

# Planning for better water management



**Catchment  
Based Approach**

**CIWEM**

Chartered Institution of  
Water and Environmental  
Management



**RTPI**

Royal Town Planning Institute

[www.ciria.org](http://www.ciria.org) | [www.susdrain.org](http://www.susdrain.org)



Courtesy Jiri Rezac

# Planning for better water management



- What integrated water management is, why it is important and what it can deliver
- Why planning for water matters and how integrated water management is delivered through planning
- The factors critical for success
- Responsibilities: who does what
- The role of national and local planning policy
- A case study to show how this all works together to achieve the outcomes

# Thanks to our supporters



## Funders:



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# What is integrated water management?



*"A collaborative approach to managing land and water that delivers coordinated management of water storage, supply, demand, wastewater, flood risk, quality of water and the wider environment"*

# Why is integrated water management important?



# What can integrated water management deliver?

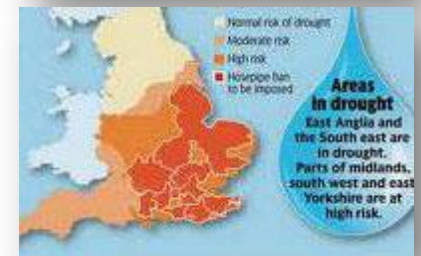


- Reduced risk from flooding
- Increased water efficiency and reduced water stress
- Clean and good quality water environment
- Enabling new housing
- Facilitating economic growth and regeneration
- Enhanced biodiversity
- Better blue-green infrastructure
- Improved public spaces and places, and wellbeing
- Mitigating and adapting to climate change
- Using resources more sustainably and efficiently

# Why planning for water matters



- Extended periods of rainfall already increasing
- 3m homes at risk of surface water flooding
- UK water deficit of 22% by 2050
- Only 10% of floodplains remain functional



Planning for water provides opportunities to design our towns and cities to be:

- Greener
- Healthier
- More biodiverse
- Less liable to flood
- Resilient to climate change

# How integrated water management is delivered through planning



- Blue-green infrastructure
- SuDS
- Urban design and place-making
- Rainwater harvesting and water re-use
- A more pleasant and healthy environment

