RM6187 Framework Schedule 6 (Order Form and Call-Off Schedules)

Order Form

CALL-OFF REFERENCE:	EA TE2100 Investment Strategy
THE BUYER:	[redacted]
BUYER ADDRESS	[redacted]
THE SUPPLIER:	[redacted]
SUPPLIER ADDRESS:	[redacted]
REGISTRATION NUMBER:	[redacted]
DUNS NUMBER:	[redacted]
SID4GOV ID:	N/A

Applicable framework contract

This Order Form is for the provision of the Call-Off Deliverables and dated 23/09/2024 It's issued under the Framework Contract with the reference number RM6187 for the provision of the Thames Estuary 2100 Investment Strategy options report.

Call-off incorporated terms

The following documents are incorporated into this Call-Off Contract.
Where schedules are missing, those schedules are not part of the agreement and can not be used. If the documents conflict, the following order of precedence applies:

1. This Order Form includes the Call-Off Special Terms and Call-Off Special Schedules.
2. Joint Schedule 1(Definitions and Interpretation) RM6187
3. The following Schedules in equal order of precedence:

Joint Schedules for RM6187 Management Consultancy Framework Three

- Joint Schedule 1 (Definitions)
- Joint Schedule 2 (Variation Form)
- Joint Schedule 3 (Insurance Requirements)
- Joint Schedule 4 (Commercially Sensitive Information)

- Joint Schedule 5 (Corporate Social Responsibility)
- Joint Schedule 10 (Rectification Plan)
- Joint Schedule 11 (Processing Data)

Call-Off Schedules

- Call-Off Schedule 5 (Pricing Details)
- Call-Off Schedule 7 (Key Supplier Staff)
- Call-Off Schedule 20 (Specification)

4. CCS Core Terms
5. Call-Off Schedule 4 (Call-Off Tender) as long as any parts of the Call-Off Tender that offer a better commercial position for the Buyer (as decided by the Buyer) take precedence over the documents above**.**

Supplier terms are not part of the Call-Off Contract. That includes any terms written on the back of, added to this Order Form, or presented at the time of delivery.

Call-off special terms

4 Not used

Call-off start date: **24/09/2024**

Call-off expiry date: On completion of the contract deliverables and within the timescales set for each:

Stage 1 – 28th February 2025
Stage 2 – 29th August 2025

Call-off initial period: **N/A**

Call-off deliverables:

Full details of the requirements can be found in Appendix A of this document.

Maximum liability

The limitation of liability for this Call-Off Contract is stated in Clause 11.2 of the Core Terms.

The Estimated Charges used to calculate liability in the first contract year are:

£495,700.01 Call-Off Charges

Call-off charges

Call-Off Schedule 5 (Pricing Details) sets out the activity and resource schedule that forms the basis of the Call-off charges.

All changes to the Charges must use procedures that are equivalent to those in Paragraphs 4, 5 and 6 (if used) in Framework Schedule 3 (Framework Prices)

The Charges will not be impacted by any change to the Framework Prices. The Charges can only be changed by agreement in writing between the Buyer and the Supplier because of:

- Specific Change in Law

Reimbursable expenses

Where Services are to be provided to the Buyer under any Call Off Contract on the basis of Framework Prices submitted by the Supplier to CCS using the Time and Materials pricing mechanism set out in Annex 1, the Supplier shall be entitled to be reimbursed by the Buyer for Reimbursable Expenses (in addition to being paid the relevant Charges under the respective Call Off Contracts), provided that such Reimbursable Expenses are supported by Supporting Documentation. The Buyer shall provide a copy of their current expenses policy to the Supplier upon request. The following items were included in the statement of requirements and are deemed to be included in the suppliers agreed fixed price:

- In person attendance at monthly progress meetings
- Co-location at Marsham Street office – 1 day per programme week

Payment method

This contract is based on a Fixed Price Lump Sum agreement. A payment schedule will be agreed with the successful supplier based on their delivery programme during the mobilisation period.

[redacted]

FINANCIAL TRANSPARENCY OBJECTIVES

The Financial Transparency Objectives do not apply to this Call-Off Contract.

