System Asset Management Plan</td>
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<tr>
<td>SCAR</td>
<td>Suffolk Coast Against Retreat</td>
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<tr>
<td>SCG</td>
<td>Strategic Coordinating Group</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>SEA</td>
<td>Strategic Environmental Assessment</td>
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<td>SFW</td>
<td>Severe Flood Warning</td>
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<td>SFRA</td>
<td>Strategic Flood Risk Assessment</td>
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<td>SMP</td>
<td>Shoreline Management Plan</td>
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<td>SPA</td>
<td>Special Protection Areas</td>
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<tr>
<td>SR</td>
<td>Spending Review (e.g., SR10 = Spending Review 2010)</td>
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<tr>
<td>SRO</td>
<td>Surface water Run Off</td>
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<tr>
<td>SSSI</td>
<td>Sites of Special Scientific Interest</td>
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<td>STP</td>
<td>Short Term Plan</td>
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<td>SUDS</td>
<td>Sustainable Drainage Systems</td>
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<tr>
<td>SWMP</td>
<td>Surface Water Management Plan</td>
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<td>TCG</td>
<td>Tactical Control Group</td>
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<tr>
<td>TES</td>
<td>Training and Exercise System</td>
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<td>UA</td>
<td>Unitary Authority</td>
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<tr>
<td>WAG</td>
<td>Welsh Assembly Government</td>
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<tr>
<td>WFD</td>
<td>Water Framework Directive</td>
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<tr>
<td>WLMP</td>
<td>Water Level Management Plan</td>
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Glossary of terms used in FCRM programming and financial management

This glossary is intended as reference tool for Members to be used in conjunction with the papers on the RFCC programme.

It is a living document and will be updated periodically. If you have any feedback on it or would like additional clarification to support your role or learning & development then please contact vicky.eade@environment-agency.gov.uk
**Accrual**
Work done or a service received which has not been invoiced or paid for by the end of the accounting period. You allow for it to show a true figure of your financial position.

**Allocation**
The funding aligned to projects and programmes prior to Budgets being set; see Indicative Allocation and Final Allocation. It should be noted that receiving a funding allocation does not obviate the need to gain Approval.

**Appraisal**
The process of; defining the problem; setting objectives; examining options, assessing outcome benefit (inc benefit:cost ratio); weighing up costs, impacts (positive and negative) risks and uncertainties in order to make a decision. This is the period between Gateways 0 and 1. The appraisal follows a short Initial Assessment and culminates in a Business Case. The appraisal phase provides greatest scope for RFCC Members to get involved and support project development, eg as part of the associated community engagement.

**Approval**
This refers to a project’s Financial Scheme of Delegation (FSoD) approval following Technical Review or the Environment Agency Board approval to the programme.

**Area Flood & Coastal Risk Manager (AFCRM)**
Our Area Flood & (or) Coastal Risk Managers (AFCRMs) lead the delivery of the National FCERM strategy and our strategic overview role locally. A key part of our strategic overview role is the bringing together of evidence and working with communities, potential funders and partners, especially other Risk Management Authorities, to develop complementary approaches to managing flood and coastal erosion risk.

AFCRMs promote candidates and once they are in the programme they sponsor Environment Agency led capital projects through the scheme appraisal stage to the approval of the Business Case. This includes associated engagement, partnership funding activity and the programming relationship with other Risk Management Authorities. It is at this stage of project development that the committee have the greatest opportunity to help shape the delivery of measures within their area.

They also have a role to work with regards to in-year monitoring of projects being delivered by other Risk Management Authorities; this includes signing-off project Business Justification and Business Case documentation prior to submission for Technical Review.

The majority of their programme accountabilities are delivered through their Partnerships & Strategic Overview (PSO) teams.

**Asset**
Within flood risk these are usually categorised as either structures (eg sluices, pumping stations etc) or defences (eg channels, walls, embankments etc), but equally the term applies to data, models and other tangible products.

**Asset Performance (AP) team**
See Operations Manager

**Asset Systems**
An asset system is a collection of individual assets that work together to provide flood risk protection to properties in a geographical area. They are defined for Environment Agency systems (main river and sea defence) and have a System Consequence rating associated with them. They do not relate to Coastal Erosion assets as these are not the responsibilities of the Environment Agency.

**Baselining**
In January the RFCC issue their consent to the programme. The financial allocation to deliver that programme is based on forecast project costs at a snap shot in time. As forecasts vary month on month, baselining is the process for making final budget adjustments before the start of the financial year.

**Benefits**
The positive quantifiable and unquantifiable changes that a project is expected to produce.

**Budget**
This is the amount of money given to a project or available to a programme within the accounting system. Project and programme budgets are set based on needs identified at a snap-shot in time and are reviewed and re-set at appropriate milestones in the financial year (see Baselining).

**Business Case**
Following approval for a project’s Business Justification, a project’s business case summarises and presents the project appraisal for Technical Review and FSoD approval. For most projects the business case is presented within a Project Appraisal Report (PAR), completed proportionately to a national template for consistency; for low risk/cost projects the business case can be presented within a Form A.

**Business Justification**
A project’s business justification is reviewed following Initial Assessment to determine whether there is a case to progress to full project appraisal; this includes the development and presentation of the project’s Business Case. The justification is presented for Technical Review and FSoD approval through a Form A template for Environment Agency projects or FCERM7 for other Risk Management Authorities.

