



# North West Regional Flood and Coastal Committee

**21 July 2023**

# Agenda Item 2

Minutes of the RFCC meeting  
held on 21 April 2023

# Agenda Item 3

## Flood Incidents Update

# Agenda Item 4

## Resilience and Adaptation

Introduced by Andrew Eden, Environment Agency FCERM  
Manager and Programme Executive

North West RFCC

# Adaptation Pathways

Andrew Eden

Environment Agency

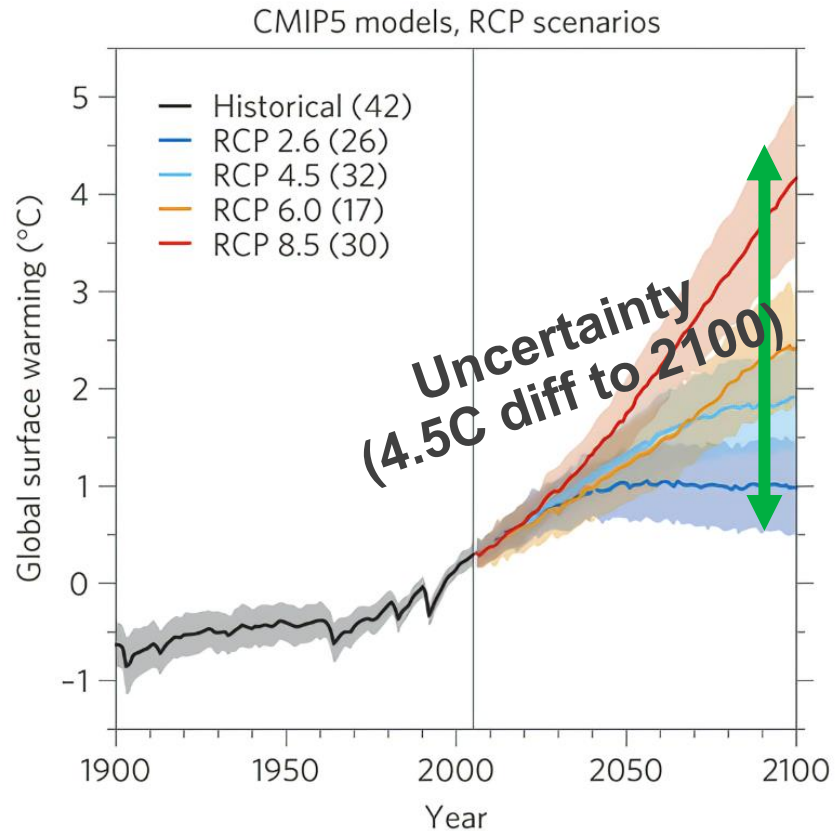
FCERM Manager and Programme Executive



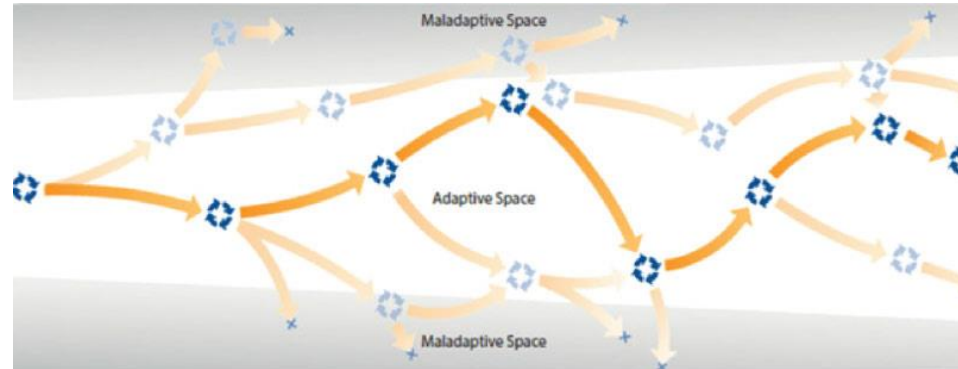
# Agenda

- What is adaptation
- Adaptation pathways – what are they and why should we care
- The adaptation pathways programme
- The four adaptation pathway pilots
- Great stuff!
- Planned improvements

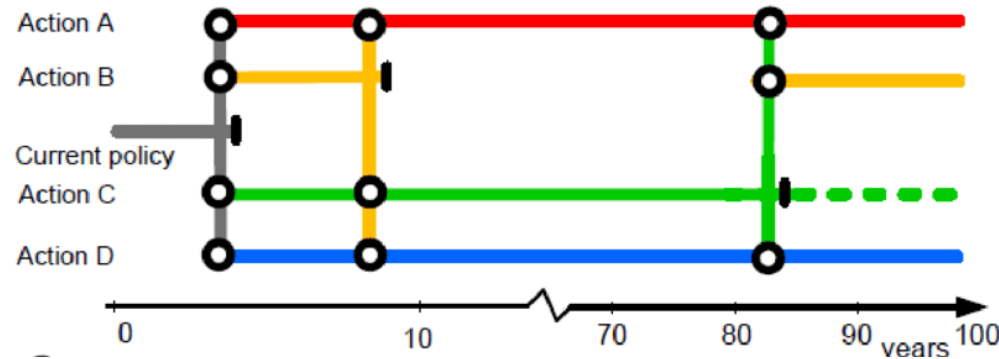
# What is adaptation?



**Uncertainty**



**Flexibility**  
(how do we avoid 'lock-in')

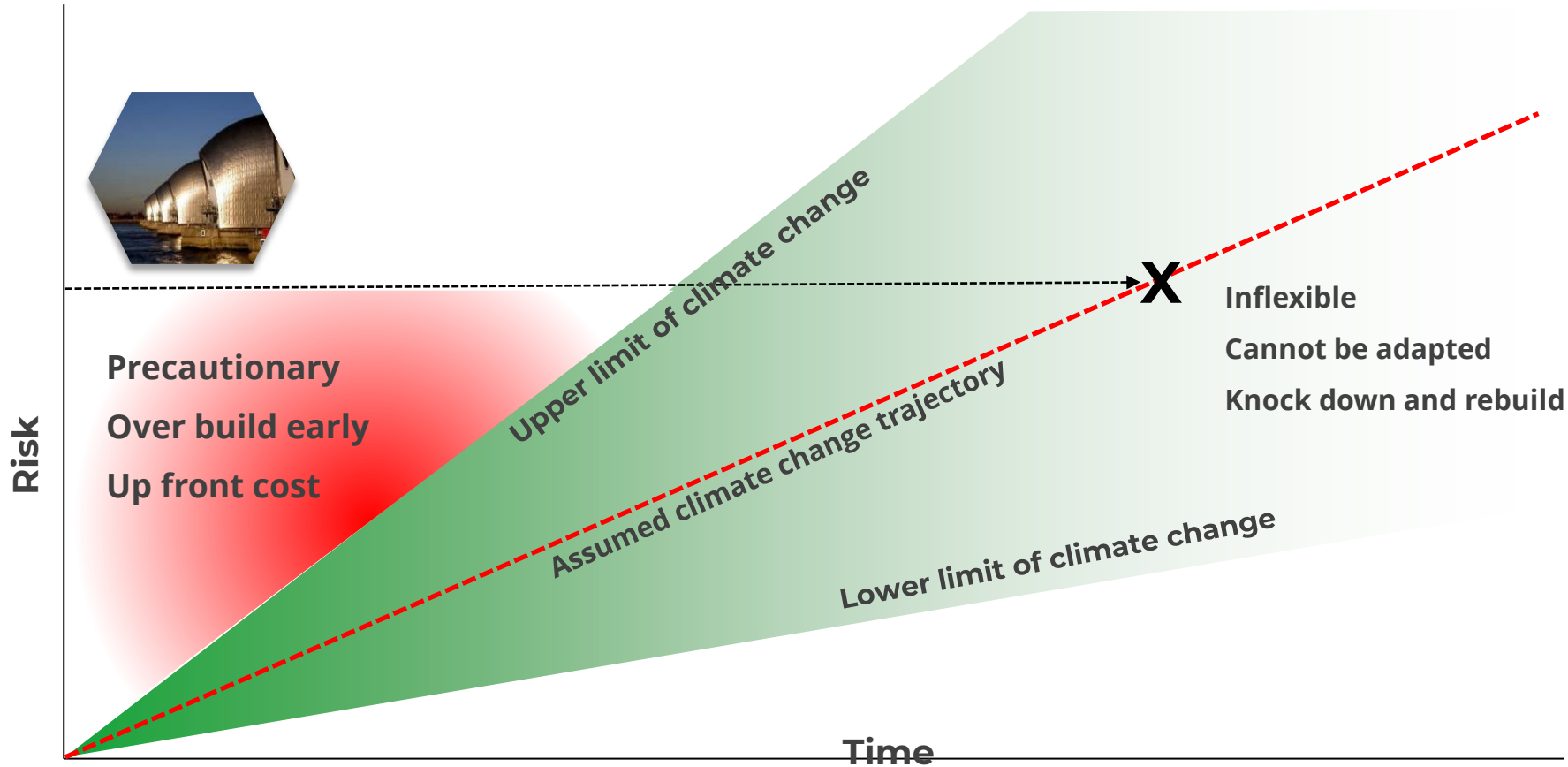


**Flexibility**

...the process of adjusting to current or expected effects of climate change...

- Step 1 Planning
- Step 2 Understand the risks and opportunities from current climate
- Step 3 Understand risks and opportunities from a range of future climate change scenarios, including the most severe climate scenarios
- Step 4 Consider adaptation options for different levels of risks and opportunities, and their thresholds
- Step 5 Identify and evaluate the implications of interdependencies with other drivers
- Step 6 Assemble a route map of adaptation pathways
- Step 7: Evaluate and choose adaptation pathways
- Step 8: Report preferred adaptation pathways
- Step 9: Set out implementation, monitoring and evaluation plans

