

Thames Regional Flood and Coastal Committee (RFCC)

Flood risk management and environmental benefits in the Thames River Basin, 2015 to 2021

1. Thames Region Flood Risk Management Programme

1.1 A £2.3 billion six-year national flood and coastal risk management (FCRM) capital programme for England was announced by government in December 2014. The programme includes more than 1,500 schemes nationally and is designed to improve flood protection for 300,000 households and have significant benefits for businesses, infrastructure, agriculture, the economy and the environment. It is estimated that this investment will help avoid around £30 billion in economic damages, including a £1.5 billion boost to the farming sector.

1.2 As part of this national programme, the Thames Regional Flood and Coastal Committee (RFCC) has approved its first long-term Six Year Programme of FCRM schemes covering the period 2015 to 2021 at a record investment of £535m. The Thames budget includes £330m of central government grant in aid (GiA) from the Department for Environment, Food and Rural Affairs (DEFRA), £85m from a Levy raised by Local Councils and £120m in contributions from partners including Local Enterprise Partnerships, Local Authorities, utilities, businesses and residents.

1.3 The Thames Programme includes 437 schemes over six years to reduce the risk of flooding for 32,000 households from rivers, the sea, surface water and groundwater. A range of small and large schemes are in the programme to manage these diverse risks. The Thames RFCC has ensured that its programme includes measures to address small clusters of properties at significant risk as well as seeking to tackle larger concentrations of significant risk. The largest scheme, for the Thames tidal waters, has already spent £3.8m towards sustained long term investment in tidal defences for London and its environs and will cost around £43m over the six years (with intertidal habitat management integrated into the Thames Estuary plan). The tidal risk will also benefit from an estimated spend in the estuary of £62m by the Anglian Region RFCC and £91m by the Southern Region RFCC.

1.4 In many parts of the Thames, the sand and gravel geology means that flood waters rise up from the ground, making traditional wall defences ineffective. The largest new river schemes in the region will be the £300m 'River Thames Scheme' west of London and the £141m 'Oxford and Abingdon Scheme'. Both of which are planned to involve new flood relief channels with additional social and environmental benefits, such as new footpaths and habitat creation to increase biodiversity. The design of the River Thames Scheme will enable people to connect with nature in over 40 hectares of new wildlife habitats. The construction of the River Thames Scheme flood channels is expected to begin in 2020 and take five years to complete.

1.5 In the past, it has been difficult to progress many larger Flood Risk Management schemes due to their need for multi-year funding and long lead-times for planning and construction. But the introduction of a Six Year Programme and multi-year funding commitments by central and local government and third parties has now enabled more large schemes to proceed.

1.6 The Thames RFCC welcomes new flood risk management scheme proposals, including those with wider social or environmental benefits, and will consider whether to support their inclusion in the current Six Year Programme or at a later stage. New proposals should first be discussed with the relevant Environment Agency (EA) area office. A list of all the schemes in the Thames Six Year Programme can be found at www.gov.uk/government/publications/programme-of-flood-and-coastal-erosion-risk-management-schemes, and a map is at Annex 2.

2. Environmental benefits

2.1 Many of the schemes in the Six Year Programme will help to improve the environmental quality of the Thames, its tributaries and its estuary, and so contribute to the 'good water status' requirement of the EU Water Framework Directive. All schemes proposed to the RFCC are assessed by EA staff and RFCC experts for their potential wider environmental, social or economic benefits.

2.2 The Six Year Programme for 2015 to 2021 in Thames will in total:

- Create or improve 336 hectares of water dependent habitat
- Create 266 hectares of intertidal habitat
- Protect 50 kilometres of rivers designated for wildlife

2.3 Following the policy of the previous Coalition Government, the Thames region also received a £600,000 grant from DEFRA for a number of environmental schemes related to Flood Risk Management (FRM) and the management of water levels in 2015/16. These schemes are managed by the EA and will help to improve sites designated under international agreements including Special Protection Areas (SPAs) under the Birds Directive and Special Areas of Conservation (SACs) under the Habitats Directives (collectively known as Natura 2000 Sites) and sites to help implement the Eels Directive. These environmental schemes are set out in Annexe 1. We are hoping to have a number of similar environmental schemes linked to flood risk management in future years, but the details will not be known until after the Budget announcement in late November 2015 of the new Conservative Government.