**Candidate**
A candidate is a problem or need that has been identified and a Risk Management Authority believes there is a requirement for financial investment. It is in effect a potential project that is most often identified and submitted as part of the annual Investment Needs round. A candidate is identified in a Project Mandate form. A Pre-Gateway 0 analysis is undertaken to determine if the need is valid and suitable for submission for funding. Once funding has been allocated the Project Mandate is authorised and the candidate becomes a project.

**Capital funding**
Capital funding is the money spent on the construction, creation, purchase and improvement or replacement of assets.

**Capital Programme**
The list of projects from all Risk Management Authorities, which are funded by FCRM GiA and or Local Levy along with third party contributions where applicable. The programme is prioritised by Partnership Funding Score, and delivery of statutory requirements, and is allocated through the Investment Needs process. This is usually spent on building new assets, or extending the life of existing assets (Capital Reconditioning).

**Capital Reconditioning (REC)**
A sub-set of the capital programme, the purpose is to repair/recondition or refurbish assets that are below their Target Condition (or forecast to fall below within a reasonable timeframe) to sustain the assets’ standard of service. In Anglian Region we package these works together for more efficient approval, procurement and delivery (called Reconditioning or RECON package). Works are sometimes also referred to as Capital Maintenance.
**Catchment Engineer**
See Operations Manager. The Catchment Engineer also has a role to sign-off project Business Cases on behalf of the Senior User prior to their submission for Technical Review.

**Comprehensive Spending Review (CSR)**
The Spending Review is a Treasury-led process to allocate resources across all government departments, according to the Government's priorities. These allocations span across a number of years with the current spending review period running from April 2011 to March 2015 (called CSR10).

**Consent**
The Flood and Water Management Act 2010 (section 23) requires the Environment Agency to:
- obtain the RFCC’s consent before the EA can implement its regional programme for the Committee’s region (s23(2)).
- obtain the consent of the RFCC before the Agency can issue a levy under Section 17 of the Act (s23(3)).
- obtain the consent of the Committee to the spending of revenue under Section 118 of the Water Resources Act in the region where the revenue is raised (s23(4)).
Consent is sought in January as part of presentation of the Final Allocation. Approval by the Environment Agency Board follows RFCC consent in February. The RFCC are asked to consent to the projects, activities and outcomes of the proposed programmes.

**Contributions**
This is funding from sources other than FCRM GiA as part of Partnership Funding projects.

**Cost Benefit Analysis (CBA)**
This measures the costs and benefits of a project in a common currency (preferably £s) over its lifespan, and assesses the balance between the two. Costs and benefits that cannot be monetised should still be considered. Whilst any project with a >1:1 ratio is viable, we should be looking for a greater return (1:5 as a minimum and 1:8 is quoted as the average return for FCRM investments).

**Current Magazine**
This is produced by our Framework partners and gives some great examples of programme and project delivery across the Environment Agency. Well worth a read.


**Delivery**
Scheme delivery follows Gateway 1 and concludes with Gateway 6.

**Do minimum option**
This option is where the minimum amount of action necessary is taken to manage an asset eg maintenance.

**Do nothing option**
This option is used in appraisal to act as a baseline against which all other options are tested. It assumes no action whatsoever is taken. In the case of existing works, it assumes for the purpose of appraisal that operating authorities cease all maintenance, repairs and other activities immediately. In the case of new works, it assumes that there is no intervention, and natural and other external processes are allowed to take their course.

**Do something option**
Any option other than do-nothing.

**E**

**Efficiency targets**
The Cabinet Office, via the Government’s construction strategy, require government departments to achieve capital efficiency savings. As part of Defra’s business plan, the Environment Agency nationally has a corporate target to achieve savings of 15% of the FCRM GiA allocation to the Environment Agency delivered elements of the capital programme by the end of this CSR period (2014/15). The aim is to deliver better outcomes and increase the number of properties protected through the reinvestment of efficiency savings.

To achieve this, the annual targets increase year on year and the national target has been split and allocated to each Environment Agency region. Targets have not been allocated or split down to RFCC or Environment Agency Area level.

2011/12 provides the baseline by which efficiencies are measured. Effectively there are two categories of efficiency.

- At Programme level; we build efficiencies into our GiA submission (ie ask for less budget upfront), this means there is more GiA available to allocate elsewhere at the start of the year.

- In-year project level: cash released by efficiencies made on projects after we have received a budget that can be reinvested

**Exception**
If a measurable element of a project changes (eg financial forecast or benefit delivery) beyond a certain limit then we call this an exception. Tolerances for such limits can be set at both an individual project, programme or corporate level. Exceptions are then escalated to the appropriate governance body. This may include the RFCC depending upon if, and what tolerances, have been agreed.

**Final Allocation**
The proposed final amount of capital and revenue funding allocated for the forthcoming financial year from the Investment Needs submission and following review of the Indicative Allocation. It is usually made in late November/December for RFCC review and consent in January. It is then signed off by the Environment Agency Board in February prior to Ministerial announcement. The word ‘proposed’ is used as the allocation is not confirmed until the Board have agreed it.

**Financial Mandate (FM)**
The Financial Mandate (FM) set by Defra contains the rules on Financial, Resource and Corporate Strategy and Performance matters through which Defra as lead sponsor administers control over the Environment Agency. These rules include limits on authority for expenditure and details where prior approval from Defra is required.