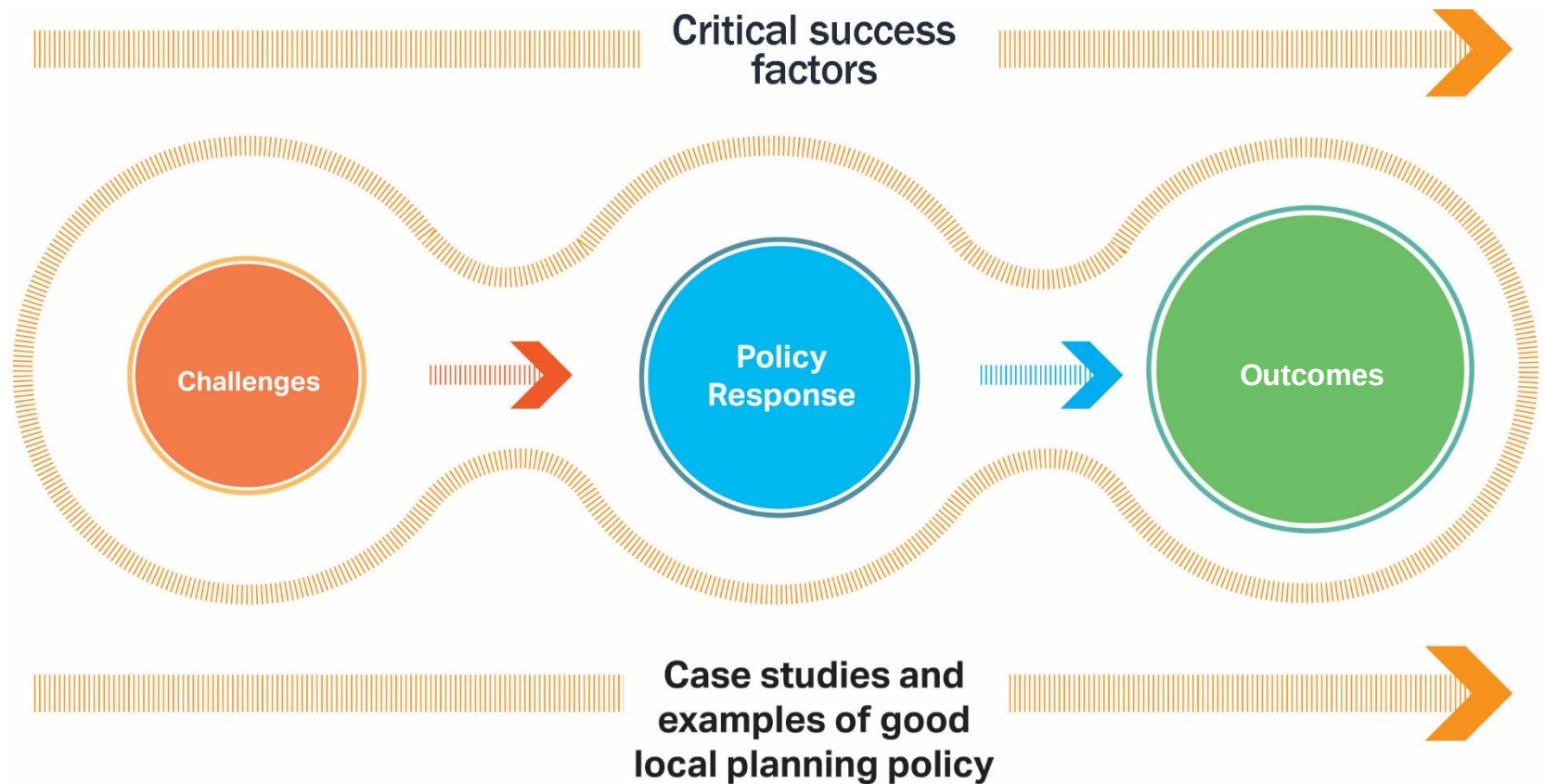


# Critical Success Factors

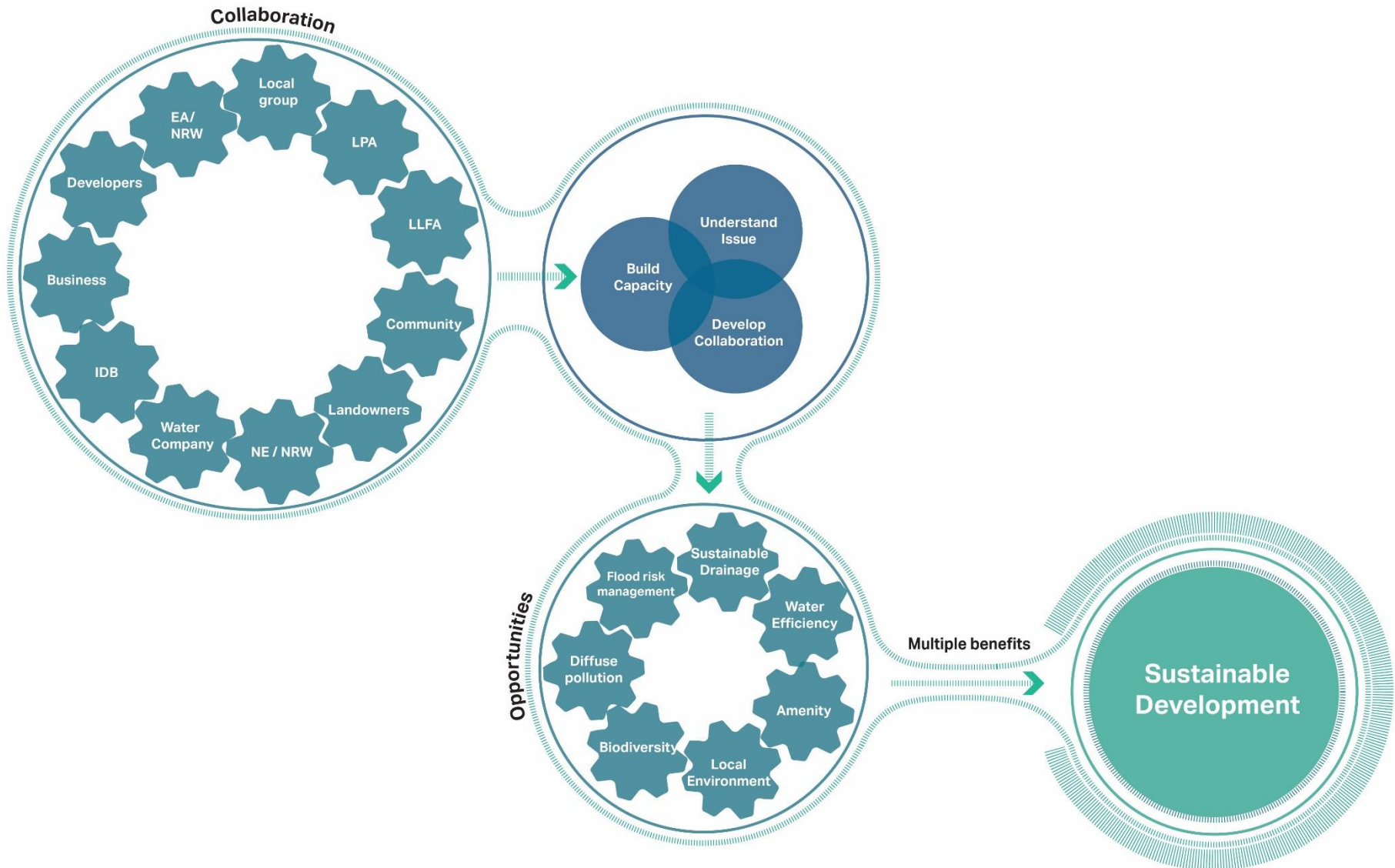


|                                          |                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b><br><b>Understanding IWM</b>     | <ul style="list-style-type: none"><li>◆ A robust and accessible evidence base.</li><li>◆ Knowing which IWM approaches are appropriate.</li><li>◆ Identifying IWM possibilities at an early stage.</li><li>◆ Showing that IWM is effective and efficient.</li><li>◆ Breaking down institutional barriers and changing mind-sets.</li></ul> |
| <b>B</b><br><b>Enabling local policy</b> | <ul style="list-style-type: none"><li>◆ Clear and understandable local plan policies.</li><li>◆ Clear, supportive plans and strategies from LLFA and water company.</li></ul>                                                                                                                                                             |
| <b>C</b><br><b>Early engagement</b>      | <ul style="list-style-type: none"><li>◆ With the water company, developers, LLFA and other areas of local government.</li><li>◆ With the local community.</li><li>◆ With the catchment partnership and other stakeholders.</li></ul>                                                                                                      |
| <b>D</b><br><b>Partnerships</b>          | <ul style="list-style-type: none"><li>◆ Good links with (and between) LPAs, LLFAs and water companies.</li><li>◆ Catchment partnerships.</li><li>◆ An engaged and supportive local community.</li><li>◆ Understanding partners' interests and drivers</li></ul>                                                                           |
| <b>E</b><br><b>Good management</b>       | <ul style="list-style-type: none"><li>◆ A strong champion.</li><li>◆ Early and clear identification of long-term management arrangements.</li><li>◆ Co-ordination of budgets and funding.</li><li>◆ Enforcement conditions.</li></ul>                                                                                                     |