3. Background

The Thames Regional Flood and Coastal Committee (RFCC)

3.1 Across England, the Regional Flood and Coastal Committees (RFCC) approve the flood investment programmes of the Environment Agency and Local Councils. RFCCs also promote integration with the investment programmes of water and sewage companies in their capacity as Risk Management Authorities. The Thames RFCC is composed of a chairperson (appointed by DEFRA), 13 local authority councillors representing all Lead Local Flood Authorities (LLFAs), plus a number of independent members including technical experts such as a Conservation Member. The RFCC is supported by a secretariat of EA staff. The RFCC meets regularly to assess progress with the Six Year Programme, monitor spending and outputs, help develop new schemes, build capacity in Risk Management Authorities and advise on any other action required to deliver the Six Year programme.

Flood risk in the Thames river basin

3.2 Across England, the winter of 2012/13 was the wettest in 100 years and the winter of 2013/14 was the wettest in 200 years. The result was widespread flooding which caused a large amount of damage and distress. The UK government predicts that climate change will by 2080 produce warmer, wetter winters with more rain falling in intense storms year round. Also, sea level is rising exacerbated by continuing post glacial tilting downwards of land in south east England. These changes increase the risk of flooding. In the Thames river basin district there are over 1.6 million people at risk of flooding from rivers and the sea, and over 2.2 million at risk from surface water accumulation after heavy rainfall.¹ The Thames river basin also contains a large part of the country's most valuable infrastructure. Like many rivers in the UK, the Thames has been greatly altered over centuries, mainly for navigation and flood control. This has very much reduced its natural functions.

3.3 At times of high flow, the Thames floods its large rural and heavily populated floodplains, in which a number of communities are protected by flood defences or water storage areas. Below London, the Thames Barrier and its extensive associated network of defences has been operated since the 1980s by the Environment Agency to protect the city from flooding from the sea. Also, there is significant risk from surface water and groundwater flooding in the heavily populated Thames catchment, which is less well understood and is only now starting to be addressed.

Flood risk management

3.4 In England, flood Risk Management Authorities (RMAs) include the Environment Agency, upper tier Local Councils (a mix of County and Unitary Councils) internal drainage boards, water companies and highway authorities. These authorities work with communities to reduce the risks from flooding. Government policy is for more flood and coastal defence schemes to work with natural processes rather than against them wherever possible. The aim is to make more space for water in estuaries and along rivers, through for example the setting back of defences to widen river corridors, the restoration of floodplains and increasing areas of inter-tidal habitat. The creation of multi-functional wetlands to provide flood protection as well as social and environmental benefits such as increased recreation and biodiversity is also encouraged. Such win/win schemes can provide cost-effective solutions for society.

Planning and implementation

3.5 Managing flood risk is the responsibility of land, home and business owners. The Government and its agencies exercise permissive powers (as opposed to a duty) to support those at risk of flooding or affected by its consequences. In particular, government assists where coordinated action is required or vulnerable citizens or critical habitat are at risk, and intervention is cost beneficial. It is Government policy to give priority to investment in the most cost-beneficial measures, to share the costs of flood risk management through central and local taxes, and to seek contributions from beneficiaries, especially for projects with lower

¹ Draft Thames Flood Risk Management Plan. Environment Agency. October 2014

cost-benefit ratios. Flood risk management schemes must compete with many other demands on central and local government funds. Currently, the overall benefit to cost ratio from Government investment in Flood risk management is 9 to 1.

3.6 The central government department responsible for flood risk, rivers and water management is the Department for the Environment, Food and Rural Affairs (DEFRA). DEFRA is the government department which funds and oversees the work of the Environment Agency (EA). The EA has responsibilities and permissive powers in relation to flood risk from main rivers and the sea and manages schemes in those areas. Lead Local Flood Authorities (LLFAs) have responsibilities and permissive powers in relation to flood risk from surface water and groundwater. Who leads in managing a flood risk or delivering a protection scheme is determined by the type of risk. However, flood risk from multiple sources requires partnership working.

3.7 The RFCC advises on joined up, risk based and cost effective flood risk management by all Risk Management Authorities (RMAs) in its area, including the EA, LLFAs and water companies. The RFCC provides an important vehicle for local input to shaping priorities and securing beneficiary contributions towards flood risk management schemes. It does this through its role in approving local levy (a tax raised by Councils) and in approving the programme of flood risk management investment by the EA and Lead Local Flood Authorities (LLFAs).