# Our general approach to managing climate uncertainty

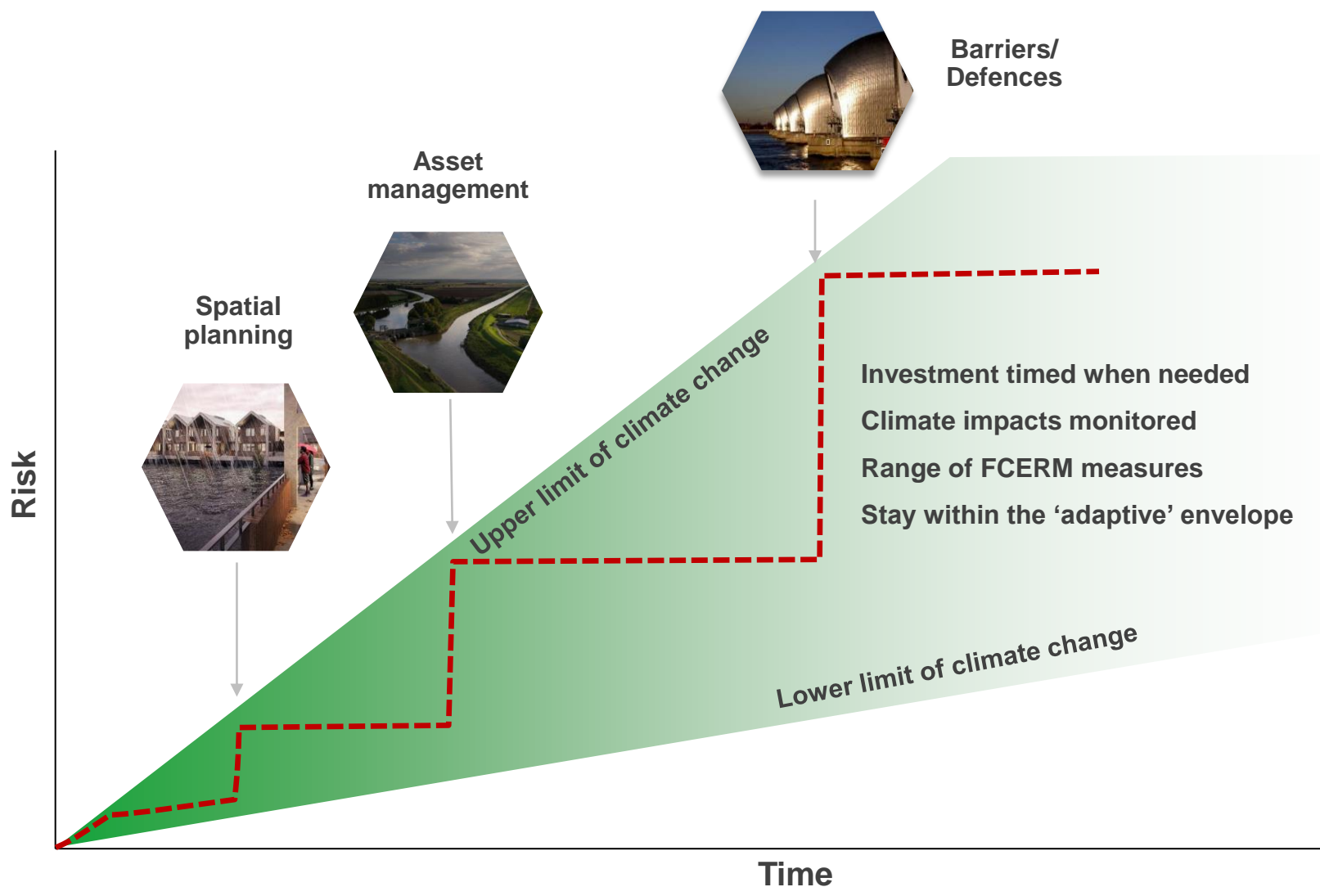


Our current approach tackles current and future risk and is very economically efficient if our assumptions of climate change are correct. But if we're wrong, we deliver inflexible and potentially costly flood and coastal risk management schemes that do not take account of future uncertainty

Precautionary, economically efficient, inflexible with limited capacity to adapt



# An adaptive approach to manage climate uncertainty



## Adaptation pathway approach

Plans

Schemes

Investments

Strategies

An adaptive approach builds the capacity to adapt from the outset. We are able to delay investment until it is needed and embed flexibility into our approach by planning for a range of future climate change scenarios. We are also able to consider other flood resilience tools above and beyond traditional flood and coastal defences.

Manages uncertainty, agile to climate impacts making effective investment at the right time

# Adaptation Pathways: why should we care?



**FCERM Strategy:** adaptation to climate change is the basis of the FCERM Strategy – we are moving to a more adaptive model



**Detail:** the approach allows for better decision making under uncertainty – more detail, more scenarios

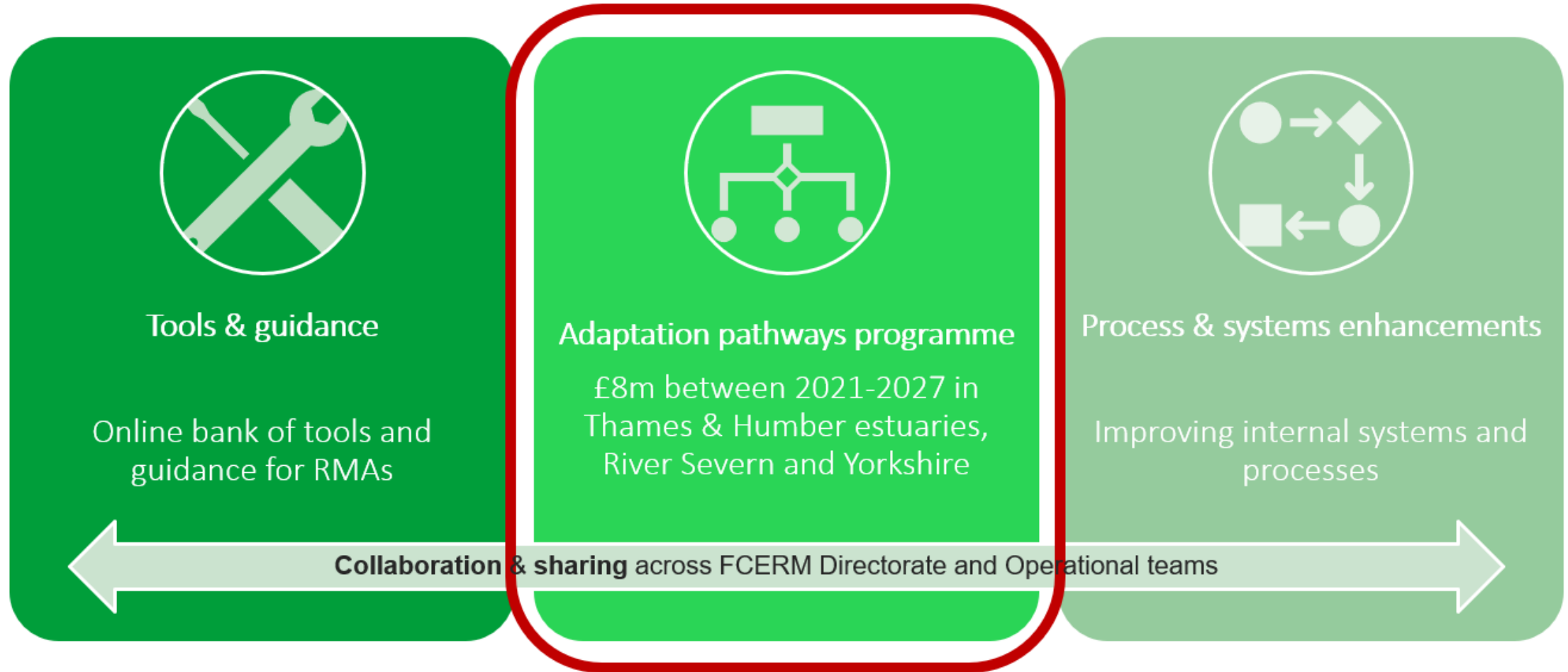


**Long term, cost effectiveness:** adaptive approaches can help us make more effective, less costly, investment decisions, by avoiding too little/ too much investment at the wrong time



**External:** more partners pursuing adaptive approaches and climate risk assessment (local authorities, WaSCs, businesses). Pathways for climate adaptation for flood risk already used in Netherlands, NZ, Australia, Shanghai, New York

# Development: what are we doing



# Flood & coastal innovation programmes

## Key outcomes

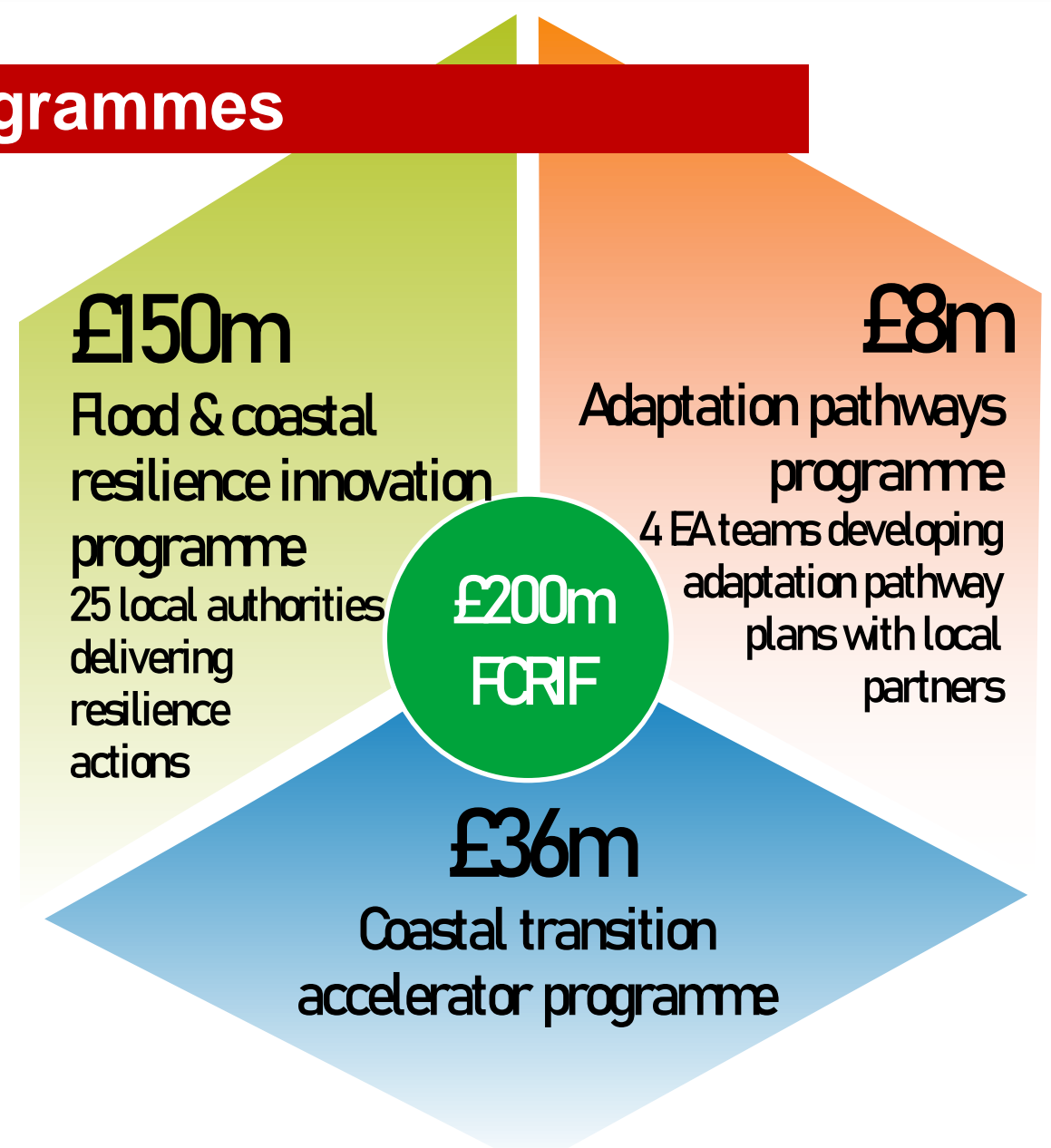
Greater **variety** of FCERM schemes in **capital programme**