Buyer's authorised representative

[redacted]

Supplier's authorised representative

[redacted]

Supplier's contract manager

[redacted]

Progress report frequency

Weekly reports are to be submitted to the employers representative by **midday** each Friday. Monthly reports are to be submitted by **midday** on the last working day of the month.

Progress meeting frequency

Meeting frequency**:** Monthly and weekly.

Key staff

[redacted]

Commercially sensitive information

N/A

Service credits

Not applicable

Additional insurances

Not applicable

Guarantee

Not applicable

Buyer's environmental and social value policy

Available online at: Environment Agency: EA2025 creating a better place - GOV.UK (www.gov.uk)]

Social value commitment

N/A

Formation of call off contract

By signing and returning this Call-Off Order Form the Supplier agrees to enter a Call-Off Contract with the Buyer to provide the Services in accordance with the Call-Off Order Form and the Call-Off Terms.

The Parties hereby acknowledge and agree that they have read the Call-Off Order Form and the Call-Off Terms and by signing below agree to be bound by this Call-Off Contract.

For and on behalf of the Supplier:

For and on behalf of the Buyer:

Execution by seal**.**

Appendix A – Statement of Requirements

The aim is to conduct a comprehensive feasibility assessment of various innovative financing ideas that could be used for funding Flood and Coastal Risk Management (FCRM) activities.

The assessment should use the Thames Estuary 2100 adaptive strategy as a case study, looking at how each idea could be applied to delivery of the strategy. However, the assessment should acknowledge where a particular idea may be suitable for other FCRM activities, even if it is not viable for Thames Estuary 2100. The findings of this project can then be applied more widely.

The assessment should evaluate the viability, risks, benefits, potential impacts, capabilities and skills required, as well as the legal, policy, and structural changes needed to implement each financing method.

It will explore alternative investment approaches acknowledging existing Defra Flood and Coastal Erosion Partnership Funding Policy is unlikely to be sufficient to provide the investment required to adapt the estuary to raising sea levels.

The findings of this assessment will inform the investment strategy for the Thames Estuary 2100 Plan (otherwise known as the Plan) to support delivery of its benefits, as well as future FCRM capital programmes.

There should be two parts to this work:

- Stage 1: An initial output is required to support the Thames Estuary 2100 Next Delivery Vehicle (NDV) Outline Business Case (OBC) by February 2025. This should identify recommendations that could be implemented in the short term (next 2-3 years), to ensure that the investment is in place for delivery of the next 15-year programme.

It should be noted that there may further phasing required within stage 1 to meet project timescales.

- Stage 2: by August 2025, the strategy should identify ideas that may take longer to implement (due to required legal, structural, or policy change, for example) but could be used to deliver future interventions and programmes of work for the Thames Estuary 2100 strategy or wider FCRM programme.

Background to the FCRM Capital Programme and current funding policy

The Department for Environment, Food and Rural Affairs leads on Flood and Coastal Erosion Risk Management (FCERM) and provides funding for projects. There are several authorities involved in managing flood risk in England, including: the Environment Agency; regional flood and coastal committees; lead local flood authorities; local authorities; and internal drainage boards.

The Environment Agency produces a national flood and coastal erosion risk management strategy for England. The current strategy was published in July 2020, alongside a new Government policy statement on FCERM. Both the policy statement and the strategy focus on “resilience” to flood risk and promote the adaptation pathways approach to planning for future changes to climate and flood risk.

The Government has currently committed £5.2bn to funding flood and costal risk management over a six-year investment programme (beginning in 2021/22).

Funding for flood risk management is complex. The Environment Agency gets grant-in-aid (GiA) funding directly from the Government and spends some of this directly on FCERM activities. However, risk management authorities can also apply to the Environment Agency for GiA funding for local projects. A project is assessed for GiA based on how much public benefit it will have (i.e. protection to people and homes). Under Partnership Funding rules, schemes are required to secure contributions from other, local sources towards the total cost, including the benefits from protecting other infrastructure, property, environment and landscape. Nationally, there has been some success in attracting financial support, particularly from councils and other public sources, and national government departments. However, private sector investment has been harder to secure.

