



SNC • LAVALIN

ATKINS

Member of the SNC-Lavalin Group

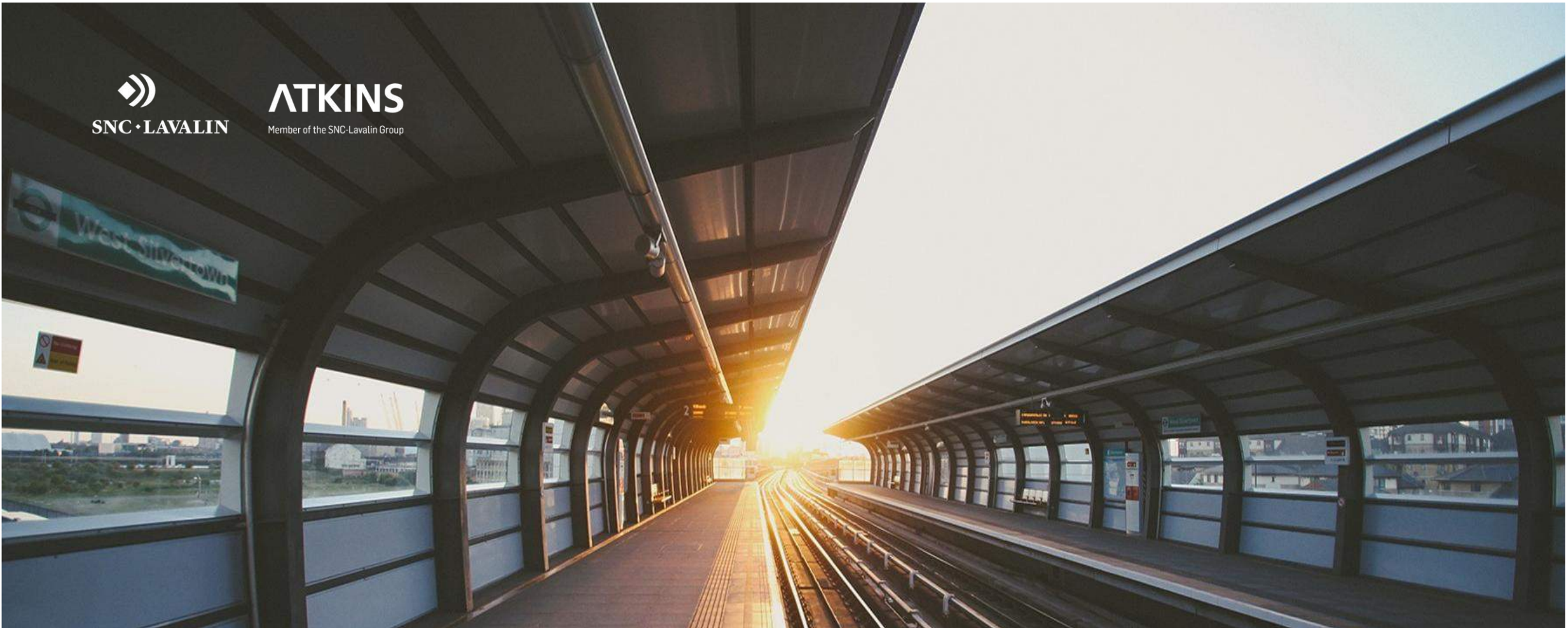
Surface Water Management 2018

CIWEM Conference

17th October 2018



ATKINS
Member of the SNC-Lavalin Group



A global fully integrated professional services and project management company

Jeremy Jones, Atkins

17th October 2018



Joined forces

On July 3 2017, SNC-Lavalin and Atkins joined forces



- › A leading engineering and construction group in the world offering services in oil and gas, mining and metallurgy, infrastructure and power
- › Major player in the ownership of infrastructure
- › One of the world's most respected design, engineering and project management consultancies serving infrastructure, transportation and energy sectors



Increased geographic reach

- › An established and balanced footprint
- › Greater “at-scale” European and Middle Eastern presence



APPROXIMATELY
50,000
EMPLOYEES

SPEAKS
70
LANGUAGES

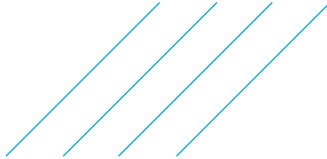
WORK FROM
OFFICES IN OVER
50
COUNTRIES

REPRESENTS
SOME
130
NATIONALITIES

- › Atkins Energy segment allocated 41% Europe, 46% North America, 9% Middle East & Africa and 4% Asia Pacific
- › Atkins segmentation based on fiscal year ended March 31, 2016 applied to twelve month period ended September 30, 2016
- › Pro forma financials based on SNC-Lavalin fiscal year ended December 31, 2016 and Atkins twelve month period ended September 30, 2016