**Financial Scheme of Delegation (FSoD)**
The FSoD, as approved by the Environment Agency Board, prescribes the limits to the powers and duties that have been delegated to the Management and Officers of the Environment Agency within the terms of the Financial Mandate. Authority is delegated downwards from HM Treasury to our Government sponsors (Defra/WG) and then throughout the Environment Agency to the Board; Chief Executive (CE) and Directors; Regional Directors (RD) and other grades and specific posts. Capital project expenditure requires FSoD approval at Business Justification and Business Case stage (along with any Supplementary Expenditure) following Technical Review.

It should be noted that even if a project has received a funding allocation there are separate rules within the FSoD that govern and approve how that funding is spent; ie Allocation does not automatically mean Approval to spend.

**Flood and Coastal Erosion Risk Management Appraisal Guidance (FCERM-AG)**
The FCERM-AG has been produced by the Environment Agency. It provides best practice implementation guidance on appraisal and supports the Defra Policy Statement on Appraisal (June 2009). The previous Defra Flood and Coastal Defence Project Appraisal Guidance (FCDPAG) was published between 1999 and 2001. Since that time, the approach has changed from one focused on flood defences and coast protection to the management of risk.
The guidance was launched in June 2010 and its use is a requirement for all publicly funded Flood and Coastal Erosion Risk Management strategies and projects developed by Risk Management Authorities. The guidance aims to help users undertake efficient appraisals and encourages experience and knowledge to be applied at all stages. It has been designed based on key principles to reduce flood risk, enhance the environment, promote partnership working and to be proportional to the project being appraised.

**Flood & Coastal Risk Management Grant-in-Aid (FCRM GiA)**
The Government, through Defra, provides the majority of funding for flood and coastal erosion risk management activities for England in the form of Grant in Aid (GIa) administered by the Environment Agency. It is often still known and referred to as Flood Defence Grant-in-Aid (FDGiA). FCRM GiA is either Capital or Revenue. Capital is used for new assets, or extending the life, and is available to all Risk Management Authorities. Revenue is used for ‘day to day’ Environment Agency activities and maintenance activities.

**Flood Risk Categories**
There are four flood risk categories associated with Outcome Measures, they are:
- **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
- **Very Significant** – 5% (1 in 20) chance of flooding each year or greater

**Forecast**
This is an assessment by the project team of the most likely outcome of the project, including financial forecast, risk forecasts and outcome (benefit) forecasts. They are reviewed and updated on a monthly basis for the year end position, and also look at the total project forecast (ie when it is complete potentially on a future financial year). Project forecasts then inform a Programme level forecast position.

**Form A/FCERM7**
A template used for presentation of a project's Business Justification. A Form A is used for Environment Agency projects and a FCERM7 is the form for other Risk Management Authorities (RMAs) and can cover the whole business case for studies. A Form A can also be used for presentation of a Business Case for low risk projects.

**Form G/FCERM4**
The form (G for Environment Agency and FCERM4 for other RMAs) used when the forecast project costs exceeds the project’s FSdD approval, or there is a change to the scope of the project work. It presents the case for Supplementary Expenditure.

**Framework**
An approved list of external suppliers including contractors and consultants experienced in delivery of flood and coastal risk schemes. The frameworks are tendered for and allocated on a five year basis. The new framework WEM (Water and Environment Management) is due to begin in April 2013 and will be available for use by all Risk Management Authorities.

**Frequent Maintenance**
Revenue activities within the Revenue Maintenance programme carried out by the Environment Agency which prevents deterioration of an asset below Target Condition. This is an annual or recurring planned activity undertaken every 5 years or less, to keep assets at their Standard of Service. eg 2-yearly channel de-silting, bushing, grass cutting etc.
Gateways
The Office of Government Commerce promoted gateways as best practice. They are points during the project lifetime, when reviews are undertaken. They provide an opportunity for independent review of project progress and ensure we review business justification regularly. This enables us to stop projects that are not viable, or will not deliver the required outcome, as soon as possible. Applying the gateway review process provides:
- Consistency and streamlining;
- A clear audit trail;
- Opportunities for effective risk management and forward planning;
- A framework for supporting performance management and sharing knowledge;
- Ultimately, better value for money.

Pre Gateway 0
The desk top analysis of a Candidate to assess them to ensure they have the potential to be a viable project. This includes the production of a Project Mandate to set out the background and need for the project, and an analysis of the potential benefits of the project.

Gateway 0
Is the review and authorisation of a Project Mandate by the Programme Manager on behalf of the Programme Board. It authorises inclusion within the programme and once funding is confirmed it can progress as a project to Gateway 1 first via an Initial Assessment.

Gateway 1
This is when a project’s Business Case received FSod approval.

Gateway 2
This gateway checks that the project design has been carried out in accordance with the approved business case

Gateway 3
This gateway checks that everything necessary is in place to ensure that the organisation will receive value for money, and we can award the construction contract.

Gateway 4
At this gateway construction work has been completed to our satisfaction, the contract project manager has prepared a completion certificate, and it is ready to be issued. Outcome Measures can be claimed at this point.

Gateway 5
At this gateway the contractor has corrected all the defects listed in the defects schedule and we have issued the defects correction certificate.