Flood Risk Management Plans (FRMPs)

3.8 The EU Floods Directive requires that six year Flood Risk Management Plans (FRMP) be drawn up for all river basins in all member states for the period 2015 to 2021. The EA published draft FRMPs for all river basins in England for public consultation in October 2014. The consultation closed at the end of January 2015. The Thames RFCC submitted a response to the consultation which set out its views on the type of FRMP best suited to our region. The EA published its response to the consultation in July 2015 and final FRMPs will be produced by December 2015. Those final FRMPs will set out the measures to reduce flood risk in each region, including programmes of flood risk management projects approved by RFCCs.

Co-ordinating the FRMP with the 'River Basin Management Plan' (RBMP)

3.9 The EU Water Framework Directive requires member states to publish River Basin Management Plans (RBMP) in six year cycles. The second RBMP for the Thames is due to be published in December 2015. The EA is developing the FRMP for Thames alongside the RBMP, so that, wherever possible, each can help the other to achieve shared objectives for improving our rivers. To help develop and co-ordinate these plans, the EA is working with the Thames Liaison Panel (LP) of stakeholder organisations and the Thames RFCC. This coordination will continue through the life of each plan, with the aim of producing clear processes for achieving the shared objectives. Those processes will then be applied wherever possible to achieve greater benefits, increased efficiency and better value for money.

Robert Oates FLS
Conservation Member, Thames RFCC
robert.oates1@btinternet.com
October 2015

Annex 1.1: Thames RFCC – SUMMARY programme of FCRM funded environmental schemes for 2015/16

Scheme	EA Area Office	Protection category	Total Project Expenditure £	GiA from DEFRA £	Private contributions £	Other EA funding £
Middle Roding Landscape Opportunity Area, River Roding.	London North and Hertfordshire	HAB	20,000	20,000	0	
Rainham Marshes	London North and Hertfordshire	SSSI	19,000	19,000		
Restoration of the Kennet SSSI - Marlborough to Ramsbury	West Thames	SSSI	120,000	120,000	0	
River Lambourn SAC - fish passage and habitat enhancement projects	West Thames	SSSI	70,000	70,000	0	
River Mimram Chalk Stream Restoration Project	London North and Hertfordshire	WFD	306,469	50,000	206,469	50,000
Rye Meads SSSI	London North and Hertfordshire	SSSI	20,000	20,000	0	
Thames Kent and South London FISH (Fixing 3 eel passes)	Kent and South London	FISH	30,000	30,000		
Waltham Abbey SSSI	London North and Hertfordshire	SSSI	20,000	20,000	0	
		TOTAL	605,469			

Annexe 1.2: Thames RFCC – DETAILED programme of FCRM funded environmental schemes for 2015/16

			Total Project Expenditure	GiA from DEFRA	Private contributions	Other EA funding	Project description
Middle Roding Landscape Opportunity Area, River Roding.	London North and Hertfordshire	HAB	20,000	20,000	0		The delivery of this landscape scheme is linked to the Roding Flood Risk Management Strategy with reference to specific schemes within this strategy. The project will create 50 ha of wetland habitat consisting of grazing marsh, wet woodland and reed bed. The England Biodiversity Strategy makes a commitment to create 200,000 ha of priority habitat by 2020 of which the Environment Agency has committed to deliver 10,000 ha. Flood risk management schemes are a major delivery mechanism to achieve this target. The River Roding has been identified as a Landscape Opportunity Area in the Regional Habitat Creation Plan (Environment Agency, 2010); a landscape database which aids the prioritisation of our habitat creation schemes.
Rainham Marshes	London North and Hertfordshire	SSSI	19,000	19000			The aim of the project is to finish off the work that was started last financial year on Wennington Marsh. The work aimed to create 6 ha of wetland scrapes. This provided the required habitat to support wading bird populations to help the SSSI