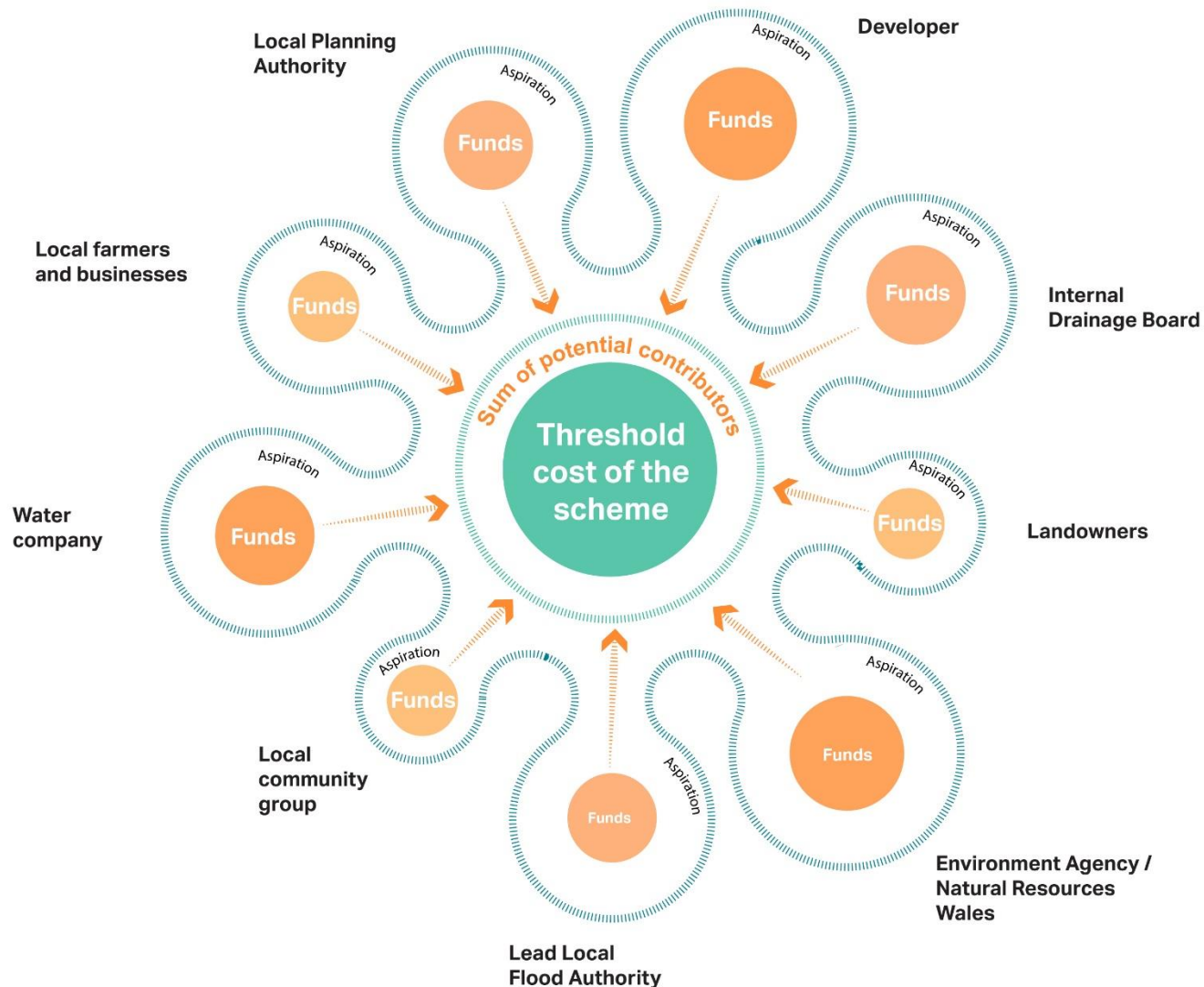
# The Golden Thread



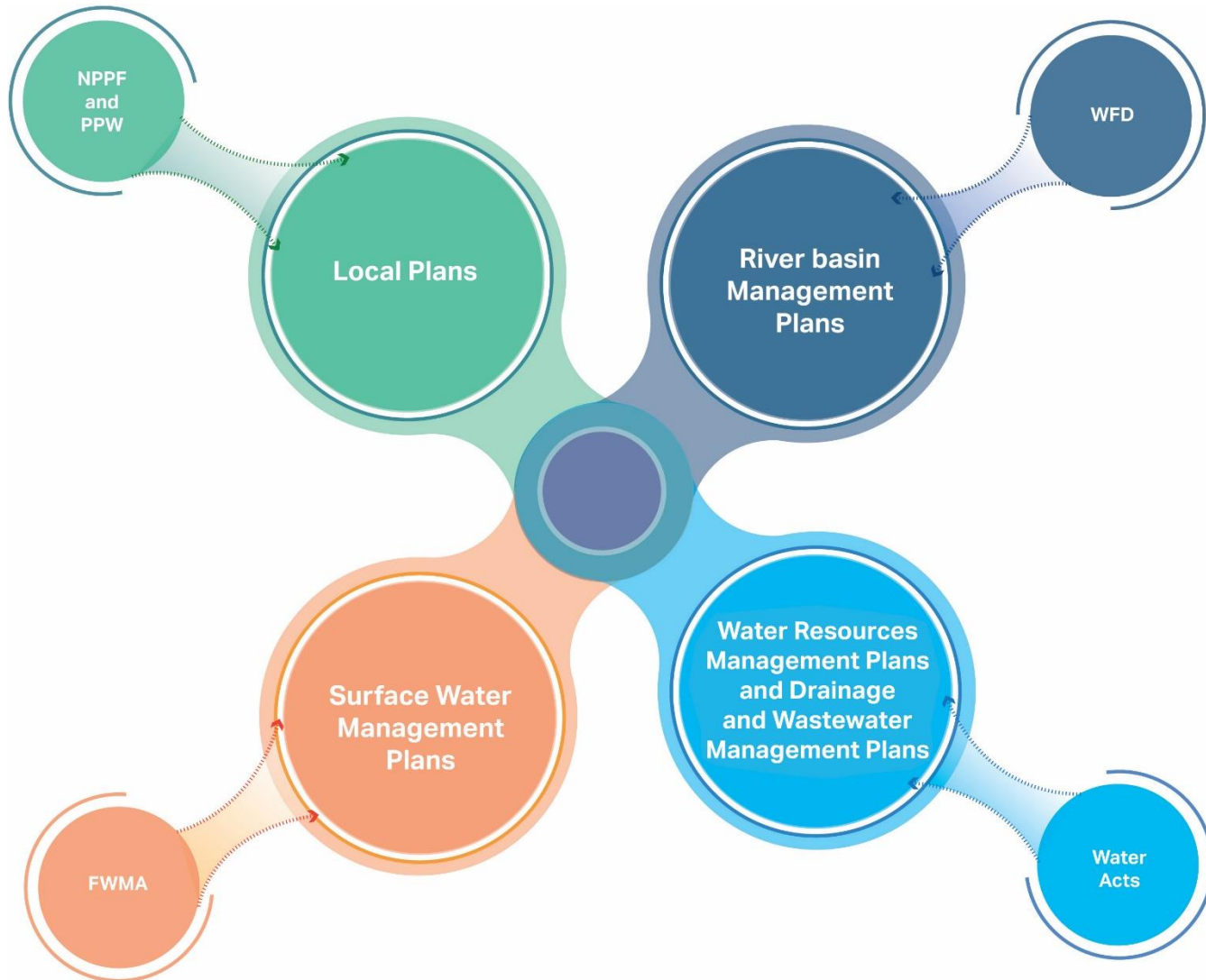
# Partnerships, process and outcomes



# Partnerships: getting more for less



# Responsibilities



# Role of national and local policies



Using an analysis of national policy and guidance and good practice, the project identifies:

- *key characteristics* of local policies delivering IWM
- *case studies* of good local policy



Volunteers planting, River Wandle (courtesy South East Rivers Trust)

# Key characteristics of good local policies



Practical guidance for policy-makers based on

- national planning policy and guidance
- good practice guidance (e.g. Green Infrastructure Partnership)