Greater **capability** across RMAs

Greater **uptake** of resilience

Robust evidence on **cost:benefit**

## **Wider benefits**

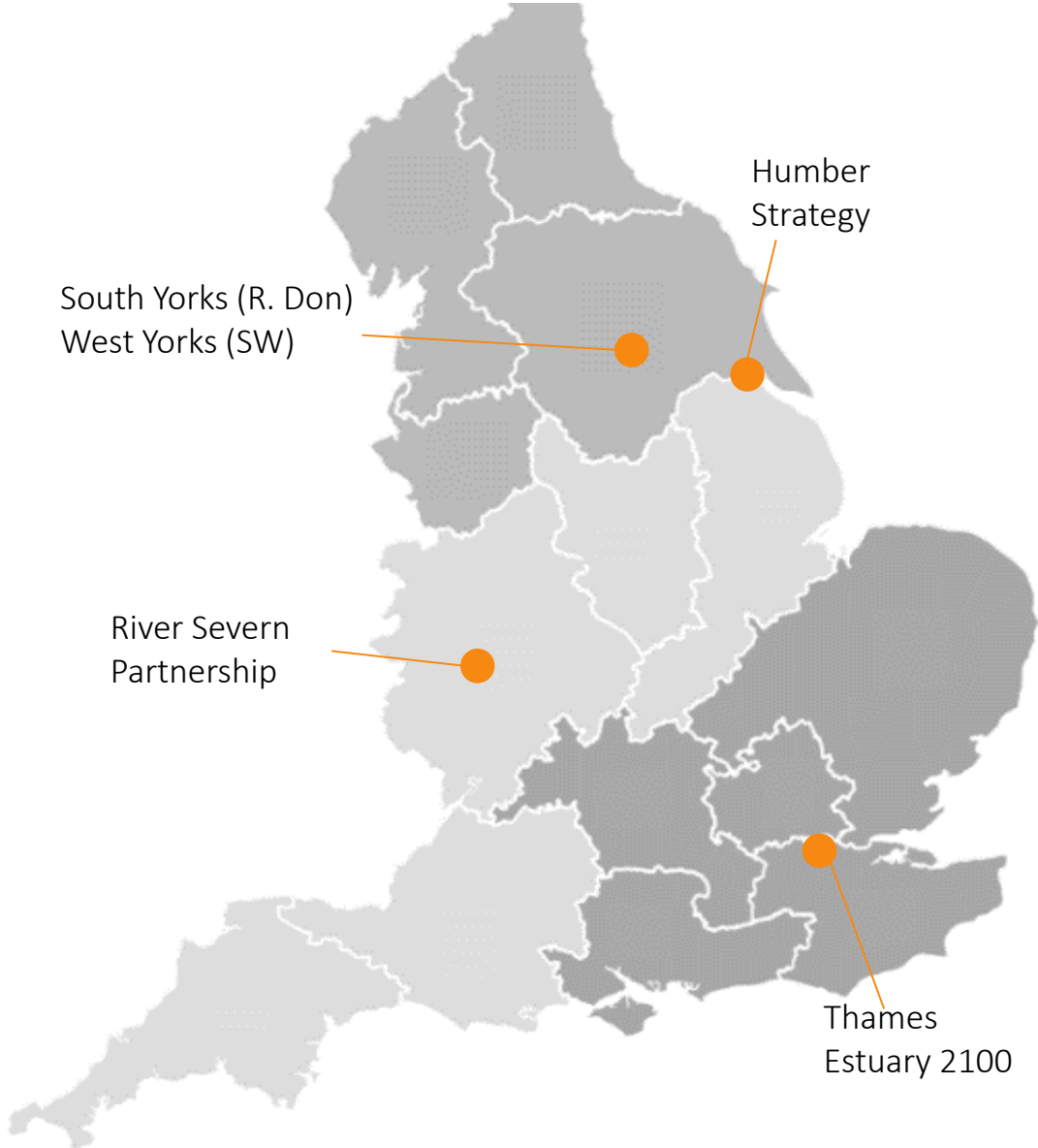


We will drive innovation in flood and coastal resilience and adaptation to a changing climate. We're investing £200 million to test and develop new ways to create a nation resilient to flooding and coastal change.

# Flood & coastal innovation programmes: Collaboration



# The Adaptation Pathways Programme



**£8m Adaptation pathways (2021 – 2027)**  
Investment strategies for managing flooding and coastal risk in a changing climate to 2100 and beyond

Flood resilience actions

Economic assessment & appraisal

Funding

Monitoring, data & evidence

Implementation

People

Modelling

Engagement

Multiple benefits



# Programme communications

MAY 2023 ISSUE 1

# HORIZONS

WORKING TOGETHER TO SHARE LEARNING FROM FLOOD AND COASTAL INNOVATION PROGRAMMES.



**HELPING COMMUNITIES BECOME FLOOD READY**  
How listening became the key to the Blue Heart project success.

**SHAPING A CLIMATE RESILIENT ESTUARY**  
How sustainability and social value are at the heart of the updated Thames Estuary 2100.

Supporting Flood and Coast Projects

News & Updates  
Developing a Project  
Strengthening the Progra...  
Project Resource Directory  
Project Theme Directory  
Yammer Community  
Partnership Funding  
Adaptation Pathways  
FCERM Climate Change A...  
Libraries  
Key Contacts  
FAQs  
Feedback & Site Issues  
Recycle bin  
Edit

+ New Send to Promote Page details Immersive Reader Analytics

## Adaptation Pathways - Welcome to the Knowledge Hub

Grant, Hattie  
Advisor


### Welcome to our Adaptation Pathways knowledge hub!

This is the place to learn about adaptation pathways, what they are and how to use them.

This knowledge hub provides a bank of best practice and digital tools to equip risk management authorities to embed adaptation pathways into their projects, investments and strategic plans. The page includes information on:

- What adaptation pathways are and what they are trying to achieve
- Briefings, guidance and tools
- Case studies examples of where adaptation pathways are being used

We are learning by doing. We do not have all the answers and there are challenges for risk management authorities.



### Flood and Coastal Resilience Innovation Fund

Learn the latest about the £200 million fund which is testing innovative action on flooding and coastal change.

[Find out more](#)

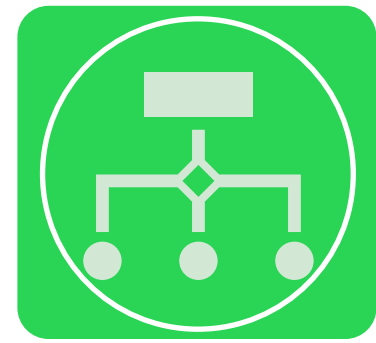


[Adaptation Pathways - Welcome to the Knowledge Hub \(sharepoint.com\)](https://sharepoint.com)

[Flood and Coastal Resilience Fund | Engage Environment Agency \(engagementhq.com\)](https://engagementhq.com)

# The Adaptation Pathways Programme

## Thames Estuary 2100



- **Trailblazer** (2012) - managing uncertainty and delivering flexibility to protect London and Estuary from flooding (*1<sup>st</sup> in the world*)
- Monitors SLR – bringing phases forward or pushing into future
- **300km of river bank**, fixed assets, defence raising, barrier, storage

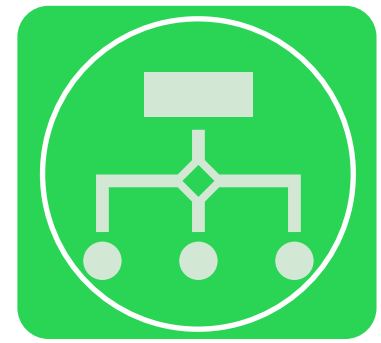
Additional requirements to keep London and Estuary resilient to future SLR – 16 products to *improve uptake, stakeholder* and *political buy-in, overcome funding and legal challenges*. APP will deliver:

- **Costed strategy** for the first phase of defence raising (*adaptive appraisal*)
- **Interactive and innovative tools** to facilitate engagement with partners
- A **detailed land strategy** setting out the land requirements to deliver the Plan and potential **routes to secure it** (e.g. *new barrier*)
- **Secure commitments from LAs**, industry and landowners (*local policy*)



# The Adaptation Pathways Programme

## Humber Strategy 2100+



Understanding tidal flood risk now and in the future (Step 1)

- building acceptance of the magnitude and consequence of risk, and how we communicate it



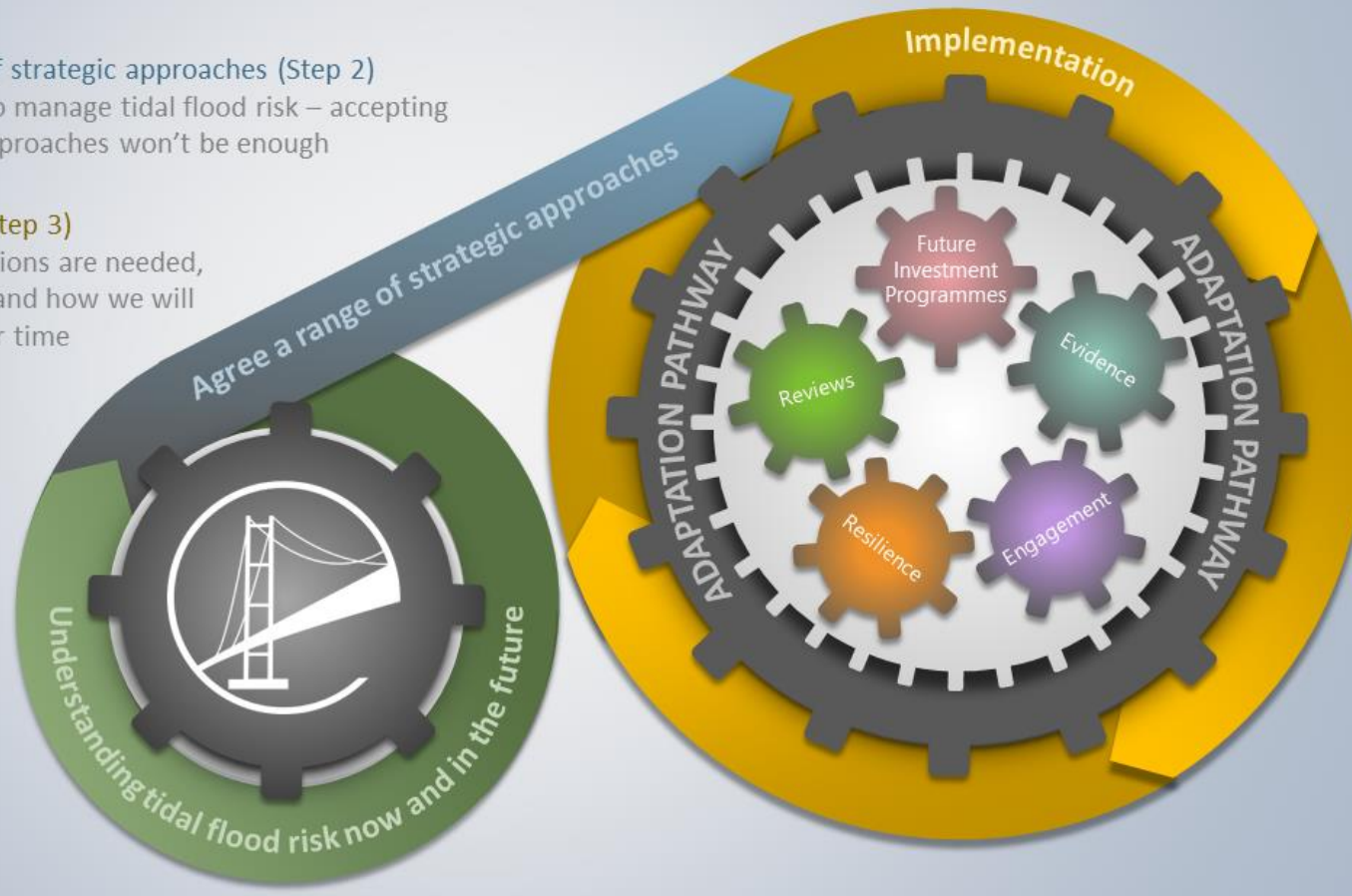
Agreeing a range of strategic approaches (Step 2)

- that we will use to manage tidal flood risk – accepting that the current approaches won't be enough



Implementation (Step 3)

- defining what actions are needed, where and when, and how we will flex and adapt over time

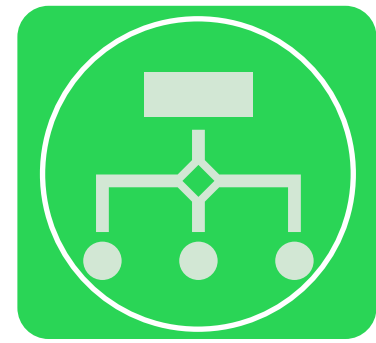


Collaborative  
decision-making tool

- *Replicable*
- *Multi-scenario*
- *Accessible*
- *Partnership*

# The Adaptation Pathways Programme

## South Yorkshire and West Yorkshire



- **South Yorkshire** - using AP to determine optimum timing and type of investment to deliver the South Yorkshire Catchment Plan (*Fluvial, catchment-scale*)
    - *Tasks similar to Humber – also co-developing collaborative decision-making tool*
  - **West Yorkshire** – using AP to reduce flood risk to Garforth (suburb, Leeds) [*completes 2025*]
    - *Repeated SW flooding - Partnership between EA, Leeds City Council and Wakefield MBC, plus Yorkshire Water and Leeds University*
- high-level adaptation pathway plan with recommendations for short term actions and investment choices*
  - AP decision-making framework (triggers, thresholds and decision making process)*
  - tools, guidance and resources (transferable to other geographies)*
  - Integration with cross-sector retrofit programmes (e.g. local authority led public realm improvement, low carbon transport models and green-blue infrastructure)*
  - focus using data we have ‘better’ and communicating in non-technical ways – Great learning for rest of the programme!*

# The Adaptation Pathways Programme River Severn Partnership



Framework that provides governance, monitoring and collaborative translation tools to ensure a dynamic and proactive co-creative relationship with RSP.