Gateway 6
At this gateway the project is complete and the project is closed

Gateway 7
The project sponsor identifies the need for and arranges a post-project appraisal.

General Drainage Charge (GDC)
A local income, General Drainage Charge is raised for additional maintenance of Environment Agency flood risk management assets and is raised from landowners whose land is greater than 4ha and is not within an IDB Boundary. Anglian Region is unique in raising this charge. The charge rate is linked to the % change in Local Levy contribution by a Council Tax Band D property within the region and it has to be spent in the financial year it is raised.

Governance
Usually governance relates to consistent management, cohesive policies, guidance, processes and decision-rights for a given area of responsibility. For flood risk the term is mostly associated with the control of a project or programme via clear roles, a Project Board or the Programme Board.

H

Highland Water Charge
Charge made by IDBs to the Environment Agency for additional operating costs within their districts due to the need to convey water through IDB systems that originates from higher ground outside our their district.

IDB Precept (IDBP)
A local income raised from Internal Drainage Boards, with the rate generally set locally at RFCC level. It must be spent in the financial year it is raised and contributes towards Environment Agency FCRM activities within the river catchment.

Identified Needs
A term applied to elements of work within the Revenue Maintenance programme. It comprises all the Frequent and Intermittent Maintenance needs within an Asset System (over and above the Minimum Needs) to maintain the performance of that system of assets.

Indicative Allocation
This is the initial financial allocation (capital and revenue) for the forthcoming financial year, following the submission of the Investment Needs bid, and national prioritisation. It is presented to the RFCC at the October meeting for review / amendment. The RFCC are able to allocate local income to projects or activities as part of this process. Any changes made by the RFCC are then submitted for the final allocation, subject to them being affordable nationally, and delivering the same or more outcomes.

Initial Assessment
Once a candidate has passed Gateway 0, the Risk Management Authority will need to investigate the project further to develop the Business Justification. This is the initial assessment which gathers more specific data (ie surveys) than the desktop review as a candidate. It is a review to ensure that the project is worthy of full appraisal. The RFCC could use the outputs of this stage to make a more informed decision about the use of Local Income on a project.

Intermittent Maintenance
These revenue funded activities form part of the Environment Agency Revenue Maintenance programme. It comprises a suite of works that prevents deterioration of assets below their Target Condition. This is usually a one off activity or an activity undertaken at greater than 5 yearly intervals (ie bushing works or re-grouting of sea walls)

Investment Needs Submission
The needs based bid for FCRM capital GiA funding for all RMAs for the next five years. Its aim is to deliver specific outcomes or benefits (ie numbers of properties protected, number of assets at or above target condition, number of Ha of habitat created / protected). The process starts in April, and the submission is made in July following RFCC agreement.
**K**

**Key Performance Indicator (KPI)**
These are the Environment Agency’s corporate performance measures against which targets are set and agreed with Regions. They reflect our progress towards achieving our environmental outcomes and are one of the ways we demonstrate we are meeting our commitment to deliver. In programming, we report our position to the RFCCs on the key FCRM KPIs (962 and 965).

**Key Performance Indicator 962 (KPI962)**
KPI 962 reports the percentage of assets that are at or above their target asset condition, known as ‘passing assets’. The Environment Agency reports on all Flood Risk Management assets on Main River, regardless of who owns or manages them. The national target is split by Region and, in Anglian, by the three RFCCs.

**Key Performance Indicator 965 (KPI965)**
KPI 965 quantifies the number of households that are at increased flood risk from assets that are not at their target flood defence condition (‘failing’ assets). In an ideal world all assets would be at condition and, hence, the additional households at risk would equal zero.

**L**

**Large Projects Review Group (LPRG)**
Previously known as National Review Group (NRG), it has the same Technical Review and assurance function as the Project Assurance Board (PAB) but recommends technical and financial approval for large and/or complex projects over the value of £10 million. It meets on a monthly basis, and reviews projects from all Risk Management Authorities across England & Wales.

**Local income**
A collective term for Local Levy, General Drainage Charge and IDB Precept income.

**Local Levy**
A local income raised by each RFCC to fund FCERM activities within the region that are a local priority and to support Partnership Funding projects by attracting FCRM GiA. The Local Levy required is discussed by the RFCC annually in January and voted on by Local Authority members only. The total agreed levy needed is raised from all LLFAs within the RFCC boundary and is proportioned across them based on the equivalent number of band D council tax properties that each LLFA has in the RFCC’s area. This means that where Local Authority boundaries cross RFCC boundaries they may pay different rates of levy to different RFCCs. Local Levies do not have to be spent in the year they are raised as balances can be carried forward.

**Long Term Investment Strategy (LTIS)**
This sets out the scale of the investment needed nationally to meet the FCRM challenges over the next 25 years. The current LTIS was published in 2009 and was called ‘Investing for the Future’ (it is currently being updated). It sets out:
- the present scale of flood and coastal erosion risk, and the achievements in managing it so far;
- an analysis of the investment needed to adapt to climate change and manage the potential increased risk over the period 2010-2035;
- ways to manage flood and coastal erosion risk more efficiently;
- an analysis of the benefits of investment, and the potential to broaden the sources of investment.


**M**

**Maintenance Protocol**
Our asset maintenance protocol sets out our approach to maintaining flood and coastal risk management assets in England. It describes how we decide which assets we maintain and how we work with those affected by our decisions.