Part A, section 4

Part D National Policy Review

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Key characteristics of good local policies are:

- Evidence based
- Visionary
- Strategic
- Avoid duplication
- Clear and positive
- Cooperative
- Deliverable

Part E Characteristics of good local policies

# Technical Requirements or 'Asks'



- Provide examples (with commentary) of policies that contain clear technical asks for
  - Sustainable drainage
  - Water efficiency in homes and other buildings
  - Water quality
  - Biodiversity

Part A, section 4

# Case studies of local plan policies



- 15 post-NPPF local plans
- Most adopted, all well advanced
- Urban, suburban and rural authorities
- Regional, unitary, district and national park
- Some emerging plans as well

Part C, Examples of good local policies  
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*Ecosystems Services (courtesy South Downs National Park Authority)*

# Local Plan case studies



- Each case study includes
  - List of policies
  - Summary
  - Challenges / Opportunities
  - CSFs / Outcomes
  - Further Information links
- 8 of 15 demonstrate 'golden thread' link to projects

Part C, Examples of good local policies

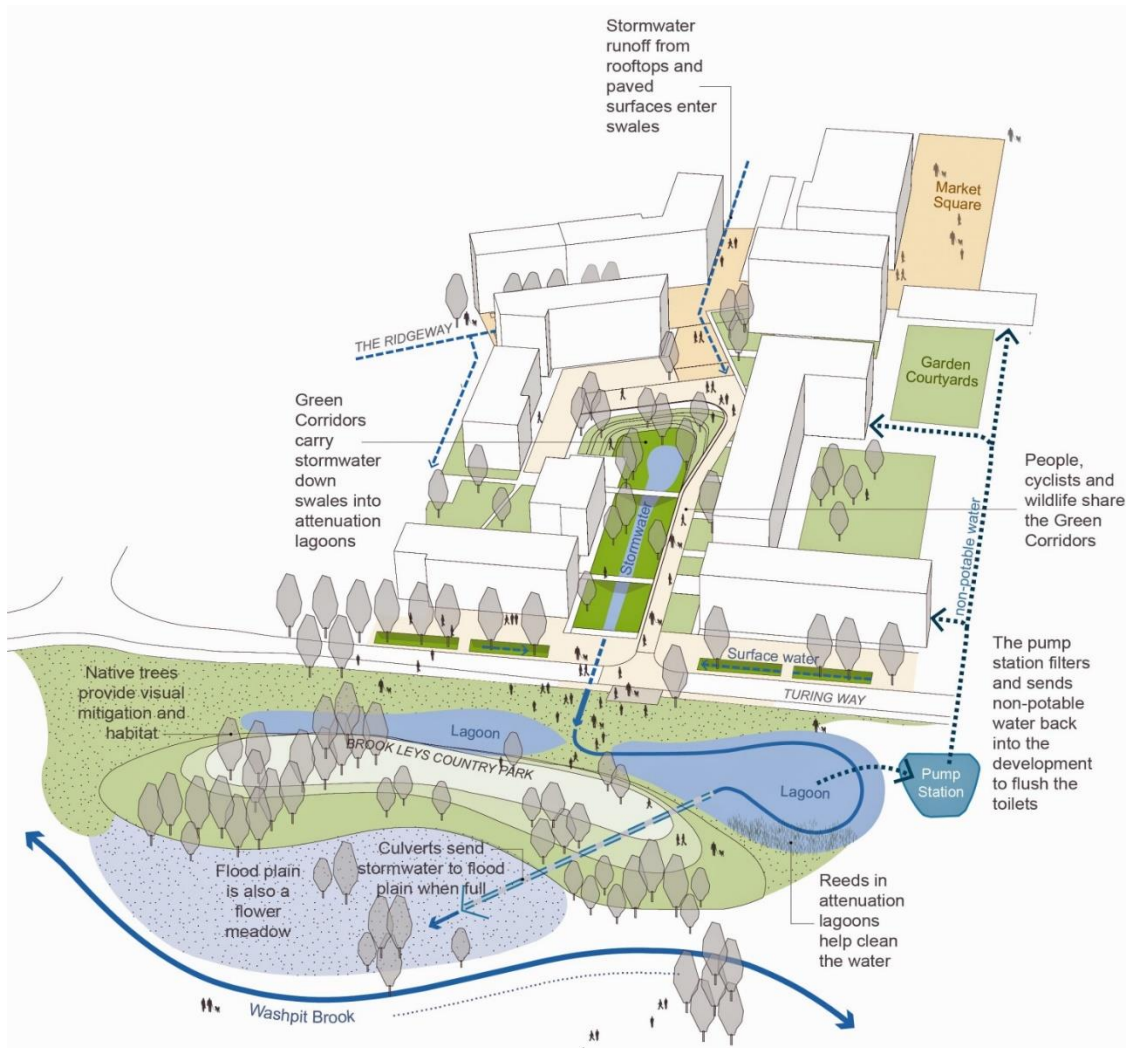
# Physical case studies



- 12 case studies, each includes
  - A description of what was done
  - The CSFs involved and outcomes it delivers
  - How it relates to planning policy
  - Who did it
  - Further Information links
- 11 demonstrate 'golden thread' link to planning policy

## Part B, Physical case studies

# North West Cambridge



- 3,000 homes and 100,000m<sup>2</sup> of other uses
- IWM driven by local plan policy