Due to its voluntary nature, these beneficiaries often have no motivation to contribute. With recent inflation, this has created an even bigger challenge – the need is increasing, and the likelihood of contributions is decreasing. However, new Green Finance policy will require companies to disclose their climate risk (including adaptation) and transition plans. There is an opportunity to link climate risk to climate action through the Environment Agency's flood and coastal programme.

The long-term, adaptive nature of the Thames Estuary 2100 Plan (see below for further detail) increases the partnership funding challenge. The current FCRM funding approach was set up primarily for project delivery. It does not fit long-term or geographically-wide strategic studies well, as partnership funding is most effective when you are on the verge of taking action on a particular asset. In the case of the estuary, the complex system of 9 flood barriers, 330km of flood walls and embankments and hundreds of smaller assets need to work together and therefore be invested in together as a system to be effective in managing flood risk. The investment itself needs to come at the right time over the next 100 years to ensure we can realise the cost-savings and wider benefits of taking an adaptive approach to managing the risk.

As more locations take this adaptive approach to planning, the need to take an alternative approach to funding is increasing. Whilst the Thames Estuary 2100 Plan is at the forefront of this approach, it is important that others can learn from it and benefit from this research.

Background to the Thames Estuary 2100 Plan

The Thames Estuary 2100 Plan was first published by the Environment Agency (the client) in 2012 and updated in May 2023 following a 10-Year Review. It makes recommendations for adapting riversides in the Thames Estuary to manage sea-level rise and the increase in tidal flood risk as a result of climate change, until 2100 and beyond. The Plan spans from Teddington in the west to Sheerness and Shoeburyness in the east.

The Plan sets out how the Environment Agency and our partners can work together to protect over 1.42m people, £321bn worth of residential property and much more in business, transport, service, social infrastructure, and other assets.

The Plan is internationally recognised as a leading example of a climate change adaptation strategy. It takes an adaptation pathways approach and is designed to be adaptable to different projections for climate change and sea level rise. By taking an adaptive approach, we can better anticipate and respond to a range of future climate scenarios, ensuring we are investing in the right flood risk management actions at the right time, to ensure the resilience of the estuary and its communities. The Thames Estuary is the first place in the UK to take an adaptation pathways approach to managing flood risk.

One of the key elements of the approach is to optimise the maintenance, repair and replacement of the defences. This aims to maintain or improve the standard of protection they provide, to extend their life, and adapt them so that they can be raised more easily in future to cope with rising sea levels. The interventions are planned according to projected sea level rise and other changes in the estuary, and the timescales can be adjusted as we monitor this change. The investment need is therefore spread out across the remainder of the century and beyond. It also means that there must be some flexibility in being able to draw down on investment if the timescales do change.

Taking a proactive approach to planning for future sea level rise allows us to work with others in the estuary to re-imagine riversides to ensure they not only manage flood risk, but also provide wider benefits for communities, businesses, and the economy. This includes:

- reshaping riversides, setting defences back where possible to create amenity space along the river and improve access for leisure and wellbeing
- creating new habitats, improving biodiversity and creating green spaces that benefit both people and wildlife
- supporting resilient, green growth by creating opportunities and ensuring the business and infrastructure at the economic heart of the UK is resilient to rising sea levels
- involving communities in shaping their vision for future riversides, whilst raising awareness of flood and climate risks and their role in helping manage them
- working towards net zero to help tackle climate change as well as adapting to the impacts that are already locked in
- delivering shared ambitions for the estuary by working closely with authorities that manage the river and its riversides

If we do not take a holistic approach to planning for future defence upgrades, we will be limited in how we can continue to protect London and the estuary from increasing tidal flood risk. Without collaborative working across stakeholders, we could end up with flood defences that cut off communities, homes and businesses from the river, restrict growth, are more grey than green, that do not help tackle climate change or offer social value. For this reason, the Environment Agency must work with stakeholders and partners across the estuary to deliver the Plan.

The Thames Estuary Asset Management (TEAM) 2100 programme was initiated in 2014 and is scheduled to end in 2025. The Thames Estuary 2100 Next Delivery Vehicle project is now looking at the how we best deliver the Plan over the next 15 years, seeking approval via Defra and Treasury.