The National Flood and Coastal Erosion Risk Management (FCERM) Strategy for England describes the strategic approach to maintaining our flood and coastal risk management (FCRM) assets. The asset maintenance protocol for England is an important part of the FCERM strategy and will support its implementation. It will help us apply a consistent approach to identifying which low risk assets should no longer be maintained and how we will work with those affected by our decisions. Reducing our investment in low risk assets will allow us to focus our maintenance in higher risk locations.


**Medium Term Plan (MTP)**
The Medium Term Plan (MTP) is the spreadsheet that captures the capital Environment Agency, Internal Drainage Board and Local Authority candidates and projects over the next 20 years.

**MEICA (Mechanical, Electrical, Instrumentation, Control and Automation)**
The acronym for the regional team (that reports to an Operations Manager) and the type of assets that they look after. MEICA assets are typically pumping stations and other major assets with complex operational arrangements. The team also develops and manages the carbon reduction work.

**Minimum Needs**
A term applied to elements of work within the Revenue Maintenance programme. It is the lowest unavoidable cost to maintain statutory compliance and continue operation in an Asset System over the next year. We capture this figure (and all Identified Needs) in System Asset Management Plans (SAMPs). In undertaking the minimum maintenance required, asset condition may decline as a result. Typically this will mean that we ensure our assets meet Health and Safety standards for staff operating them, the public, and that we ensure our environmental obligations are met (eg WFD compliance).

**Moderation**
Not all capital Candidates contribute towards Outcome Measures targets, however, there is a clear and demonstrable need for them, eg for statutory or legal reasons, emergency works, health and safety, or time dependant works. In these cases there will be moderation evidence with the Project Mandate. Candidates with moderation are screened nationally as part of the Investment Needs submission to ensure the case is clear and robust, prior to the allocation of any funding.

**National Allocation & Programming Team**
Within the FCRM Directorate at Head Office, this team develops a set of key principles for the allocation of FCRM GiA to the Environment Agency and other Risk Management Authorities. The team are responsible for translating the Spending Review funding levels into national and regional budgets for all Flood and Coastal Risk Management (FCRM) and corporate activities funded by FCRM GiA.

**National Capital Programme Management Service (ncpms)**
A national Operations team, the National Capital Programme Management Service (ncpms) project manages schemes on behalf of Area teams. In Anglian Region they manage approximately 80%-90% of the Environment Agency delivered capital programme and their services can also be used by other Risk Management Authorities.

**National Environmental Assessment Service (NEAS)**
The National Environmental Assessment Service (NEAS) is responsible for managing the environmental impact of capital and revenue programmes to ensure projects are compliant with environmental legislation, have minimal environmental impact, uphold high standards in environmental design and contribute to national and regional environmental targets.
Operations Manager
Our Operations Managers lead on our asset management work to deliver professional asset creation, maintenance and operational services for local communities. This includes sponsoring Environment Agency led capital projects through their Delivery phases and the associated budget management. They are also accountable for the identification of need, prioritisation and delivery of the Revenue Maintenance programme.

Their programme accountabilities are delivered through their Asset Performance teams and Catchment Engineers.

Opportunities
This is a term that is used for candidates that can be brought forward within a financial year to make the most of any available budget, or indeed existing projects that can be accelerated.

Outcome Measures (OMs)
A suite of performance measures specifically related to managing flood and erosion risk. They replaced the priority score system and are used to assess the benefits of projects. They help prioritise the programme of works from all Risk Management Authorities and OM1 to OM4 are used as part of the Partnership Funding score to calculate the FCRM GiA available to a project. Flood and Coastal Erosion Risk Management have targets set for each OM. They are listed below:

OM1 - The ratio of benefits to costs that a project delivers. To ensure consistency in all schemes this is calculated over the whole life of the project (ie including the design, build, operation, maintenance and expected refurbishments). To mitigate for inflation, these figures are discounted to ‘today’s’ price. This is applied to both costs and benefits and called Present Value whole life. A simple way to think about it, if we had all the money up front, how much would we need in the bank, allowing for interest on the account, so that we had a balance of £0 when the asset reached the end of its life. At a national programme level we aim for a minimum of 5:1, however, for the last CSR period we achieved a programme ratio of 8:1.

OM2 - The number of households moved out of any flood probability category to a lower probability category (see flood risk categories).

OM2b - The number of households moved from the very significant or significant probability category to the moderate or low probability category (see flood risk categories). In this case the 1:75 year (1.33% probability of flooding in any particular year) is the threshold.

OM2c - 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 (OM2b). Therefore they are less likely to experience difficulties in arranging mortgages or insurance.

OM3 - The number of households with reduced risk of coastal erosion. Therefore they are less likely to experience difficulties in arranging mortgages or insurance.

OM3b - The number of households protected against loss in 20 years from coastal erosion. Therefore they are less likely to experience difficulties in arranging mortgages or insurance.

OM3c - The number of households in the 20% most deprived areas protected against loss in 20 years from coastal erosion. Therefore they are less likely to experience difficulties in arranging mortgages or insurance.

OM4a - Hectares of water dependent habitat created or improved to help meet the objectives of Water Framework Directive. Remedies to improve condition of Sites of Special Scientific Interest and measures needed for water bodies to achieve good ecological status/potential, meeting our statutory obligations under both the Countryside and Rights of Way Act and WFD.
OM4b. - Hectares of intertidal habitat created to help meet the objectives of the Water Framework Directive for areas protected under the EU Habitats / Birds Directive. New habitat is created to offset habitat being lost to coastal squeeze.