							move towards meeting favourable condition and also increase floodplain storage. The £19k will finish of the areas that could not be completed due to time and wet weather last financial year.
Restoration of the Kennet SSSI - Marlborough to Ramsbury	West Thames	SSSI	120,000	120,000	0		This project will restore damaged sections of the River Kennet SSSI to meet WFD and favourable condition. This is a programme of river restoration and fish passage improvements over 5 sites – Werg Mill, Durnsford Mill, Stitchcombe mill, Moons Mill and Elcot. Action for the River Kennet (ARK) has 90+K and we have a budget to match it. The plan is to provide them with match funding and they deliver the improvements. They have already let a design contract. Construction will be over the next 3 years. Starting this year at Durnsford and Werg.
River Lambourn SAC - fish passage and habitat enhancement projects	West Thames	SSSI	70,000	70000	0		This project will address Site of Special Scientific Interest (SSSI) favourable condition requirements and WFD failures. The objective is to enhance and restore a designated site. We have delivered several significant projects on the Lambourn over last few years, dealing with the major impoundments and physical habitat issues. This project is designed to tackle some of the smaller structures that have a limited impact on habitat quality but which remain blockages to fish passage. This year's budget is to look at feasibility and design, with funding in subsequent years to deliver construction.

River Mimram Chalk Stream Restoration Project	London North and Hertfordshire	WFD	306,469	50,000	206,469	50,000	<p>This project will create improved chalk stream habitat. The River Mimram is a chalk stream at poor status. To help the river to reach Good Ecological Status under the WFD, the EA has identified a range of cost beneficial actions (from the WFD catchment appraisals). Affinity Water company will undertake a substantial programme of abstraction reduction (15.5Ml/d) in the catchment to improve flows. Alongside this, Affinity Water and local partners (Wildlife Trust, NIA etc) have secured some of the funding required to deliver habitat enhancement & restoration. These actions are required to be delivered by the EA & Partners in combination.</p> <p>This project will create improved chalk stream habitat by delivering a range of actions including 2 impoundment bypasses and another separate planform restoration as well as in-channel improvements to other significant sections. In total 4km of river will be restored. The project team will work with the landowners and farmers to deliver other WFD actions including appropriate grazing levels or fencing works to address sedimentation and pollution issues. Also, we will work with the landowners and farmer to create an estimated 10ha's of Priority wet grassland habitat in addition to the 1.2ha of chalk stream priority habitat restored.</p>
---	--------------------------------	-----	---------	--------	---------	--------	--

Rye Meads SSSI	London North and Hertfordshire	SSSI	20,000	20000	0	<p>The project will restore 18 ha of grazing marsh through the review and implementation of the water level management plan and associated works.</p> <p>Rye Meads SSSI is a mosaic of open water, wet grassland, fen and reed-bed located within the floodplain of the River Lea and is part of the Lee Valley Special Protection Area for birds. The area of concern is the area of flood meadows, unit 1 and unit 2, which are designated for the composition of the fen botanical composition which supports notable wetland birds including Bittern. The SSSI was assigned by Natural England in 2014 to be 'at threat' due to prolonged water inundation across the site with impacts on the botanical community and supporting wetland bird community. Actions associated with water level management are specifically attributed to the Environment Agency. This project helps to deliver the EA corporate score card action 'We deliver our commitments to the England Biodiversity Strategy by: restoring sites of special scientific interest' and Outcome 1a within the Biodiversity 2020 strategy: 'Better wildlife habitats with 90% of priority habitats in favourable or recovering condition and at least 50% of SSSIs in favourable condition, while maintaining at least 95% in favourable recovering condition'.</p>
----------------	--------------------------------	------	--------	-------	---	--

Thames Kent and South London FISH (Fixing 3 eel passes)	Kent and South London	FISH	30,000	30,000		Improving eel passage at three sites: Broadwater weir on the River Cray, Winsford Road weir on the Pool River and Manor House Gardens weir on the Quaggy.
Waltham Abbey SSSI	London North and Hertfordshire	SSSI	20,000	20,000	0	The project will restore 33 ha of Alder wet woodland through the production of a water level management plan and associated works. Waltham Abbey SSSI is an area of Alder Woodland located within the floodplain of the Small River Lea and Cornmill Stream. The SSSI is cited predominantly for the heronry, but also supporting a variety of passerine birds. The SSSI has been assigned by Natural England to be in un-favourable condition and has a remedy identified under water level management with the comments "the quality of wet woodland habitat has deteriorated due largely to the site drying-out. An Investigation into the feasibility of wetting-up the canal network through the production of a water level management plan is required. This action is specifically attributed to the Environment Agency.

Annex 2 – Distribution of FRM schemes in Thames region 2015-2021

6 Year Plan Scheme Location