An **adaptation planning framework for FCERM** in the River Severn catchment to 2100 and beyond.

**Informs local FCERM delivery and management.**

Dovetails with Severn Valley Water Management Scheme



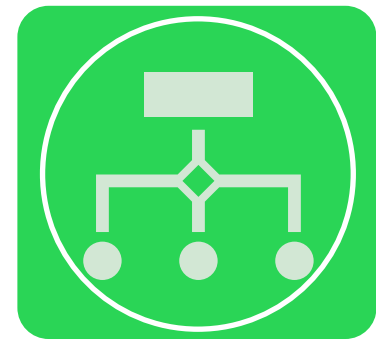
Adaptive Pathways Explainer



[Adaptive Pathways Explainer \(vimeo.com\)](https://vimeo.com/adaptive-pathways-explainer)

# The Adaptation Pathways Programme

## Snapshot of highlights and learning



- Citizen juries (RSP, Humber, Yorks)
- Securing future land strategy (TE2100)
- **AP benefits toolkit (RSP)**
- AP engagement checklist (RSP)
- Setting up AP governance structures (ALL)
- **Adaptive economic analysis (TE2100)**
- **Collaborative decision making tools (Humber, Yorks)**
- Innovative engagement tools and techniques (All)
- Riparian landowner guidance (climate adaptation) – (TE2100)
- AP training materials and guidance for RMAs (All)
- **Using AP to align flood and coastal investment with other partners (RSP, Humber, Yorks)**
- How to embed recommendations within local planning policy (TE2100, Humber)
- **Costed and optimised investment strategies and/ or plans informing future capital programme pipeline (ALL locations)**

# Adaptation Pathways

## Opportunities for mainstreaming

Improving Appraisal Guidance

**FCERM Strategies guidance**

**LIVING DRAFT Adaptation Pathways Guidance**

Guidance and training for our assurers (LPRG)

**AP EngagementHQ site (tools, case studies, guidance)**

Enhance CC allowances

**Research and alternative methods to 'value' adaptation'**

**In EA control**

**SHAPING of future Strategic Flood Risk Planning replacement (Defra-led)**

How could we secure enhancements to funding policy to value 'adaptation' and 'flexibility' properly

**Defining role of EA in place-shaping and local strategic plans**

EA capability, leadership and focus

**In EA influence**

**TIMING of future Strategic Flood Risk Planning replacement (Defra-led)**

RMA capability, capacity, recruitment and ability to implement such measures

**Outside EA influence**

# Q&A

# Agenda Item 5

## Update from the Finance & Business Assurance Sub Group

Introduced by Adrian Lythgo,  
supported by Adam Walsh and Sally Whiting

# North West RFCC Overview: 2023-24

## What outcomes are we delivering?

		* North West Target	North West Forecast	Actual to date
		3,598	4,839	38

*\*No official North West RFCC target. Targets are split by Area.*

## Are we spending the funding we have secured?

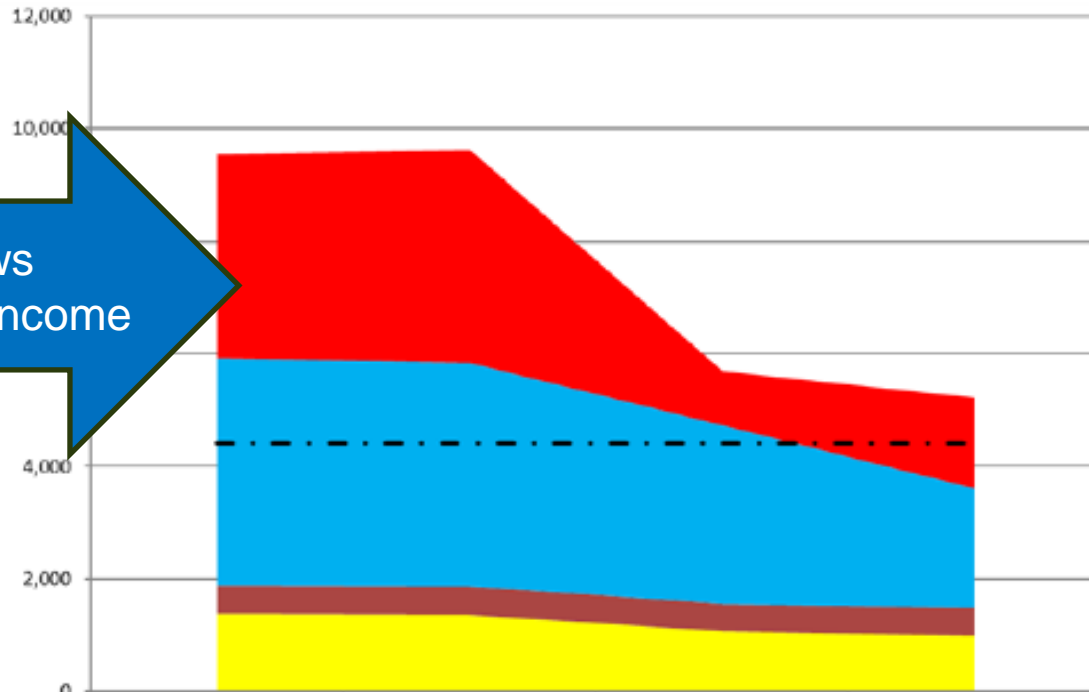
	Capital funding available £108.542 million	Capital forecast £112.495 million
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# NW RFCC Local Levy Programme – 2023-24 and Beyond

## Local Levy Income & Expenditure Scenario

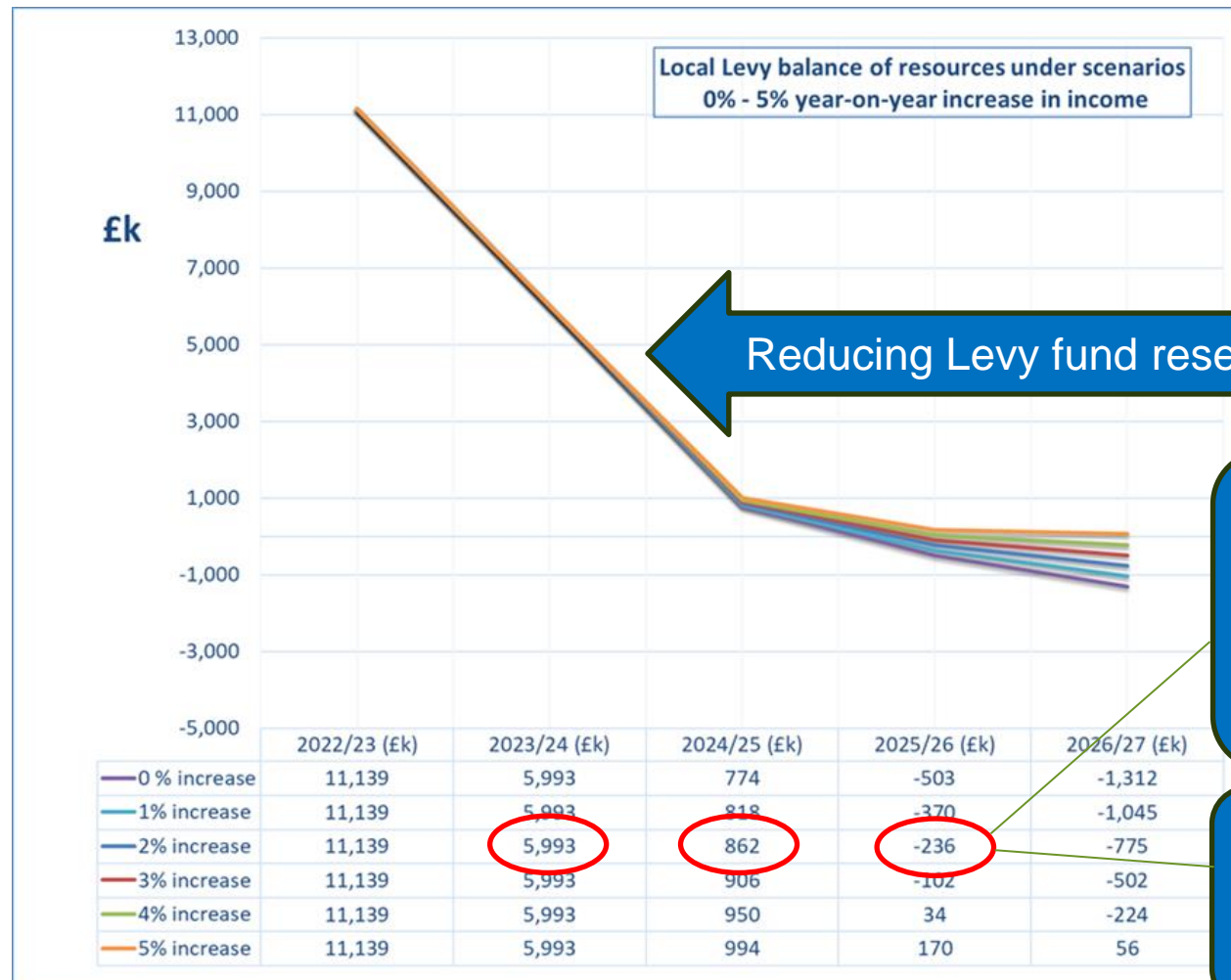
Fund reserve allows programme to exceed income



	2023/24 (£k)	2024/25 (£k)	2025/26 (£k)	2026/27 (£k)
Priority capital schemes => £1m (Levy)	3,630	3,800	947	1,613
Smaller capital schemes	4,043	3,961	3,176	2,118
Partnership Quick Wins	500	500	500	500
RFCC Business Plan (inc Innovation & Change Fund )	1,384	1,369	1,064	989
Sub Total Expenditure	9,557	9,630	5,687	5,220
Local Levy Income	4,411	4,411	4,411	4,411

2023-24	
Local Levy income and allocation summary (£ million)	
Cash balance at start of year	11.139
Local Levy income	4.411
Total available balance	15.550
Allocation	9.557
Expected remaining balance at year end (based on allocation)	5.993

# NW RFCC Local Levy Programme – 2023-24 and Beyond



Reducing Levy fund reserve

Local Levy Strategy commitment to retain a minimum reserve of 5-10% of annual income (i.e. £220k-441k)

Indicative programme not affordable from 2025/26 - requires review

# Local Levy Strategy

- ➔ Published Sept 2020
- ➔ Subsequent changes
- ➔ Reducing Local Levy reserve
- ➔ Most principles still feel right
- ➔ Refresh proposed

# Recommendations from Sub Group

- To note the current local levy position and latest spend forecast.
- To endorse the ongoing refresh of the scheme-specific local levy allocations in the future years of the programme.
- To support the subsequent initiation of a refresh of the Local Levy Strategy.