OM4c. - Kilometres of rivers protected under the EU Habitats/Birds Directive improved to help meet the objectives of the Water Framework Directive. FCRM actions to restore rivers designated as special areas of conservation.

**Over-programme**
This is a programme management technique to enable a programme to deliver to budget. Effectively you start a financial year progressing more projects than can be afforded on the basis that not all project risk budgets with be fully utilised, efficiencies will be made on projects, some projects will suffer a delay and a few may be found not to be viable.

**P**

**Packaging**
The combining of a number of projects which are similar in either nature or in geographic location. It is usually applied to lower value projects to make them more efficient by only having to let one contract, thus saving time and money on the procurement process. Packaging also provides for continuity of work for suppliers that enables specialist delivery teams to be formed resulting in greater delivery efficiency.

**Partnership & Strategic Overview (PSO) teams**
See Area Flood & Coastal Risk Managers

**Partnership Funding**
Flood and Coastal Erosion Resilience Partnership Funding is Defra’s current policy. It provides a system of funding which applies to all Flood & Coastal Erosion Risk Management (FCERM) projects seeking FCRM GIA Capital funding in England. It is a way of increasing overall investment in flood and coastal erosion risk management by encouraging external contributions as a means to unlock GIA. 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. The RFCC has a key role in working with partners and communities to maximise contributions and also raise and allocate local levy which can also be used as an external contribution.

**Partnership Funding score (PF Score)**
Based on the outcomes a project is expected to deliver, a maximum amount of FCRM GIA is calculated. The score is calculated based on the outcome measures benefit divide by funding, expressed as a percentage.

A project needs a minimum score of 100% to be considered for FCRM GIA. However, in many cases the raw score (base purely on its outcomes) will be below this threshold. In these cases the project will either need to increase the outcomes it delivers so that FCRM GIA could fund the whole scheme, reduce the costs of the scheme (ie a cheaper way of delivering) or increase contributions from other sources. This will then give an adjusted score, called the Partnership Funding Score. That is also used to prioritise both nationally and locally by RFCCs. A score of 100% will not guarantee funding of a scheme as there is a finite amount of GIA available, but the higher the score the more likely it is to secure GIA. The RFCC can use Local levy as a contribution to schemes and therefore improve the PF score.

**PRINCE2**
PRINCE2 (an acronym for PRojects IN Controlled Environments) is a de facto process-based method for effective project management. It is used extensively by the UK Government, PRINCE2 is also widely recognised and used in the private sector, both in the UK and internationally.

**Programme**
It its purest form programming is about organisational transformation. However, we use the term programme to describe a collection/dossier/portfolio of similar activities or projects.
Programme Board
In terms of programme governance each Region of the Environment Agency has a Programme Board and there is also a National Programme Board. In Anglian Region the Board is managed through monthly FCRM Business Group meetings where Flood & Coastal Risk Managers, Finance, ncpms and others meet to review by exception in-year performance, programme opportunities, risks as well as future programmes of investment. The Programme Team report performance to the Board following detailed monthly financial and programme monitoring review at an Area/RFCC level. The Programme Board take decisions and mitigating actions and escalate issues to the Regional Director and his leadership team as appropriate.

Programme level risks
Are risks that have the potential to affect the overall outcomes of the Programme. These may be in terms of external factors (budgets, extra funding from government, new legislation, PF Scores), significant project risks (ie a project being delayed by planning consent) or the accumulation of smaller risks (ie the aggregation of small individual risks across a number of projects).

Programme Management
The term programme management refers to the co-ordinated organisation, direction and implementation of a portfolio of projects and activities. Programme management aims to achieve results and realise benefits that are of strategic importance.

Programme Manager
Led by the FCRM Programme Manager, programming and monitoring of all Environment Agency supported FCERM delivery is done once at region. This includes developing and implementing RFCC programmes of work and assuring the outcomes of these programmes.

Programme Team
Reporting to the Programme Manager, the Programme Team leads FCRM programming for Anglian Region and monitors associated delivery. Business Partner aligned to each Environment Agency Area/RFCC. This team provides a clear link to the National Allocation and Programme team and works very closely with Area teams, Finance and ncpms.

Project
When a candidate passes through Gateway 0 it becomes a project. A collection of projects form part of a programme. An FCRM project is set up to scope, appraise and deliver tangible products to meet the needs identified and recorded in the Project Mandate. For FCRM capital projects, there are five types of project: they are Sustain; Simple Change; Supported Change, Legal Compliance and Complex Change (See Project Type)

Project Appraisal Report (PAR)
The project appraisal report (PAR) describes the appraisal that has been carried out on an FCRM project and provides the business case to support the recommendations proposed. It is used to gain formal approval under the Environment Agency Financial scheme of delegation (FSoD) and where appropriate approval from Defra, Welsh Assembly Government (WAG) and HM Treasury.

Project Assurance Board (PAB)
The purpose of PAB is to provide Technical Review and assurance of projects (up to the value of £10 million) throughout their entire lifecycle. PAB makes recommendations to project teams so they can improve their business case and once satisfied that issues have been appropriately resolved will recommend approval to the FSoD delegated officer.