The next 15 years will include significant interventions, including raising all flood defences downstream of the Thames Barrier by up to 0.5m, determining the end-of-century option for the future of the Thames Barrier and securing land for this, preparations for defence raising upstream of the Thames Barrier and creation of new habitat to compensate for that lost through coastal squeeze. The programme will also consider requirements for the organisational structures and commercial arrangements for delivery, including the resources, capabilities and governance required for collaborative working across organisations to achieve the multiple benefits that can be realised through delivery of the strategy.

Funding the Thames Estuary 2100 Plan

As part of the 10-Year Review of the Plan, a review of the economic case found that costs of delivering the Plan have increased due to asset deterioration and rising maintenance costs, whilst benefits have decreased due to changes to the implied values and a major reduction in flood damages for key infrastructure and transport risks.

The cost of delivering the Plan until 2100 is £16.2bn - this is the cash cost without inflation or optimism bias. This includes costs for asset management and habitat creation, and land for a new barrier. This doesn't include other land needs for defences, revenue (resource costs) for delivery of the Plan, or costs for creating riverside strategies – locally developed visions for adapting riversides and achieving wider benefits. The net present social value is £64.1bn until 2049.

The existing Partnership Funding Policy limits our ability to attract funds from Flood Defence Grant in Aid out with flood risk advantages and there is a funding gap by solely taking this approach.

The Plan divides the estuary into 23 policy units, which are areas that share similar flooding characteristics and assets at risk. For each of the units, we have considered the costs and benefits and using the Partnership Funding Calculator, ascertained the level of GiA that can be attracted. 7 of the 23 policy units have a partnership funding score of less that 100%. These are all in the outer estuary where there are low flood benefits associated with existing properties and carbon benefits. There are some additional applied benefits associated with landscape, historic environment and the infrastructure and transport benefits, but these do not outweigh the disbenefits included in the assessment for physical habitats, water quality and Water Framework Directive components.

However, studies have demonstrated that certain assets and Policy Units are hydraulically linked. We are therefore exploring whether we can evidence this sufficiently to make the case for sharing funds from one Policy Unit with others.

Approaches being considered:

- Estuary-wide Partnership Funding calculation
- Grouping hydraulically linked Policy units (e.g. by north/south bank, Regional Flood and Coastal Committee boundary , or other)
- Weighted apportionment based on hydraulic connectivity.

This approach would potentially enable us to claim more FDGiA funding and therefore reduce the funding gap that remains. We are currently assessing the feasibility of taking this approach forward as part of the TEP2 business case. If this approach is supported, it is likely we would still have a significant funding gap to fill through other sources.

Using the current Partnership Funding policy, it is estimated that £578m of additional third-party funding for capital costs will be required in the Thames Estuary over the next 40 years. Additional funding will be required to cover other items such as maintenance and operation of assets, and delivery of the wider benefits that are linked to adapting the riverside. This Investment Strategy should explore the most effective means of securing investment to cover the full spectrum of benefits.

Through TEAM2100, a funding strategy has sought to bring in 3rd party contributions on individual projects and from estuary-wide beneficiaries. Whilst some small-scale contributions have been secured, this has not resulted in significant 3rd party investment. This has prevented optimum delivery of asset management works as set out in the Thames Estuary 2100 strategy, increasing whole life

cost and carbon. It has also limited the delivery of wider benefits.

The Thames Estuary 2100 Strategy Business Case, approved in May 2023, recommends exploring an alternative approach to funding Thames Estuary 2100, due to the constraints set out above. We need to think differently if we are going to successfully deliver the Plan.

What is required

This Thames Estuary 2100 Investment Strategy should therefore look at existing mechanisms, work done to date by the Environment Agency and others to explore alternative mechanisms (set out below) and consider new mechanisms that will enable funding for the delivery of the Thames Estuary 2100 Strategy and its benefits. This work should be developed working closely with the Environment Agency (the Client) and its key stakeholder The Thames Estuary 2100 Flood Infrastructure Taskforce who has supported development and delivery of the Plan and committed to support in resolving the investment challenge.
The Thames Estuary 2100 Flood Infrastructure Taskforce has been established to support development of the investment strategy. Chaired by the Thames Estuary Growth Board, it brings together representatives from public and private sector with a stake in the estuary.

