

Building Knowledge for a Changing Climate

A Stakeholder Perspective



Introduction

- Currently there are limited tools for assessing Flood Risk
- Sewer Models are Business As Usual for Water Industry
- Tried and Tested Tool for Identifying and Resolving Flooding associated purely with the sewerage system





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Flooded Pub Cellar



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Introduction

However

- Flooding in heavy rainfall is rarely from a single source – sewer flooding, land and highway run-off, watercourse and river flooding
- The Interaction is complex

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Multi Source Flooding



Overland flow

Overland flow and sewer flooding



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Climate Change

- And the situation is predicted to get worse
- Changing rainfall patterns, inappropriate development and rural land management practices together with wider issues associated with global warming are escalating flood risk
- Need to consider the impact of climate change – how will this effect any solutions?

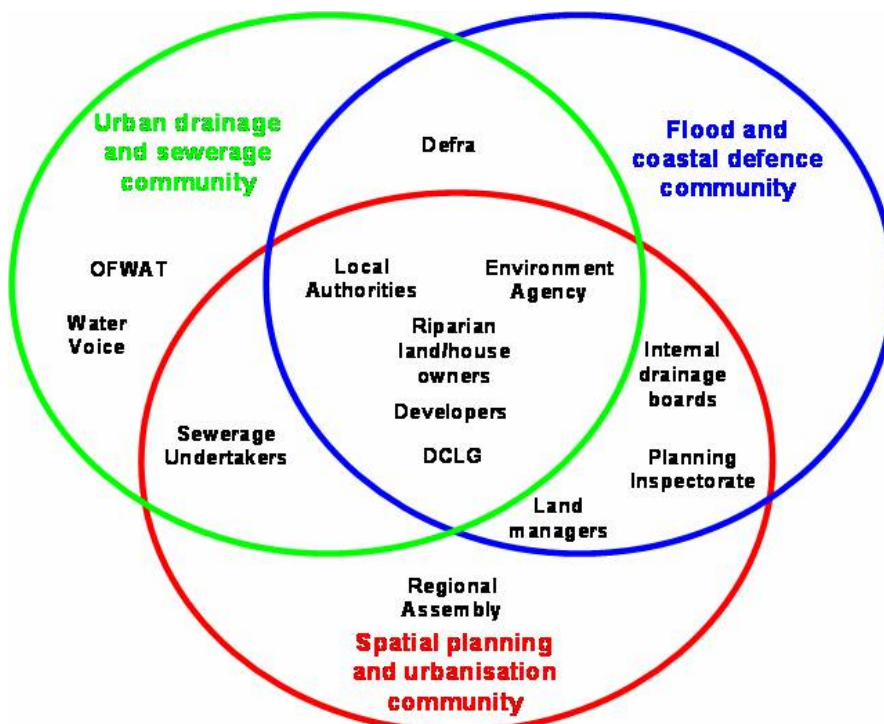
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Problem Understanding – Whose Water Is it Anyway?

- Understand the interactions with other networks to identify the source of the problem, fully assess the potential risk of flooding and develop a joint solution
- Identify responsibilities and ownership for managing flood risks and solution development
- All the relevant stakeholders need to work together to identify the source of the problem and develop a joint solution

Stakeholder community



Need for Improved Modelling Tools

- Ultimate Goal – Integrated Urban Flood Risk Management Approach
- We need modelling tools:
 - to predict the overland routing of storm water
 - to represent the interaction between below and above ground flows
 - to be able to take account of climate change and urbanisation
 - that can deliver the right solution at the right price

Benefits - YW

- Helps to manage appropriate level of involvement and set realistic expectations
- Enables us to get the most from our limited funding – cost effective operational and capital solutions development
- Ability to Improve asset performance and undertake pro-active asset management:
 - understand and identify assets at risk
 - reduce crisis intervention



Benefits - Society

- Eliminate flooding, whatever the cause
- Enhanced levels of service to the local community
- Improved customer perception and understanding
- Improved customer confidence and relationships



Constraints and Limitations

Need to overcome barriers to collaborative working and deal with issues of:

- Legislation (design criteria, SUDS ownership)
- Regulation / Funding
- Data:
 - acquisition
 - management
 - sharing
 - protection

These are being investigated by Defra's Making Space For Water Integrated Urban Drainage Pilot Studies in which many of the AUDACIOUS partners are involved





Moving Forward

- Map out a future strategy for flood risk understanding and engagement with other stakeholders
- Need to facilitate the smooth transfer from Academic to Commercial arena e.g. Integrated Software developments
- Need to ensure gaps/overlaps with other projects are taken into account e.g. Links to DTi SAM project
- Need to ensure the right balance between data collection and solution
- Need to consider alternative solutions such as SUDS
- Resources and training requirements?