Each Region has a PAB which meets on a monthly basis. Projects from all RMAs are reviewed for the following:
- are projects supported by a robust case for change that provides strategic fit – the ‘strategic case’
- do projects optimise value for money – the ‘economic case’
- are projects commercially viable – the ‘commercial case’
- are projects financially affordable – the ‘financial case’
- are projects achievable – the ‘management case’.
Membership of PAB is made up of managers and specialists from across the business.

**Project Board**
A small group of people (normally only the Project Executive, Senior User and, if in place, the Senior Supplier) who collectively monitor and control a project’s overall progress. This group concentrates almost entirely on the process of project management and:

- acts as a quality assurance mechanism for a project’s deliverables;
- provides an escalation and resolution route (to the Programme Board) for a project’s risks and issues.

**Project development costs**
Activity and expenditure between Gateway 0 and Gateway 3 is defined as project development.

**Project Executive**
See Project Roles

**Project Manager**
See Project Roles

**Project Mandate**
This is the form where the outline need for investment is recorded and supports the submission of a candidate into the programme, recording Gateway 0.

**Project risk**
All projects have risk built up from potential occurrences that may affect the delivery of a project to time, cost, quality or outcome. Risks are explored as part of project development and monitored/managed routinely throughout a project, Project budgets (and FSoD approval) include for the costs of managing a project’s identified risks (but not all of them) should they arise. The cumulative effect of this is that at a programme level a significant amount of budget is aligned to project risk that may or may not materialise and therefore require use of that budget. The over-programming approach is a means to manage this issue.

**Project roles**
Having clear and defined roles on a project is crucial to good governance. The key roles on a project are:

- **Project Executive:** Ultimately accountable for the project’s delivery, they should be independent from the User and Supplier.

- **Project Sponsor:** Identifies a need within the organisation; acts as the ultimate ‘client’ for any project that is set up; and is the major driving force of the project shaping the benefits to be delivered. For Environment Agency FCRM capital projects this is the Area Flood & Coastal Risk Manager up to Gateway 1 and then the Operations Manager to Gateway 6. For high risk projects or packages of work the Area Manager may perform this role.

- **Senior User:** The senior user is responsible to the end users for ensuring that the products delivered by the project are fit for purpose. Their input continues throughout the life cycle of the project. The senior user:
  - helps shape project deliverables;
  - communicates the end users’ needs and aspirations throughout the life of the project;
  - provides a link to all the internal functions/teams during the life of the project;
  - is the principal point of contact in FCRM for all project matters;
  - leads on engagement with the community, partners and stakeholders;
• signs off the product descriptions for products to be delivered as part of the project board;
• accepts the completed project from the project executive.

For Environment Agency FCRM capital projects the Senior User is from within Operations Management, usually senior Asset Performance staff or the Catchment Engineer. They can be supported by a team and for most projects will draw upon the skills and resources from within our Partnership & Strategic Overview teams (eg regarding funding packages with partners), Flood Resilience teams (who coordinate community engagement) and Modelling & Hydrology teams.

**Senior Supplier:**
The senior supplier represents the interests of those designing, developing, facilitating, procuring, implementing, and possibly operating and maintaining the project products; they are also accountable for the quality of products delivered by the supplier(s) and they must have the authority to commit or acquire supplier resources required.

This role is most appropriate for high risk or key delivery projects or major packages of work. It would ordinarily be performed by a senior manager from within a Framework supplier.

**Project Manager:**
Appointed by the Project Executive, they have the authority and responsibility to manage a project day-to-day. This person must deliver the required products, within the tolerances agreed with the Project Board.

**Project Type – Complex Change**
A complex change project is a project that examines options at the strategic level or implements a strategic solution but where there is no agreed strategy in place. Complex change projects require a strategic approach to be developed to address the extent, integration or interconnection of different areas. A full cost:benefit appraisal is required.

**Project Type – Simple Change (aka Standalone project)**
A Simple Change Project is one where the problems to be addressed, potential solutions and effective decision-making can be taken independently of the wider catchment/coastal zone or framed so as to not constrain future long term management. A strategic context is still required for a Simple Change Project to support the decision-making process. This type of project is the most common in the programme.

A Simple Change Project is appropriate when:
• a change to the standard of service (SoS) is proposed
• justification to sustain the current SoS is not clear or beyond the control thresholds
• a strategy plan is not required

A full Benefit:Cost analysis is required for appraisal of these projects.

**Project Type – Supported Change**
A project to deliver the recommendation(s) of an approved (FSoD) strategy. As such the scope of this project is typically limited to assessing the specific needs to implement the strategy in the project location. The overall option and new SoS will already have been determined. This project will draw heavily upon information in and gained for the strategy which will minimise the time and effort required for this project.

**Project Type – Sustain (standard of service (SoS))**
A Sustain SoS project is one that delivers activities needed to continue the agreed standard of service of an existing asset or group of assets. Typically projects might include the refurbishment of assets or replacement of components of larger assets, which have reached their design life.

In addition, projects classified as Sustain must fall within Control Thresholds to ensure that the investment in them is justifiable and does not impede on any potential future strategic plans (ie we wouldn’t replace an asset if we plan to build something else in 5 year which will negate the need for
that asset). If the project is not within the thresholds then the project should be classified as a Simple Change. Sustain projects are appraised using a cost effectiveness analysis.