# RFCC Business Plan - Overview

North West RFCC Business Plan Reporting Tool																						
Programme Level reporting																						
<h3>Project RAG Summary</h3> <table border="1"><caption>Project RAG Summary Data</caption><thead><tr><th>RAG Status</th><th>Count</th></tr></thead><tbody><tr><td>RAG - Green</td><td>14</td></tr><tr><td>RAG - Amber</td><td>6</td></tr><tr><td>RAG - Red</td><td>2</td></tr></tbody></table>		RAG Status	Count	RAG - Green	14	RAG - Amber	6	RAG - Red	2	<h3>Programme Investment Profile</h3> <table border="1"><caption>Programme Investment Profile Data</caption><thead><tr><th>Category</th><th>Value (£K)</th></tr></thead><tbody><tr><td>Local Levy investment 2023/24 (£K)</td><td>1,384</td></tr><tr><td>Spend/claim forecast 2023/24 (£K)</td><td>1,270</td></tr><tr><td>Estimated future Local Levy funding need 2024/25</td><td>1,231</td></tr><tr><td>Estimated future Local Levy funding need 2025/26</td><td>972</td></tr></tbody></table>			Category	Value (£K)	Local Levy investment 2023/24 (£K)	1,384	Spend/claim forecast 2023/24 (£K)	1,270	Estimated future Local Levy funding need 2024/25	1,231	Estimated future Local Levy funding need 2025/26	972
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# RFCC Business Plan – Change 1 (Approved)

- The Finance and Business Assurance Sub Group approved an increase in Local Levy funding for the Business Plan 'Building Community Resilience' ambition, from £230 thousand per year to £249.55 thousand per year, to 2026-27 (within delegated powers from the RFCC)

# RFCC Business Plan – Changes 2 and 3 (Proposed)

- To approve the RFCC the formal closedown of action ID11 - Evidence gathering – Effectiveness of Lead Local Flood Authority (LLFA) advice on planning applications.
- To approve the inclusion of support for a Highways SuDS Design Guide requiring a Local Levy contribution of £20 thousand in 2023-24



# Rochdale & Littleborough FRMS Project

Reapportionment of Local Levy contribution to  
the Littleborough element



# Recommendation from Sub Group

- **Rochdale & Littleborough Flood Alleviation Scheme** - approve the reappportionment of Local Levy contribution to the Littleborough element of the Rochdale and Littleborough scheme

# EA Maintenance Programme 2023-24

- EA Revenue Programme financial summary 2023-24
- (inc. Maintenance, Staff Costs and Revenue Projects)



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Committee

	<b>Budget £m</b>	<b>Forecast £m</b>	<b>Forecast Variance to Budget £k</b>
CLA	11,368	8,335	-3,033
GMC	10,236	8,913	-1,323
<b>NW Total</b>	<b>21,604</b>	<b>17,248</b>	<b>-4,356</b>

# North West RFCC Risks – 2023-24

- Forecasts and allocations
- Cost of materials
- Lead times
- Industrial action
- Framework changes
- Inflation
- Weather conditions
- Incidents
- Biodiversity Net Gain legislation
- *Resources*



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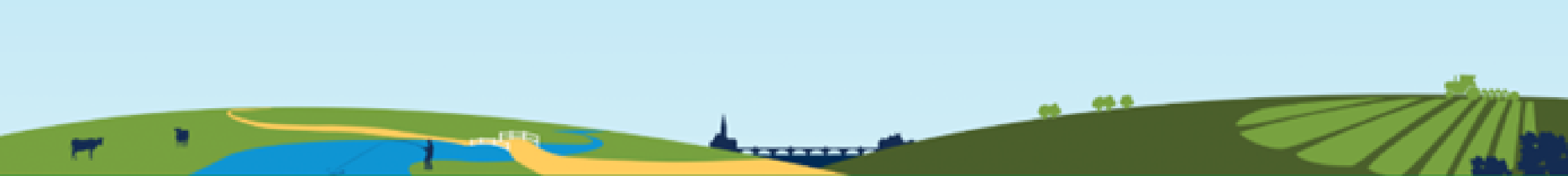
# Recommendations from Sub Group

- **Note** the progress in delivering the 2023-24 Capital and Resource programmes
- **Note** the risks to the North West Programme in 2023-24

# Agenda Item 6

## Strategic Flood Risk in the North West

Presented by Jennifer Bridgeland (EA),  
Perry Hobbs (UU) and Mike Clough (UU)



## Flood Risk Management Plans

# 2<sup>nd</sup> Cycle Flood Risk Management Plan

## RFCC Update – 21.07.2023

Presented by Jennifer Bridgeland

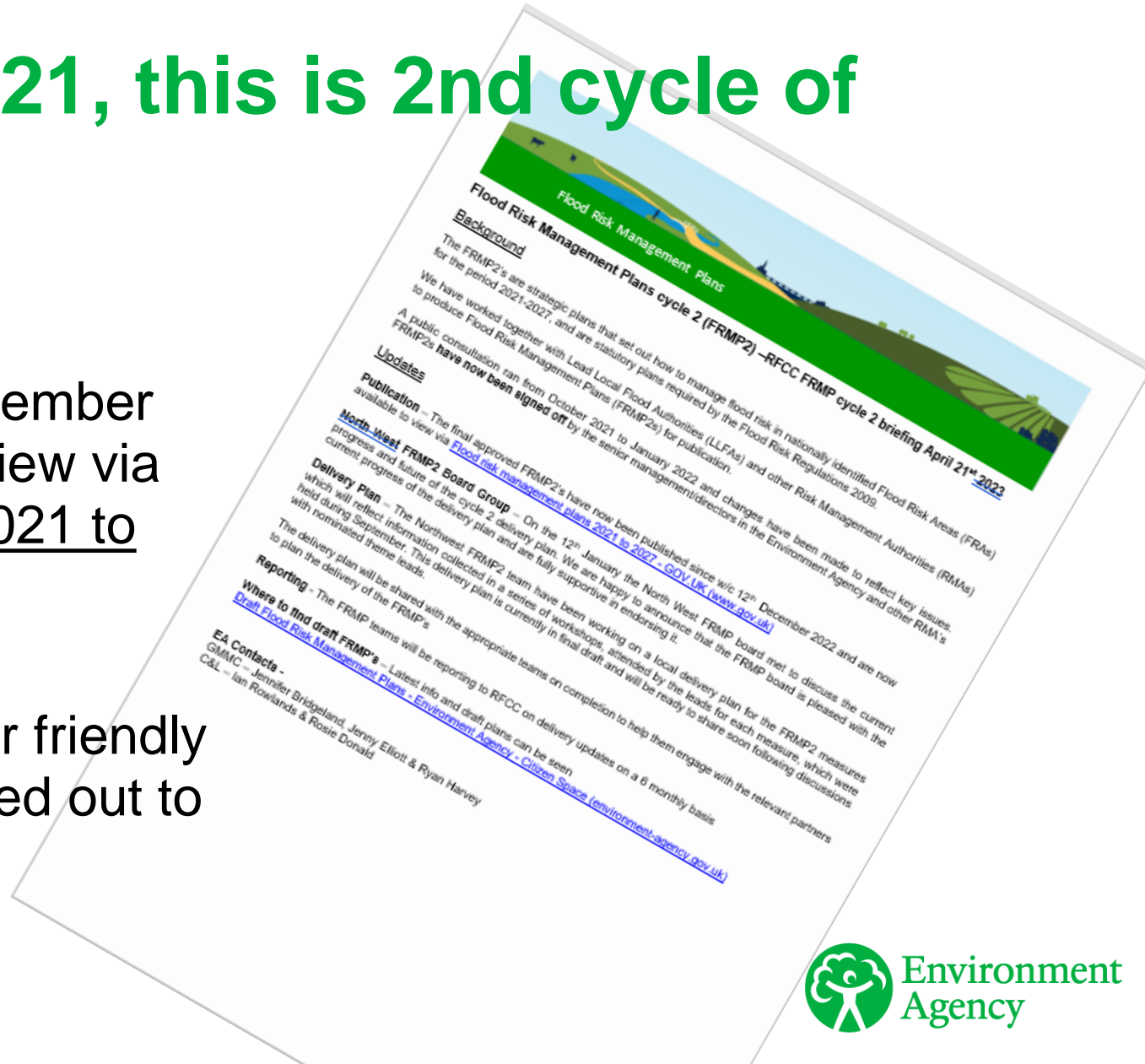
North West EA FRMPs Team – Jennifer Bridgeland, Ian Rowlands, Rosie Donald & Jenny Elliott

# FRMP2 so far

## 1st cycle completed 2021, this is 2nd cycle of FRMP's (2021-2027)

### April briefing note summary:

- FRMP2's were published in December 2022 and are now available to view via [Flood risk management plans 2021 to 2027 - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- FRMPs team have written a user friendly Delivery Plan which is being rolled out to relevant staff





## Flood Risk Management Plans

### Since the April briefing note the FRMP team has

- Finalised a delivery plan to ensure delivery of FRMP measures
- Held workshops in Autumn 2022 we have identified a list of theme & measure leads:
  - **Theme Leads** – to oversee reporting by FRMP theme
  - **Measure leads** – to report on specific measures
- Rolled out the process for reporting on FRMPs to River Basin District Theme & Measure Leads
- Hosted drop-in sessions to provide tips and guidance on reporting to Measure Leads
- Submitted data to the EA National team via [Flood Plan Explorer](#) (FPE) mapping tool, which is available to view on line
- Liaised with RMA's in connection with delivery of their relevant measures.



## Reporting Overview

- FRMP team are reporting on **two types of measure**: River Basin District (RBD) and Flood Risk Area (FRA)
- We are reporting on **3 River Basin Districts** – North West, Solway Tweed and River Dee
- First reporting nationally on FRMP2 was at the end of April 2023 - FRA measures were not reported on in this occasion
- National reporting will be biannual (April & October)
- NW FRMP team will **update RFCC biannually**
- Reporting is uploaded to Flood Plan Explorer (FPE) where it is accessible by the public
- Theme and Measure Leads to:
  - complete an excel delivery plan to collect comments on progress
  - upload the measure status to FPE


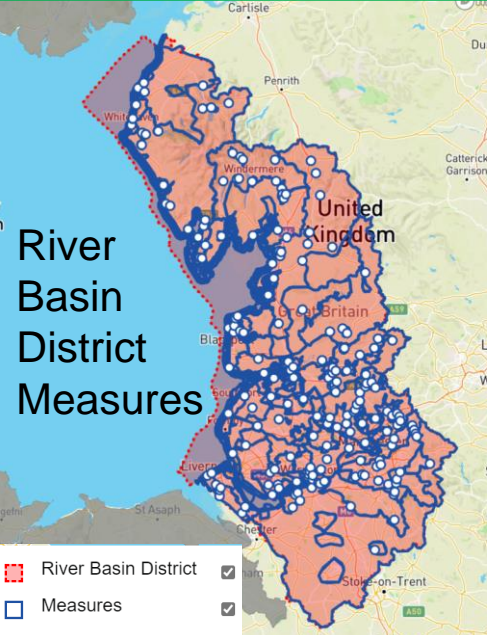

# Flood Plan Explorer- updating measure status

River Basin Districts | **Flood Risk Areas** | Strategic Areas | National measures

## River Basin Districts

A River Basin District (RBD) is an area covering one or more river catchments.

