

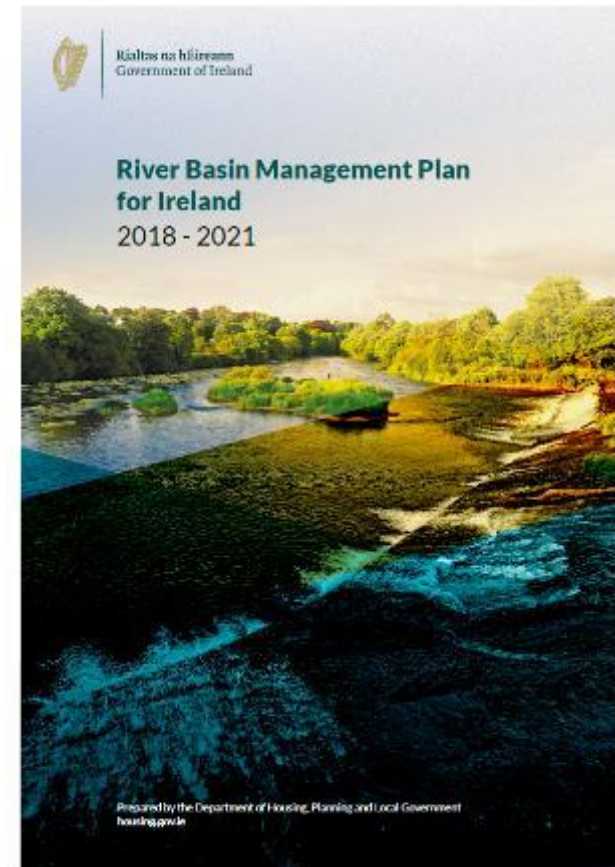
Background & scene setting

Fran Igoe



Background

- Water Framework Directive – essentially getting Europe’s waters cleaner and involving citizens
 - Incorporates EU Habitats Directive, Urban Wastewater Directive etc
- Local Authority Waters Programme – shared service for 31 Local Authorities
- Identified need for a focus on Nature Based SuDS & Green/Blue Infrastructure



Nature Based Solutions



Terms used interchangeably

- Nature Based Solutions
- Sustainable Urban (or Rural) Drainage Systems: SUDS
- Green & Blue Infrastructure
- Natural Water Retention Measures etc

This Webinar is SUDS within Nature Based context

National context: Natural Water Retention Measures



- EPA & OPW are leading out on this nationally
- Steering group of national agencies relevant to the Water Framework Directive
- Water Policy Advisory Committee (WPAC) requested that the National Technical Implementation Group (NTIG) develop a proposal for including Natural Water Retention Measures (NWRM) as part of a broader suite of mitigation measures that could contribute to the achievement of the environmental objectives set out in the second River Basin Management Plan.

Natural Infrastructure for Water Management

Investing in nature for multiple objectives



* Hybrid solutions that contain built elements that interact with natural features and seek to enhance their water-related ecosystem services.

Natural or semi-natural infrastructure provides services for water resources management with equivalent or similar benefits to conventional (built) 'grey' water infrastructure. The composition, structure, and function of natural infrastructure assets in river basins, and the way they interplay with built 'grey' infrastructure will determine the primary services and co-benefits produced.

Further information can be found in UNEP (2014) *Green Infrastructure Guide for Water Management: Ecosystem-based management approaches for water-related infrastructure projects*.

Natural Infrastructure for Water Management

Investing in nature for multiple objectives



Urban development

- Cities
- Towns
- Villages
- One off housing (hard surfaces including concrete and tarmac)
- Roads

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Water quality impacts alone good reason for SuDS

*After a storm, water often runs off of impervious urban surfaces directly into aquatic ecosystems. **This stormwater runoff is a cocktail of toxicants that have serious effects on the ecological integrity of aquatic habitats.** Young et al 2018. Nature Scientific Reports*

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Toxic road runoff kills adult coho salmon in hours, study finds

Open Access | Published: 12 February 2018 | [Details](#) | [References](#) | [Cited by](#)



A 5-year-old coho salmon that was found to be dead on a highway in British Columbia, Canada, after being exposed to stormwater runoff from a highway interchange. (Photo: Scott / The Seattle Times / AP)

A new study shows that stormwater runoff from urban roadways is as poisonous to coho salmon that it can kill adult fish in as little as 2 1/2 hours.

nature > scientific reports > articles > article

SCIENTIFIC REPORTS

Article | [Open Access](#) | Published: 12 February 2018

Urban stormwater runoff negatively impacts lateral line development in larval zebrafish and salmon embryos