The Taskforce have been involved in scoping this work and should be the primary stakeholder group for engagement throughout development of the work. This should be done in an agile way so that their comments and insights can be taken on board as the work progresses.

While the focus on this scope is the Thames Estuary 2100 Plan, there is a need across the sector to generate financing at sufficient scale to overcome the size of the financing gaps for major FCRM projects. As a guide, proposals should be capable of delivering upwards of £100m in upfront capital funding, though this could be lower or significantly higher depending on the project.

We envisage ideas to explore further to include (but not limited to):

- Resilience levies for commercial properties/estates, both mandatory and voluntary linked to sustainable disclosures

- Creating an income stream from future savings in flood insurance premiums, which could be capitalised to fund the upfront costs of building new flood defences.

- Setting up a captive insurance market to create a revenue stream, which could be capitalised to fund the upfront costs of building new flood defences.

- Borrowing by local authorities to pay for the costs of new defences, which would be paid back from increases in business rate income which may come from increased growth and regeneration from reducing flood risk. This has been applied already in the River Thames Flood Risk Management Scheme, though there are uncertainties about how to scale up this approach.

- Using existing local levies or creating additional local levies against beneficiaries, which could be capitalised to fund the upfront costs of building new flood defences.

- Creating revenue streams from capturing land value uplifts, associated with enabling new development by reducing flood risk.
- Purchasing land that may be required for future flood risk management and creating revenue source until required

- Establishing a resilience fund for the Thames Estuary/London
- Creating a levy on use of the river/the riversides which can be reinvested
- Land value capture from land better protected in future by tidal defences through the Thames Estuary 2100 Plan

This should include an assessment of relevant policy and governance instruments that may be needed to address these financing options, including (but not limited to)

- Identifying policy changes
- Identifying barriers within Managing Public Money approaches and how to overcome these
- Establishing a local cross-government group to look at potential contributions (MoD, MoJ, DfT etc)
- Establishing a Special Purpose vehicle
- Other legal mechanisms or requirements to enable the financial mechanisms

Once all potential mechanisms have been assessed and evaluated, the strategy should recommend a pathway to establishing a mechanism(s) to close the funding gap for the remainder of the Thames Estuary 2100 Plan. This should include:

- For phase 1, a mechanism(s) that is realistically achievable within a relatively short timescale and has a high likelihood of success. We will be required to set up the mechanism in a relatively short timeframe and must have confidence in its success to achieve business case approval.
- For phase 2, a mechanism(s) that is capable of bringing in the remaining funds required for delivery of the strategy but may take longer to establish.

Any mechanisms recommended by this project should be realistic and achievable within the relevant timescales. It should consider risks, opportunities, and threats for each mechanism recommended. The strategy should set out clearly how we should go about establishing the mechanism(s) including required process, policy and legal changes, relevant stakeholders and engagement required to achieve this and any upfront costs, skills and resources required to do this.

Work done to date or in progress

The following work should be considered as part of the suite of recommendations being evaluated in the Investment Strategy. We can provide existing documents and reports for these pieces of work. This work should not be duplicated but where appropriate, if the supplier feels this approach requires further exploration, these ideas may be revisited.

TEAM2100 Draft Funding and Financing Strategy

The draft Team2100 Funding and Financing Strategy 2015 discussed its initial findings and recommended a way forward. The proposed funding strategy was split into two stages of implementation, recognising that some of the more innovative funding and financing solutions may

require policy and legislative change, and significant engagement with a wide range of stakeholders. It proposed a short-term strategy to meet the immediate funding gap using funding sources that may be available without recourse to legislative or policy change and that are readily available. The paper assumes that securing direct contributions from businesses, LEPs and local authorities is not a viable long-term approach and will not generate enough income to enable TE2100 to progress over the whole life appraisal period. Rather, the long-term approach suggested is dependent on raising funding from a much wider set of beneficiaries, be they residents, businesses or developers.