- [Anglian](#)
- [Dee](#)
- [Humber](#)
- [North West](#)
- [Northumbria](#)
- [Severn](#)
- [Solway Tweed](#)
- [South East](#)
- [South West](#)
- [Thames](#)

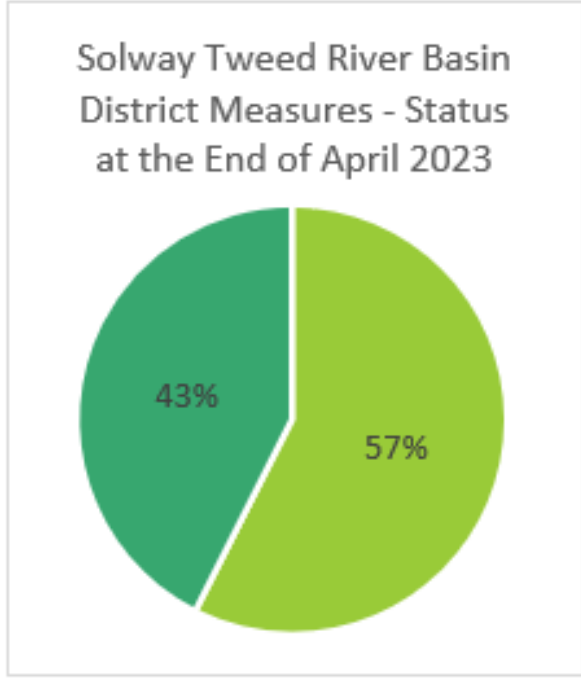
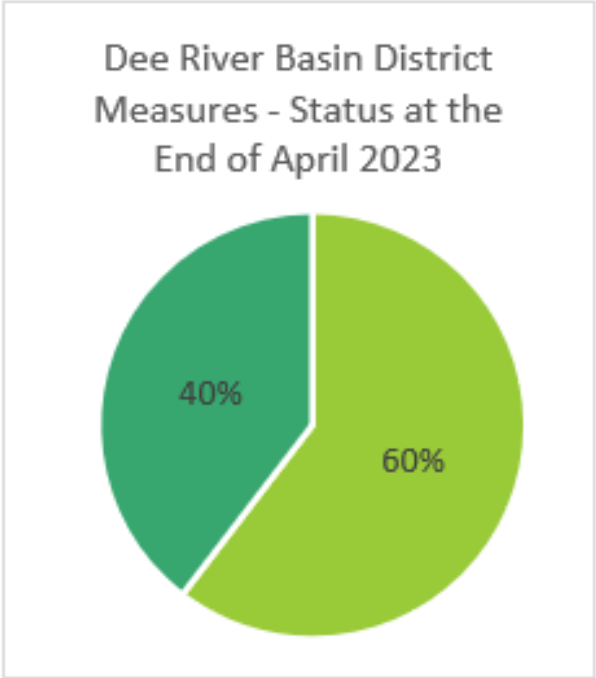
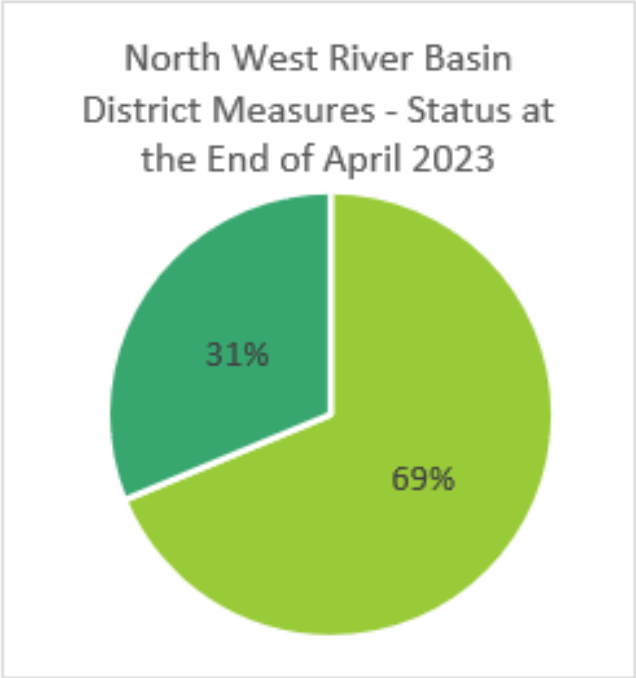


Example of an individual measure

Status of measures will be updated biannually by area FRMPs teams and LLFA's (FRA measures)

[Find out about flood risk management plans – Flood Plan Explorer \(data.gov.uk\)](https://data.gov.uk)

# Initial Reporting April 2023- River Basin District Measures



- The April 2023 report represents a benchmark at the start of the FRMP2 implementation.
- More measures have already started since April.
- In October 2023 we expect these statistics to show many more will be ongoing.

Key – Status of Measures

Not started - Proposed	On Going - Construction
Not Started - Agreed	Completed
On Going	Cancelled now Superseded

# Initial Reporting April 2023- Flood Risk Area Measures

- Flood Risk Areas were not required to update their measures this April.
- The 15 specific Flood Risk Areas are at various stages of reviewing & implementing their Flood Risk Measures, with support from their Environment Agency's local authority lead point of contact.
- LLFAs will be granted access to FPE this summer and will be able to update the status of their measures- they will have editing access, not approval
- National will roll out recorded training events for LLFAs to help with uploading status updates into FPE.
- LLFA's will be encouraged to make some updates to their measures' status in October with the aim that the bi-annual reporting should be as up to date as possible.
- We have also asked our FCRM colleagues for ideas on how we can support LLFAs after the national roll out.

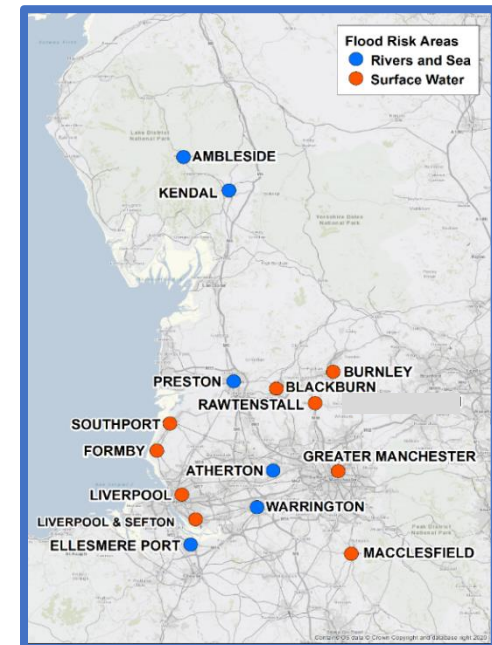
## FRA Local Authorities

### CLA

- Westmoreland and Furness Council
- Blackburn with Darwen Borough Council
- Lancashire County Council

### GMMC

- Wigan Council
- Tameside Metropolitan Borough Council
- Cheshire West and Chester Council
- Cheshire East Council
- Liverpool City Council
- Sefton Council
- Warrington Borough Council



# Board Meeting Update

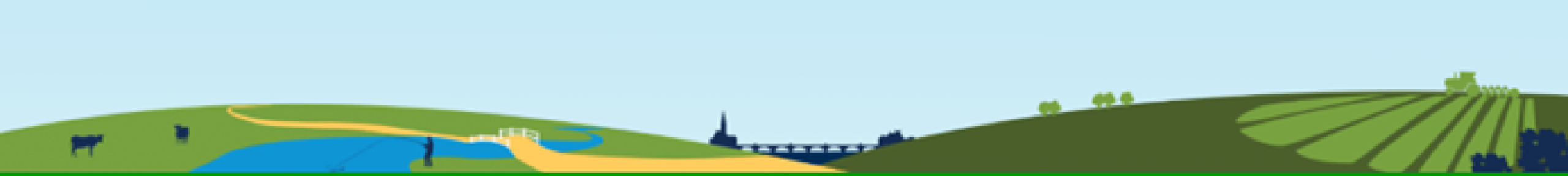
At the June FRMP Board we:

- updated the new Chair on our progress
- agreed our updated Terms of Reference and structure
- discussed our risk register (4 risks, all stable).

The Board agreed to support the delivery plan roll out, reporting structure and continuation of resource.

## Next Steps

- Reiteration of training for Theme and Measure Leads (drop-in sessions)
- Virtual Theme and Measure Lead quarterly meetings
- 6 monthly reporting to RFCC
- Next national FRMP report October 2023
- Annual report to DEFRA March 2024



## Flood Risk Management Plans

# Questions and Comments

# Drainage and Wastewater Management Plan (DWMP)

## What is the DWMP?

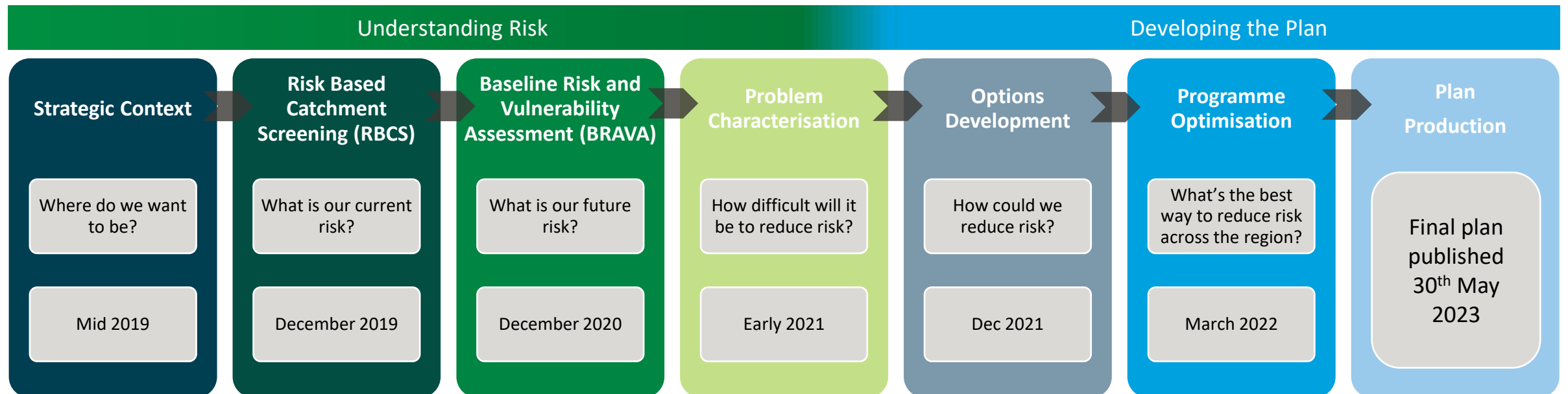
The DWMP is a long term strategic plan that will set out how United Utilities intends to maintain a robust and resilient drainage and wastewater system in the North West over the next 25 years.

This is the first time we have produced the DWMP, and it will be reviewed every 5 years. This iteration (Cycle 1) is non-statutory, but the next iteration (Cycle 2) will become statutory under the Environment Act 2021.