**Project Type – Legal Compliance**

Projects that are required to fulfil legal obligations can typically be divided into:

- **legal requirements that drive the need for a project:** there are two types of legislation here:
  - legislation with ‘general’ application, such as the Habitats and Birds Directives or Water Framework Directive; and
  - specific legislation, including local legal agreements, such as navigation acts for specific rivers.

- **legal requirements that place duties or obligations on the project:** these can be sub-divided into:
  - duties that stem from legislation such as Health & Safety or Town and Country Planning; and
  - obligations that arise from contractual agreements, such as contracts between an operating authority and a water company to provide adequate water levels for abstraction by pumps.

Defra policy also requires that the benefits of meeting the legal requirements are identified, described and, where possible and appropriate, quantified and valued in monetary terms. Information on the benefits will be used to help understand who is gaining or losing from the programme of work, and to help demonstrate that the programme provides good value for money. It is also important to consider whether there may be efficiency gains from providing wider benefits beyond those linked to the minimum legal requirements. The costs and benefits of providing the wider benefits would need to be appraised. This means that any incremental increases in investment

**Project Sponsor**
See Project Roles

**Q**

**R**

**Reconditioning/RECON**
See Capital Reconditioning

**Revenue funding**
FCRM GiA Revenue funding is the money spent by the Environment Agency on day to day activities. These include salary costs of most staff, revenue projects (ie typically inspections, maintaining our hydrometric and telemetry network and quality assurance of flood modelling) and Revenue Maintenance (ie preventing assets falling below target condition). Revenue also pays for our incident response to flooding.

**Revenue programme**
The revenue programme is the programme funded by FCRM GiA Revenue Funding and supported by Local Income.

**Revenue projects**
A subset of the Revenue programme, these are projects generally funded by FCRM GiA Revenue. These support Environment Agency day to day activities where we have to procure specialist resource, eg diver inspections of assets. They also include work on ensuring our mapping and modelling as at the required industry standard, biodiversity is preserved, and we maintain our operational capability for flood forecasting and incident management thought exercises and maintaining our telemetry systems.

**Revenue maintenance**
This is a subset of the Revenue programme and includes the maintenance activities the Environment Agency undertake to ensure that assets do not fall below their target condition. They are a combination of Frequent Maintenance and Intermittent Maintenance. The programme includes routine inspections of assets and correcting minor issues, and is captured in the System Asset Management Plans (SAMPS).
Senior User
See Project Roles

Standard of Protection
The probability of flooding expressed as either a return period (ie 1 in 75 years or 1:75 years) or as a percentage (1.33%) chance per year. The calculation is 1 divided by the return period multiplied by 100 (1/75*100=1.33%). If we maintain the Standard of Service then we accept that the standard of protection will reduce in time as the affects of climate change take hold.

Standard of Service
A measurable and objective description of an asset; for example the crest level of a wall or pumping capacity and a minimum condition grade. Not to be confused with the term Standard of Protection.

Senior Supplier
See Project Roles

Supplementary Expenditure
Extra funding that is required on a project, over and above what has already been allocated to it. This will also require further Technical Review and FSoD approval It is captured on a Form G (Environment Agency) or FCERM4 (other RMAs) that needs to demonstrate that the business justification/case for the project is still robust.

System Asset Management Plans (SAMPs)
These are long-term plans for each Asset System. They include information on the benefit of the system (ie what the system protects) and what the expected maintenance costs are for the assets in that system. We use SAMPs to hold the information on our revenue maintenance programme. Data from SAMPs is used by the National Allocation and Programme team to make an indicative and final allocation of FCRM GIA Revenue to each RFCC. Information in SAMPs is updated regularly by Operations teams.

System consequence
This provides an indication of potential impacts of flooding for an Asset System. Each system is defined as High, Medium or Low using a matrix that broadly compares the impact on people against the impact on property and land.

Target Condition
We use a condition grading system (1 – 5) for our assets and each asset has a target grade against which we monitor (through asset inspections), report (through KPIs) and improve (via asset recondition/refurbishment).

Technical Review
The project assurance role undertaken by PAB and LPRG.

Tolerance
Tolerances can be set at a project and programme level. They enable project/programme outcomes (eg cost, time, scope, quality and benefits) to vary up to set limits (positive or negative) and to be managed in the best possible way. Once the tolerance levels are forecast to be exceeded, they are considered an exception, and are flagged for discussion/agreement at the appropriate governance level (eg Project Board, Programme Board). The in-year programme papers for the RFCC now concentrate on projects which have exceeded their tolerances, and are now in exception. The RFCC could apply tolerances for their allocation of Local Levy.

Variance
Variance is a measured from the previous month’s forecast or the start of year position called the baseline. We track the variances of financial, outcome and risk forecasts. This data allows us to make decisions on bringing in opportunities in to the programme.

**Virement**
The Programme Board is able to make some adjustments to in-year project budgets and bring projects forward from future years. However, if these changes are above the threshold (eg a significant change >£500k) a formal application of the budget change is required via Head Office and Directors. If approved then a transfer of budget into or out of the RFCC takes place.

**Whole Life Cost**
The net present cost of a project, or the asset provided by the project, to deliver defined outputs that includes the running and maintenance costs over an extended period. The period can include the replacement of the asset, and is not fixed. The period is usually taken as that where the discounted future costs are material to the net present cost.
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