It notes that this approach has been successful in financing projects like Crossrail and Thames Tideway Tunnel. Four feasible funding options were considered: a business rate supplement, a council tax levy, a levy on major transport routes, and an estuary-wide Community Infrastructure Levy (CIL).

This strategy was never implemented due to lack of resource within the programme.

Assessment of investment need for TEP2

We have appointed [redacted] to provide an investment report to build on this initial work undertaken by TEAM2100 ('Funding and financing strategy'). This investment report will present the revenue/capital budget, identify and align funding against these costs, and identify investment gaps. It will identify the annual Revenue/Capital budget needed for the 15-year delivery of TEP2 and an assessment of where this investment will come from to ensure that the programme is deliverable. This report will also identify forecast shortfalls and use evidence gathered so far to establish an indicative plan for how to address these.

Assessment of the Thames as a single hydraulic unit

In addition, we know that the tidal Thames works as a single hydraulic unit, and therefore splitting the estuary into Policy Units is not necessarily an appropriate way to measure costs and benefits. In other words, the tidal defence network works as a connected system, meaning that we need to invest in and upgrade the system, not in individual policy units. [redacted] will also consider mechanisms whereby estuary-wide contributions/protocols identified can be shared across the estuary to each Policy Unit where funds identified cannot be directly linked to individual or groups of Policy Units.

Unlocking investment through resilience premiums

The Environment Agency have recently undertaken modelling to establish if the insurance savings resulting from investment in resilience can be monetised to support investment. The modelling has sought to establish a mechanism for unlocking investment through the collection of resilience premiums, whilst ensuring that the overall costs of insurance don't rise. Further work needs to be done to build the detail on areas of the research – including the appropriate mechanism and the cost of capital. Initial results do demonstrate that this may be an approach for providing some of the additional partnership funding we need.

Physical Climate Risk Assessment Methodology (PCRAM)

PCRAM is a methodology for assessing physical climate risks (PCRs) and integrating them in infrastructure investment decision-making by incorporating climate science into financial analysis. The PCRAM currently provides a cost benefit analysis of how upfront investment in resilience provides better value for money over the lifetime of an infrastructure asset. We are piloting whether

we can adapt this analysis for Thames Estuary 2100 to assess how our infrastructure provides resilience benefits to infrastructure as part of a place-based investment.

This work will be carried out in a phased approach. Phase 1 will cover the first step of PCRAM. It will include detailed project scoping, including reviewing existing information and data. From here, the climate, asset, and financial and commercial scope can be defined, focusing on the economic case for the Thames Estuary 2100 Strategy Phase 1 will also include preliminary work towards identifying various financial vehicles and tools that may apply to the Plan. It should be noted that in the event that the PCRAM work progresses beyond stage 1, there might be a need for support in Stage 2 of the investment strategy. This phase of the PCRAM work aims to explore the possible financial vehicles, revenue streams, and mechanisms applicable to the TE2100 strategy that aims to attract investment.

A review of the Metropolitan Flood Act and Thames Tidal Contributions Policy

By law, London riparian owners are responsible for providing and maintaining tidal flood defences as set out in the Metropolitan Flood Act (MFA). The policy applies to the London Excluded Area defined in the Metropolitan Flood Act, including all flood defences that prevent tidal flooding on the River Thames and its tidal tributaries between Teddington Weir and the River Roding on the north bank, and Dartford Creek on the south bank up to their tidal limits.

Where the riparian owner fails to maintain their frontage, the MFA has provision for 'the board' (currently the Environment Agency) to carry out flood defence works, and to reclaim some of the costs of these works from the riparian owner.

The Environment Agency Thames Tidal Contributions Policy (TTCP) is an internal policy which sets out the conditions under which it may step in and how much it would expect in contributions from the riparian owner. It states that the Environment Agency will contribute to major refurbishment or replacement of a flood defence if that defence is failing. The percentage of Environment Agency contributions depends on the riparian owner has carried out maintenance and repair and whether the riparian owner is developing the adjacent land.

However, this does not incentivise riparian owners to maintain an asset and often means the Environment Agency covering a majority of the costs. We have previously reviewed this policy with the aim of bringing it up to date and aligned with the optimised maintenance approach, i.e. incentivising repair before failure, however changes are yet to be agreed.