The DWMP framework was set out by regulators to ensure all water companies are:

- Improving long term planning approaches to address unprecedented future challenges;
- In alignment with one another and to provide consistency across the industry;
- Provide greater transparency and line of sight to customers and stakeholders; and
- Driving industry wide improvement.

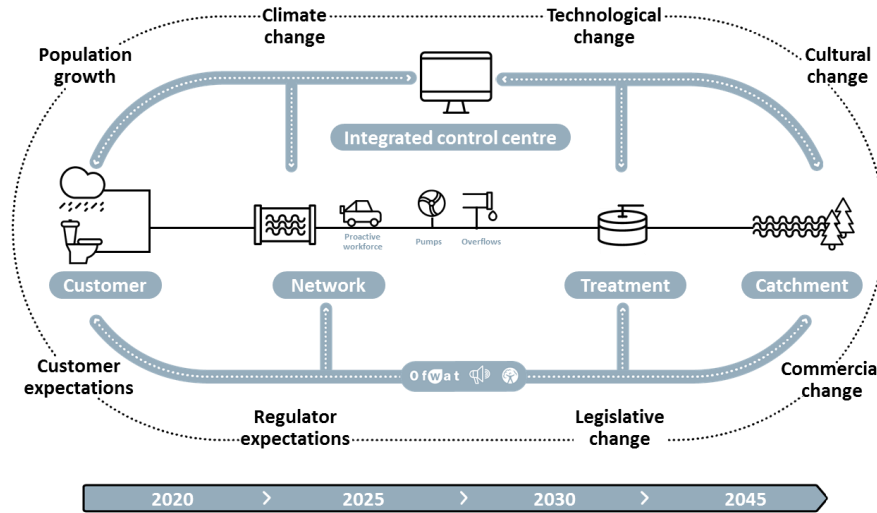
## The DWMP development process



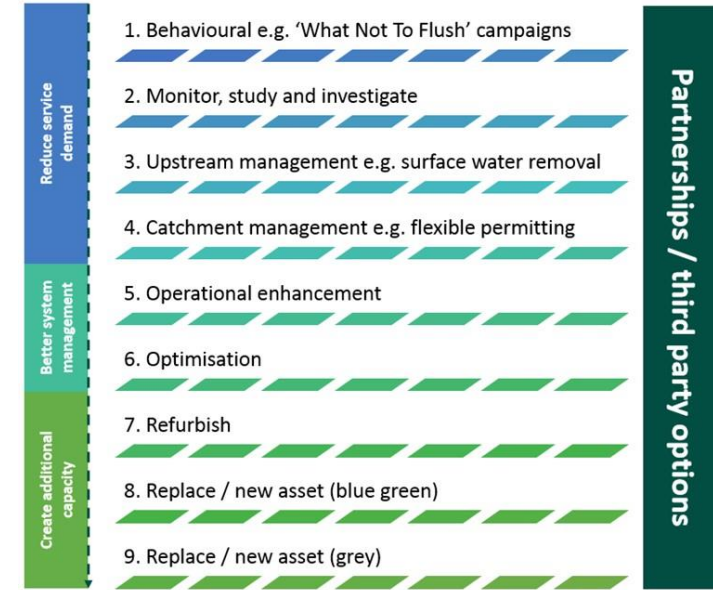
# Drainage and Wastewater Management Plan (DWMP)

## The key considerations of the DWMP

<b>DWMP activities</b>	<ul style="list-style-type: none"> <li>Historical and future risk assessments</li> <li>Resilience assessments</li> <li>Achieving planning objectives (targets) set</li> <li>Optimisation</li> </ul>
<b>Strategy and AMP8 alignment</b>	<ul style="list-style-type: none"> <li>Internal ambitions</li> <li>PR24</li> <li>AMP8</li> </ul>
<b>Customer insight</b>	<ul style="list-style-type: none"> <li>Customer insight through research</li> <li>Customer Challenge Group views</li> </ul>
<b>Stakeholder engagement</b>	<ul style="list-style-type: none"> <li>Stakeholder workshops and engagement</li> <li>Draft consultation feedback</li> </ul>
<b>Regulator guidance</b>	<ul style="list-style-type: none"> <li>Framework and guiding principles</li> <li>Regulator feedback</li> <li>Legislation (SODRP)</li> </ul>



<b>Planning objective</b>	<p>We will provide excellent wastewater services, reducing our impact on the environment</p>	<p>We will protect, restore and improve the natural environment of the North West through our actions</p>	<p>We will sustainably reduce the risk of sewer flooding in the North West</p>
<b>Metric</b>	<p>Wastewater Quality Compliance Pollution Incidents</p>	<p>Storm Overflow Performance Environmental Obligations (WINEP)</p>	<p>Internal Flooding External Flooding Flooding of Open Spaces Sewer Collapses Risk of 1:50 Year Storm</p>



### A framework for engagement in the North West



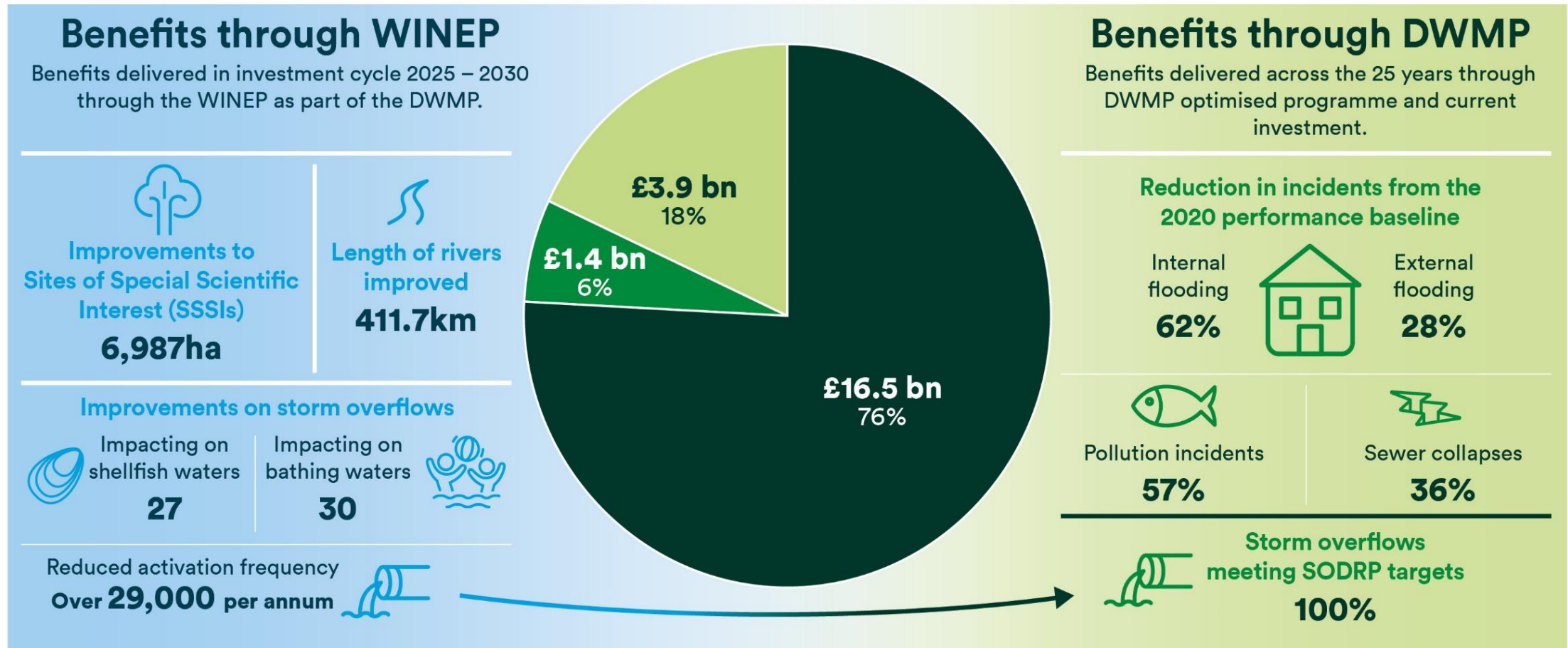


## The final DWMP

### DWMP23 (2025-2050)

Capex - £21.8 billion

■ Storm overflows
 ■ Optimised plan
 ■ Wastewater treatment



# Agenda Item 7

## Presentation on the Preston Flood Risk Management Scheme

# Overview Map

## Area 1 Broadgate & Riverside:

Higher pre-cast concrete flood walls (glass panels in places).  
Flood gates. Redi-rock revetment along foreshore.

- Scheme planned to cover 5 areas with estimated £54.7m budget (funding gap of £10-15m to finish the Scheme)
- New defences will reduce the flood risk for c.5000 homes & businesses




## Area 3 Frenchwood & Fishwick Bottoms

**Area 2 Lower Penwortham:**  
Pre-cast concrete wall panels (glass panels in places).  
Embankments raised.

## Area 3 & 4 Walton-le-Dale

## Area 5 Higher Walton

### RISK OF FLOODING

	High $\geq 3.3\%$
	Med 3.3-1%
	Low 1-0.1%



# What the scheme will look like

- Pre-cast walls appropriate for the existing buildings and landscape
- Glass panels in places to maintain views
- Raised embankments, including use of Redi-rock
- 4 x Floodgates



Example flood gate



Artist's impression of new flood wall and glass panels along Riverside Road (Area 2)

# Social & Community Benefits

- ✓ Inclusive design with opportunities for the public to access open green spaces - more walking, running, dog walking and cycling.
- ✓ 0.35ha wetland habitat at Ribble Sidings — woodland, orchard, grassland, native trees & flowers, & pond dipping platform.
- ✓ 3 new community sports pitches at Archbishop Temple High School creating a lasting sports legacy for Preston.
- ✓ Enhancements to Broadgate Gardens with fruit trees, ornamental shrubs, amenity grassland, seating areas & riverside viewing platform.
- ✓ Improved entrance to Avenham & Miller Parks.
- ✓ Areas 3 & 4 defences increase protection for a major area of commerce (located around the Capitol Centre).