- Site wide IWM system
- Swales, blue and brown roofs and green corridors manage water through the site into man-made lagoons
- Treated rainwater pumped back into the homes
- Will be largest rainwater harvesting system in the country
- Flow and volume discharged will not exceed greenfield runoff rates

# North West Cambridge - outcomes



## **Demonstrates all the Critical Success Factors:**

- Understanding IWM
- Enabling local policy
- Early engagement
- Partnerships
- Good management

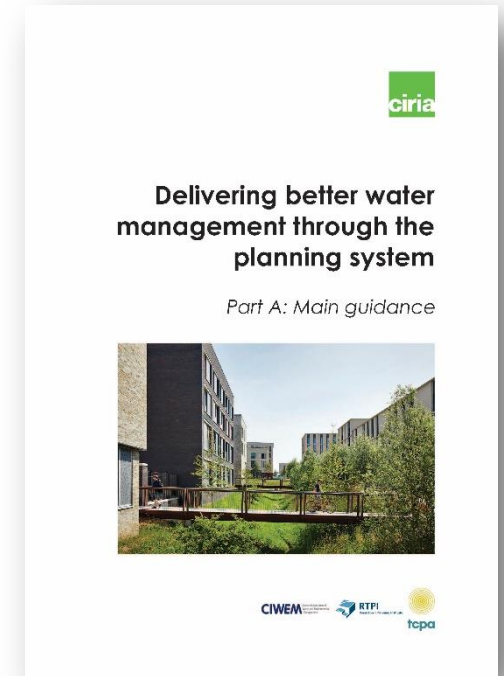
## **Provides all the IWM outcomes:**

- Reduced risk from flooding
- Increased water efficiency & reduced water stress
- Clean & good quality water environment
- Enabling new housing
- Facilitating economic growth & regeneration
- Enhanced biodiversity
- Better blue-green infrastructure
- Improved public spaces & places, & wellbeing
- Mitigating & adapting to climate change
- Using resources more sustainably & efficiently
- Will capture 25-45% of rainwater for recycling.
- The water recycling scheme will cut water consumption to 80 litres ppd (compared to Cambridge average of 150 litres ppd).
- The rainwater harvesting system will reduce mains water consumption across the site by over 45%
- Will enable a discount on customer bills by charging different tariffs for potable and non-potable sources.
- Reduced risk of downstream flooding.
- Cleansed water reduces the risk of contaminating sensitive water courses.

# Making IWM happen



- Partnerships are crucial
- Community engagement is essential
- Local Plans are key
- Legislation has a role, but
- Changing mind-sets is more important



*You can't make them do it, but you  
can make them want to do it*