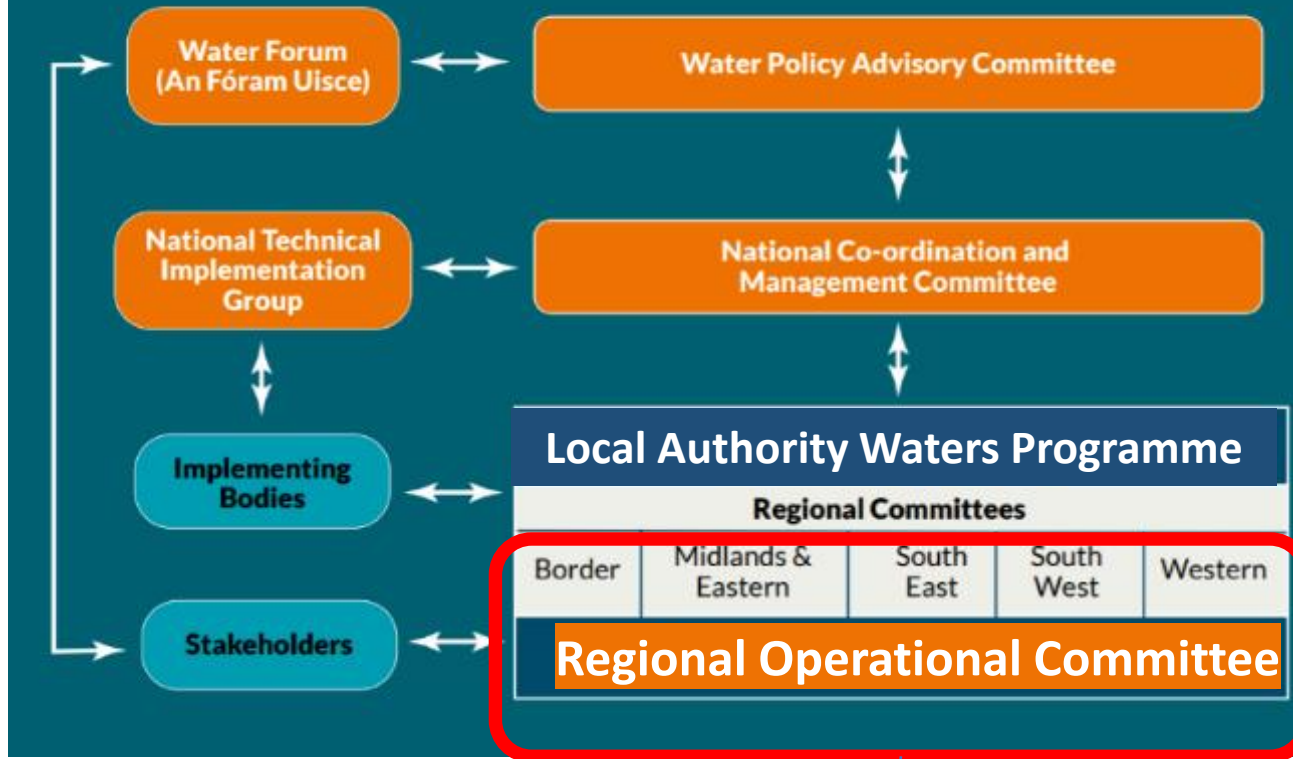
Alexander Young, Valentin Kochenkov, Jenifer K. McIntyre, John D. Stark & Allison B. Coffin [✉](#)



Example of Stormflow impact on Clashawley River, Fethard, Co. Tipperary during low flow river water levels, after a localised shower of rain in 2019. *Source J. Gilleran, EFO, IFI Clonmel*

Feedback from planners at regional level

WFD Implementation Structure



SuDS

- What they are?
- How they can be integrated with the planning process?
- Training including for practitioners (developers/architects) – what exactly is the ask and at what scale?



- Planners request consideration of CDPs within WFD operational work
- SuDS highlighted as an area requiring more guidance
Led to a deeper conversation with other practitioners