# Community Benefits Example: Ribble Sidings

- Woodland & fruit orchard with 170 native trees
- Species rich grassland
- Native wildflowers & bulbs
- Insect friendly habitat
- Pond dipping platform



Damselfly



Toad



Newt



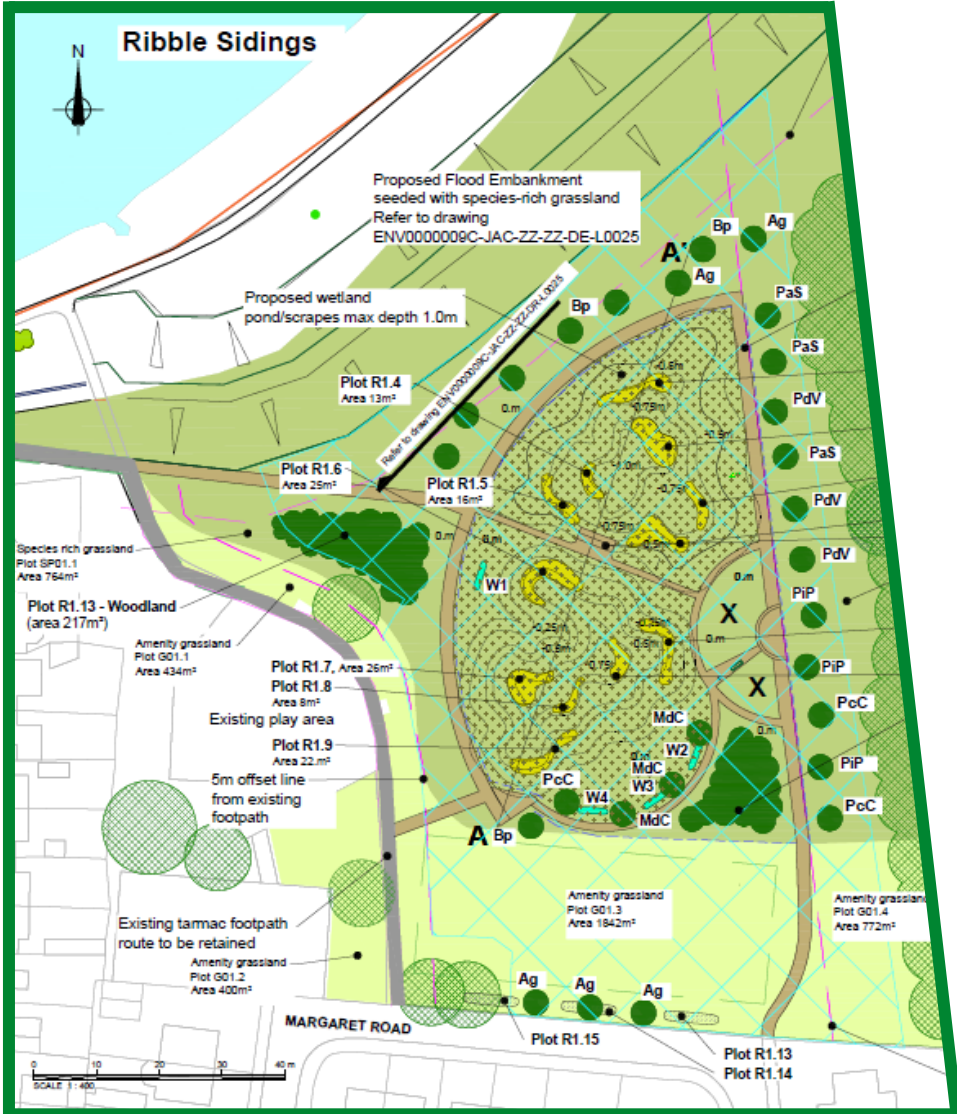
Willow



Hazel



Hawthorn



Snowdrop



Daffodil



Foxglove

# Scheme Construction & Sustainability

EA has a 40% carbon reduction target for capital schemes between initial business case & construction completion.

Carbon emissions reduction, examples:

- Use of electric vehicles
- Permeable surfaces / Ecophalt for paths
- Reuse of tree trunks

**Carbon Offsetting** (additional to 40% target)

- EA Objective: "net zero by 2030"
- Carbon offset by the creation of new environmental areas, including tree planting



- The overall EA sustainability target: 60% ("very good")
- PSR Scheme Target: 75% ("excellent")
- To date: Areas 1&2 achieved 78% for the design stage assessment

# Sustainability Example: Root Wads

- Sustainable method to reuse trees removed prior to construction
- Trunks and their root plates driven into the bank to enhance habitat niches / refuges for fish



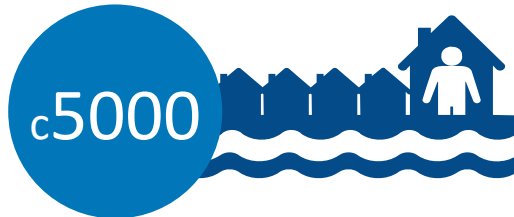


# Key Facts Summary

## Providing flood protection & better community amenities



Defences to be constructed

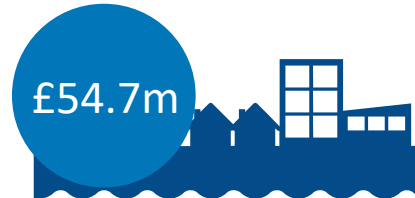


Homes, schools & businesses better protected from flooding



New sports pitches created at a local school

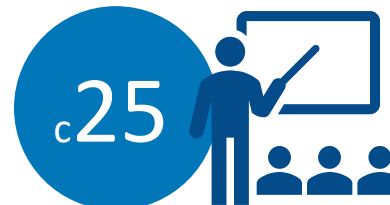
## Providing better economic growth & education opportunities



Investment in Preston & South Ribble



People working on the scheme



Educational sessions to be delivered in local schools

## Protecting & enhancing the local environment



Trees to be planted



Hectares of new wetland created

Any Questions

# Agenda Item 8

## Any Other Business

# Flood and Coast Event 2023

## Day 3 Overview - Sustainable Drainage Systems (SUDs)



Crystal Orton  
EA FCRM Advisor  
RFCC Project Manager



**Session 1: Spotlight on  
sustainable drainage,  
implementing Schedule 3  
of the Flood and Water  
Management Act 2010**

## Speakers -

Paul Shaffer - Director of Innovation and Delivery, CIWEM UDG.

Julie Mayhew - Head of Water Waste and Drainage, DEFRA.

Ian Titherington - Senior Advisor Sustainable Drainage, Welsh Government.

Graham Morely - Developer Services Strategy Manager, United Utilities.

Glen Westmore - Flood Risk Planning and Consenting Team Leader, Surrey County Council, ASA Vice Chair.

Sam Kipling - Senior Advisor on Coast and Development Planning, Environment Agency.

# Key Messages -

Surface Water is the most common flood risk in the UK - over 3 million properties at risk.

Jenkins Review 2020 highlighted a lack of consistency in SuDS approval and no clear requirement for adoption and maintenance.

Defra has carried out an extensive review of Schedule 3 with key stakeholders.

Defra will carry out a regulatory impact assessment later this year and consult on this.

The implementation of Schedule 3 will not change primary legislation.

Defra will agree a commencement date once the public consultation has been completed and once approving bodies have had time to establish.

Local authorities should hire individuals with skills to design, implement and maintain SuDS as soon as possible.

Stakeholders wish to receive mandatory guidance for approval, adoption and maintenance of SuDS.

Defra have worked closely with the Welsh Government in the development of Schedule 3 and the Welsh approach to Schedule 3 will be considered in England's Policy.

Schedule 3 legislation is unlikely to be completed until Spring 2024.

SABs to provide information to DEFRA on planning applications and planning application fees, post implementation of Schedule 3.

Schedule 3 will not include retrofit SuDS.

Staff and resources anticipated to be a challenge with some LLFA's currently having job vacancies open for 6+ months.

Schedule 3 will create good career opportunities for graduates and new people entering the industry - Green Jobs.

United Utilities wish to see more integrated SuDS trains and less end of pipe solutions.

United Utilities wish to become a formal statutory consultee in order to fully engage with Schedule 3.

Building Control legislation is currently outdated, there is a need for this to be updated.

Implementation of schedule 3 will remove the automatic right to connect to a public sewer.





# Key Lessons from the Welsh SABs

The Welsh implementation of SABs has shown that Highways Authority's and Local Planning Authorities (LPA's) working alongside SABs/Lead Local Flood Authorities (LLFA's) is crucial to the delivery of SuDS.

A review of the Welsh implementation of SABs so far is due to be published and will include 80 recommendations to help strengthen the current legislation and to make it easier to use.

There is a need to modify existing Apprenticeships and University Degrees to help close the current skill gap in the SuDS Industry.

Contractors will need support to correctly install SuDS; correct installation of SuDS is crucial to good SuDS performance.

Unlike traditional drainage engineering, SuDS improve with age once planting has established.

SABs Officers need to be consistent in the approval of SuDS.

To achieve high quality SuDS, it will require a holistic approach at preplanning stage with a variety of stakeholders i.e., Highways Authorities, Landscape Architects, Ecologists etc.

Welsh SABs have recruited employees from a wide range of career and educational backgrounds.

# Session 2: Getting more from Sustainable Drainage Systems (SuDS)



## Speakers -

Vicky Boorman - Principal Water Policy Officer, Greater London Authority, ASA Vice Chair.

Bridget Woods-Ballard - Technical Director, Flood and Water Management, HR Wallingford.

Jo Bradley - UK Director of operations, Stormwater Shepherds.

Fay Bull - Regional Director - Water and Blue Infrastructure Lead, AECOM.

# Key Messages



There needs to be a greater focus on retrofitting SuDS in urban environments to improve 'liveability' and their resilience to climate change.



Water must be viewed as an asset and as a key resource to combat drought; there needs to be a greater emphasis on rainwater harvesting in existing and new development.



Instead of heavily manicured SuDS we need to move towards more natural, wild and drought resistant planting and high-quality soils.



We have mastered water quantity design in SuDS but we now need to master water quality; pre-treatment of surface water is crucial.



SuDS should be seen as living systems with connected habitat creation and wildlife passages across developments; wildlife cannot thrive in isolated habitats.



There needs to be less artificial lighting near SuDS Schemes, as this disrupts wildlife habitats and feeding patterns.



SuDS need to provide access to surface water for wildlife, to prevent dehydration and ultimately wildlife loss.



## Session 3: Groundwater the last flood source to explore?

## Speakers -

Hillary Tandy - Cambridgeshire County Council and ASA Executive Member.

Ben Rogers - Flood Risk Officer, Lancashire County Council.

Ffion Wilson - Senior Analyst, JBA Consulting.

Alex Jones - Principal Hydrogeologist, JBA Consulting.

Nick Mills - Head of the Storm Overflow Task Force, Southern Water.

Jed Ramsay - Project Groundwater, Project Leader, Buckinghamshire Council.

# Key Messages

Local Authority's do not have sufficient access to officers with groundwater expertise.

There is insufficient cross-organisation collaboration on groundwater issues. Groundwater flood risk is the least monitored, least forecasted and the least funded. Groundwater Maps are outdated and of poor resolution.

Groundwater inundation into the sewer network is a key driver for the use of stormwater overflows on dry days. Approximately 25% of stormwater overflow is driven by groundwater.



# Session 4: The future of our water infrastructure



# Speakers -

Elliot Gill - Technical Director, Stantec and Chair, CIWEM UDG.

Emily Timmins - Director of Water Recycling, Anglian Water.

William Harrington - Team Leader, Waterway and Flood Water Management Policy, DEFRA

Jonathan Day - Deputy Director for Risk Assessment, Environment Agency.

Jacqueline Diaz-Nieto - Head of Water, The Environmental Protection Group EPG.

Martin Osbourne - Water Industry Strategic Advisor, Asset Planner and Drainage Expert, Hemdean Consulting.

# Key Messages

A call to ACT NOW and show brave leadership in SuDS implementation.

Small scale retrofit projects need to be captured, shared and added into mapping and modelling.

SuDS design has historically focused on water quantity but now needs to also focus on water quality, amenity and biodiversity.

The development of travel plans will create more available land for 'spongification' of towns and cities.

Water and sewerage company PR24 planning process to include long term development plan for 2050; taking into account various potential climate change scenarios.

# SuDS Projects Referenced

- ▶ Mansfield Sustainable Flood Resilience Programme.

[Mansfield sustainable flood resilience | Green recovery | Wonderful on Tap | Severn Trent Water \(stwater.co.uk\)](#)

- ▶ Belfast Living with Water Programme.

[Living With Water in Belfast Plan | Department for Infrastructure \(infrastructure-ni.gov.uk\)](#)



► Greener Grangetown Cardiff.

[Greener Grangetown, Cardiff \(Light Case Study\)](#)  
([susdrain.org](http://susdrain.org))

[Greener Grangetown - Arup](#)



► Grey to Green Sheffield.

[Grey to Green - Sheffield](#)