This investment strategy should include a light touch consideration of whether the TTCP is worth pursuing as a mechanism for generating income. We are currently minded not to continue to pursue this, so significant time should not be spent on this unless it is considered a legitimate means of bringing in the required investment. It should be noted that the Contributions policy is an internal Environment Agency policy (not law), and the MFA has never been tested in court.

Thames Estuary 2100 Flood Infrastructure Taskforce

The Taskforce, chaired by the Thames Estuary Growth Board, has been established to support in developing the Investment Strategy and lead the way in bringing in 3rd party investment to ensure that the required future flood defence upgrades can be delivered in a way that provides wider benefits for the estuary and its communities. The Taskforce will provide expertise throughout development of the strategy, and help explore innovative funding solutions to support resilient growth, including international investment.
An initial workshop for the Taskforce, led pro-bono by [redacted], identified some potential funding and financial mechanisms that should be further explored. The notes and feedback from this workshop will

be provided and should be considered when developing the investment strategy.

Objectives of the services

There are 2 stages to this work:

i. By February 2025, demonstrate that there is a suitable, sustainable funding mechanism(s) that can be established in the next 2-3 years to support the interventions required in the next 15 years to deliver the Thames Estuary 2100 Plan, as set out in the 40 year Asset Management Programme and the draft 15 year TEP2 asset investment need.

   Evaluate the viability, risks, benefits, potential impacts, capabilities and skills required, as well as the legal, policy and structural changes needed to implement each financing method(s). Identify a preferred approach and set out an implementation plan setting out the key actions to be taken to establish the mechanism in the next 2-3 years and then to bring in the investment over the next 15 years.

The interventions that require funding over this period, with current cost estimates, include:

- continued maintenance and adaptation of defences in line with Option 1.4 (the preferred Plan option) - £13bn up to 2100 (This figure does not include risk & optimism bias)
- downstream defence raising (which needs to be complete by 2040) - £350m without risk & optimism bias
- preparations for upstream defence raising (which needs to be complete by 2050) - £750m without risk & optimism bias
- land that needs to be acquired associated with defence raising (either downstream or upstream in anticipation of upstream raising by 2050), or for future Thames Barrier sites (which will be identified in the land strategy currently in development) - £156m up to 2070 without risk & optimism bias
- the development of riverside strategies to enable raising to happen in line with local ambitions for the riverside - £130m up to 2030 without risk & optimism bias
- the delivery of wider benefits in line with these riverside strategies, for example continuation or improvement of the Thames Path, improved riverside amenity space, creation of green infrastructure
- compensatory habitat - £381m up to 2100 without risk & optimism bias
- resources and capability required to deliver the above interventions, and the enabling services, monitoring and review of the strategy and delivery of supporting research and studies that enable the adaptive approach

It should be noted that we expect actual costs to be much higher than the figures above, once the work has been fully planned and inflation, risk and optimism bias are added. Due to the adaptive nature of the Plan, we plan phases of work incrementally based on latest data and evidence. We are now planning the next 15 years, hence having improved cost estimates for this period.

ii. By August 2025, develop a comprehensive long-term investment strategy for the Thames Estuary 2100 Plan that builds upon the 15-year strategy, outlining the necessary actions and

milestones to establish the preferred approach for funding the remaining interventions beyond the initial 15 years, including:

- upstream defence raising by 2050
- further land requirements
- delivery of the end-of-century option
- further defence raising across the estuary by the end of the century
- further habitat creation
- delivery of wider benefits
- resources and capability required to deliver the above interventions, and the enabling services, monitoring and review of the strategy and delivery of supporting research and studies that enable the adaptive approach

Similarly to the 15-year strategy this should evaluate the viability, risks, benefits, potential impacts, capabilities, and skills required, as well as the legal, policy and structural changes needed to implement each financing method(s).

Identify a preferred approach and set out an implementation plan setting out the key actions to be taken to establish the mechanisms over the next few years.
This strategy should identify where mechanisms could be replicated, or adapted, for different projects across the country and internationally, and those that might be better suited for other locations or situations.