This Webinar

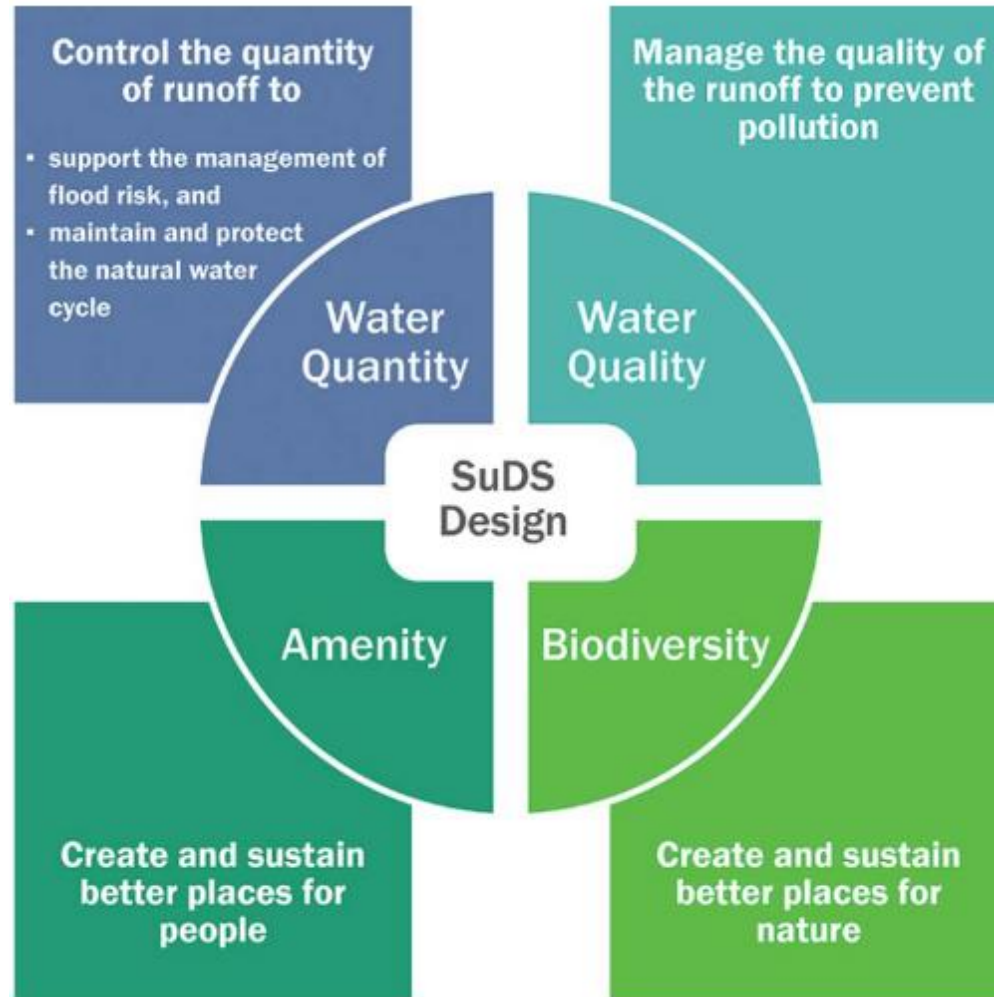


Figure 3: The four pillars of SuDS design

Run of the Webinar

- IPI will forward a questionnaire
- Q&A will take place at the end at the discussion (not between speakers)
- For Q&A please **type your name, organisation you represent** and if a technical question also add your **email address for follow up.**
- Chat function – encourage discussion.

URBAN PLANNING AND NATURE BASED SURFACE WATER MANAGEMENT: FROM THEORY TO PRACTICE

Purpose: to assist planners, engineers, architects and landscape architects in their respective roles in planning and implementing SuDS in a wider Green and Blue Infrastructure context for Ireland.

Sustainable Urban Drainage Systems (SuDS) are referenced in planning policy and County Development Plans as a means to address land surface runoff associated with developments. Overground SuDS or 'Nature Based' solutions provide multiple benefits for capacity, biodiversity, amenity, etc. but do not always provide adequate infiltration and can be incorporated more easily into wider Green and Blue Infrastructure strategies. In practice, however, their use and uptake relative to the ground surface across the country.

This web webinar will look at the experience of various local authorities with SuDS and Green and Blue Infrastructure across Ireland. Approaching the challenge from planning, urban design and engineering perspectives, the aim is to provide a better understanding of what can be achieved and planned for in Ireland and identify a framework for how SuDS and related Green and Blue Infrastructure can be better incorporated into current Local Authority work practices and County Development Plans making and implementation.

WHO SHOULD ATTEND?
Planners, engineers (including roads and housing), architects and landscape architects, environment and parks sections. Work with local authorities and anyone involved in the planning or design of developments or the general area of surface water management.

TOPIC OVERVIEW: SuDS and Green and Blue Infrastructure
The webinar requires a multi-disciplinary approach. The Local Authority work practices and County Development Plans making and implementation encourage the participation of all stakeholders.

FREE AND CDP RECKONABLE EVENT
This webinar is a key element of your County Development Planning process and we encourage as many of your colleagues as possible to attend.

PROGRAMME Chair: CDP President / Vice President

HOST: MALCOLM NOONAN TD - Minister of State at the Department of Housing, Local Government and Heritage

Chair & Scene Setting: Fionnuala, Local Authority Water Programme

Evolution of Green & Blue (SuDS) Infrastructure
- Brian, Department of Housing, Local Government and Heritage

Sustainable Urban Drainage Systems (SuDS) Techniques: What They Are And The Multiple Benefits They Deliver
- [Speaker Name]

"SuDS- From the ground up experience – rural context"
A Planners Perspective - from Dr. Waterford
- Hugh O'Brien, Waterford City and County Council

An Engineers Perspective - from Co. Tipperary
- Paul Power, Tipperary County Council

Meeting the Ambition via SuDS Infrastructure and Potential for all Local Authorities
- Brian Rice, Southern Regional Assembly

SuDS/SuDS Infrastructure Practical Incorporation into Planning System/Contribution Perspective)
Planning for Riparian Corridors in Dún Laoghaire and Rathfarnham
- Alice Murray, Dún Laoghaire Rathfarnham County Council

They are ending a SuDS Strategy: the example of the Dún Laoghaire and Rathfarnham County Council Green Roof Strategy
- Elaine Carroll, Dún Laoghaire Rathfarnham County Council

Guidelines for Planning in the urban environment & launch
- [Speaker Name]