For each stage it should recommend a preferred approach which may consist of one or more funding approaches. For each recommendation it should set out an implementation plan setting out how the mechanism could be established to bring in the required investment. This should also include a supporting engagement strategy for all stakeholders.

Summary of known indicative costs

Indicative cash costs (These figures do not include risk and optimism bias)	£m
Continued maintenance and adaptation of defences	[redacted]
Downstream defence raising	
Preparations for upstream defence raising	
Securing land	
Riverside strategies	
Compensatory habitat	
Delivery of wider benefits	
Strategy delivery costs	

reach is chosen.

Each flood risk management option will require land for new defences, enlarged defences, new barriers, new areas of habitat creation, and in some cases flood storage.

The Environment Agency will be collating and defining the land requirements for the successful implementation of the Thames Estuary 2100 (TE2100) Plan, to enable the first phase of defence raising, and the securing of land for future works.

The land requirements will account for construction of new defence assets where necessary, but also for temporary land-take for construction and access, and permanent land-take for operation, inspection, maintenance, refurbishment, upgrade, and replacement.

It should be noted that tabled cost for securing land for a future barrier does not include other land needs for defences, which are yet to be determined.

Services required

- Assess the current approach to funding via the Defra Partnership Funding policy and Flood Defence Grant in Aid, as well as the Metropolitan Flood Act, and the limitations/risks of this approach.

- Draw on funding mechanisms from previous and current infrastructure projects across different sectors, such as Thames Tideway, Crossrail and the Lower Thames Crossing to assess their viability for Thames Estuary 2100.

- Identify and review a range of innovative financing ideas that have been applied or proposed for infrastructure and other projects globally and within the UK.
- Investigate new innovative financial mechanisms and approaches by deploying proven approaches to new markets or introducing novel approaches to established problems.

- In agreement with the Client engage and collaborate with stakeholders, including the Thames Estuary 2100 Flood Infrastructure Taskforce, to assist with the development of the strategy.

- Assess the potential benefits and risks associated with each financing idea, including impacts on project timelines, stakeholder engagement, and long-term financial stability.

- Analyse the capabilities and skills required by the Environment Agency to successfully implement each financing method, considering technical, managerial, and regulatory aspects.

- Identify the legal and policy changes that would be required to enable the implementation of each financing method.

- Compare and contrast the innovative financing methods based on key criteria such as cost-effectiveness, adaptability, scalability, suitability for FCRM, compatibility with regulatory frameworks, and legal and policy alignment.

- Assess the financial feasibility and sustainability of each financing method for application to FCRM activities.

- Evaluate the suitability of these for financing Thames Estuary 2100 – including ideas that might be applicable in the shorter-term (i.e., can be put in place by 2025) and those that could be implemented over a longer time horizon. Evaluate the suitability of these for financing FCRMs strategies, programmes and projects of different types, scale and locations in England.

- Provide actionable recommendations for the Environment Agency to consider when selecting and implementing innovative financing strategies for specific infrastructure projects.

- The ideas considered should not be limited by the existing Environment Agency legal and institutional framework, or the Defra FCRM policy framework used to fund projects now. The Environment Agency and Defra recognise that this may need to evolve to incorporate new innovative financing approaches. An assessment of the legal and policy changes required should be provided as part of the deliverables.

Outputs

As part of the services, the Supplier is to produce/provide the following outputs/deliverables. This is not an exhaustive list and other outputs may be required:

- An inventory of innovative financing ideas with detailed descriptions and case examples.

- A comprehensive assessment report for each financing method, including its financial feasibility, potential benefits, risks, compatibility with FCRM projects, required capabilities and skills, and necessary legal and policy changes.

- Comparative analysis charts and graphics highlighting the strengths and weaknesses of each financing idea in terms of implementation readiness, legal and policy alignment, and regulatory challenges.

- An investment strategy as detailed in the above.

- A realistic and achievable implementation strategy for each recommended approach, with cost, time, and resource estimates, as set out above.

- Recommendations for the Environment Agency on the suitability of different financing methods based on their organisational capabilities, and steps needed to address legal and policy constraints.