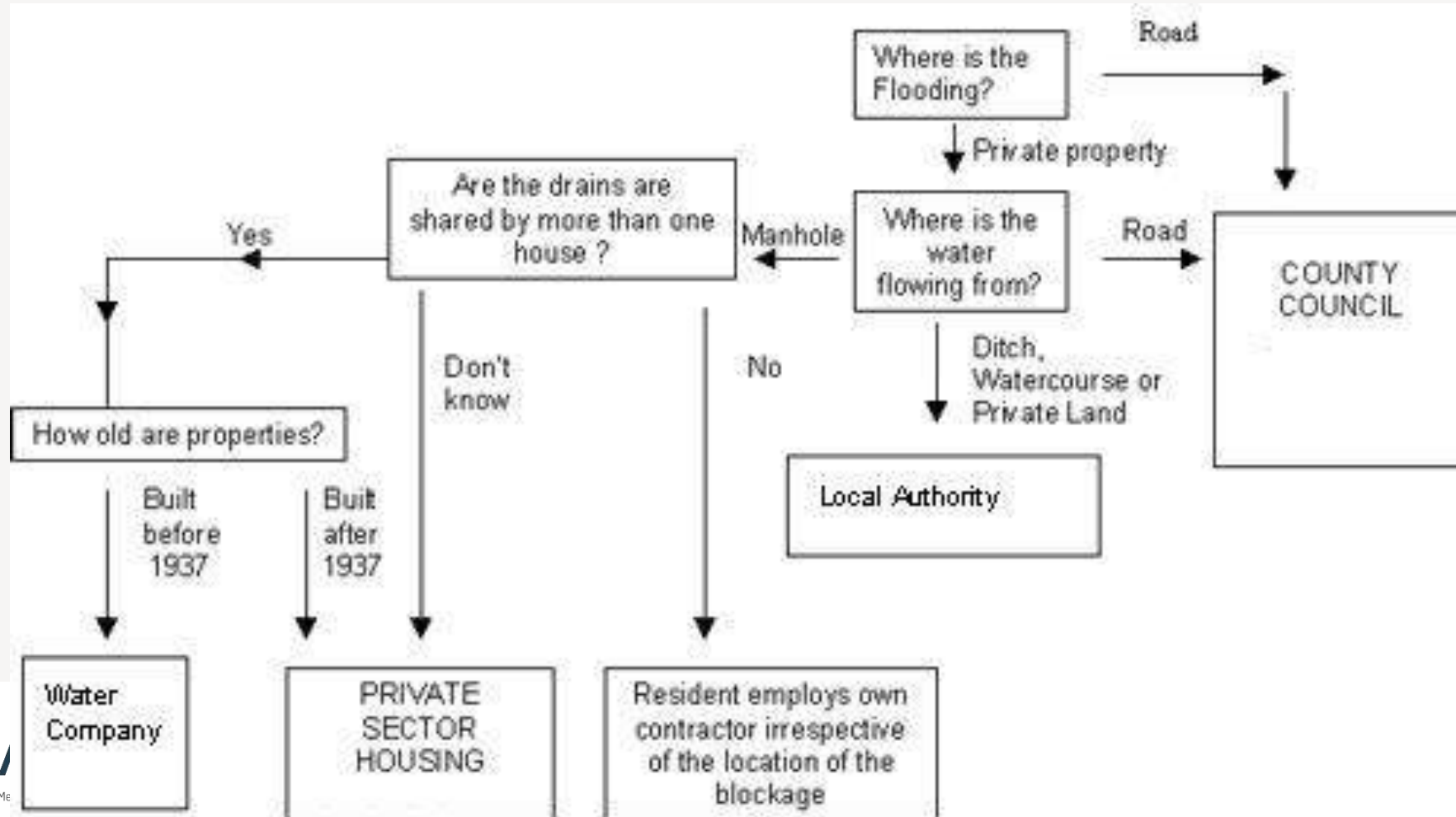
Summer 2007



Example of advice Pre-Pitt Review

Surface water flooding

This section provides information on who you should contact in the event of a flood. Please use the diagram below to see who to contact in the event of a flood



A Brief Recent History of SUDS in the last decade

2006 – DTI SUDS Mission to USA

2008 – Pitt Review of 2007 Floods

2009 – Flood Risk Regulations

2010 – Floods & Water Management Act (Schedule 3 not commenced)

2009 -2012 – Chair joint Water UK/EA Group on Implementation of SuDS in UK

2016 – 2018 Wales SuDS Advisory Group

2017 – Welsh Gov. Legal Review of Sewerage & Drainage

2018 – Welsh Gov. **Commencement Order was signed 1 May 2018**

2019 - Schedule 3 becomes law in Wales as from 7 January 2019

Welsh Government
**Review of Legal Framework
Governing Sewerage and Drainage
Assets in Wales**
Review Report
REF:251623001
Dd01 25 November 2016

Flood and Water

2016

111

CON

FLOOD AND COASTAL

1 Key concepts

- 1 "Flood" and "secondary element"
- 2 "Risk"
- 3 "Risk management"
- 4 "Flood risk management function"
- 5 "Local authority risk management"
- 6 Other definitions

2 Strategies and

- 7 National Flood and coastal order
- 8 National flood and coastal order
- 9 Local flood risk management strategy
- 10 Local flood risk management strategy
- 11 Effect of national and local order
- 12 Effect of national and local order
- 13 Cooperation and arrangements
- 14 Power to request information
- 15 Civil sanctions
- 16 Funding
- 17 Levies

3 Supplements

- 18 Environmental Agency reports

This report takes into account the technical information and requirements of schedule 3 of the Flood and Water Management Act 2010 and is not intended to be a final or definitive statement on the law.

Job number 251623-006

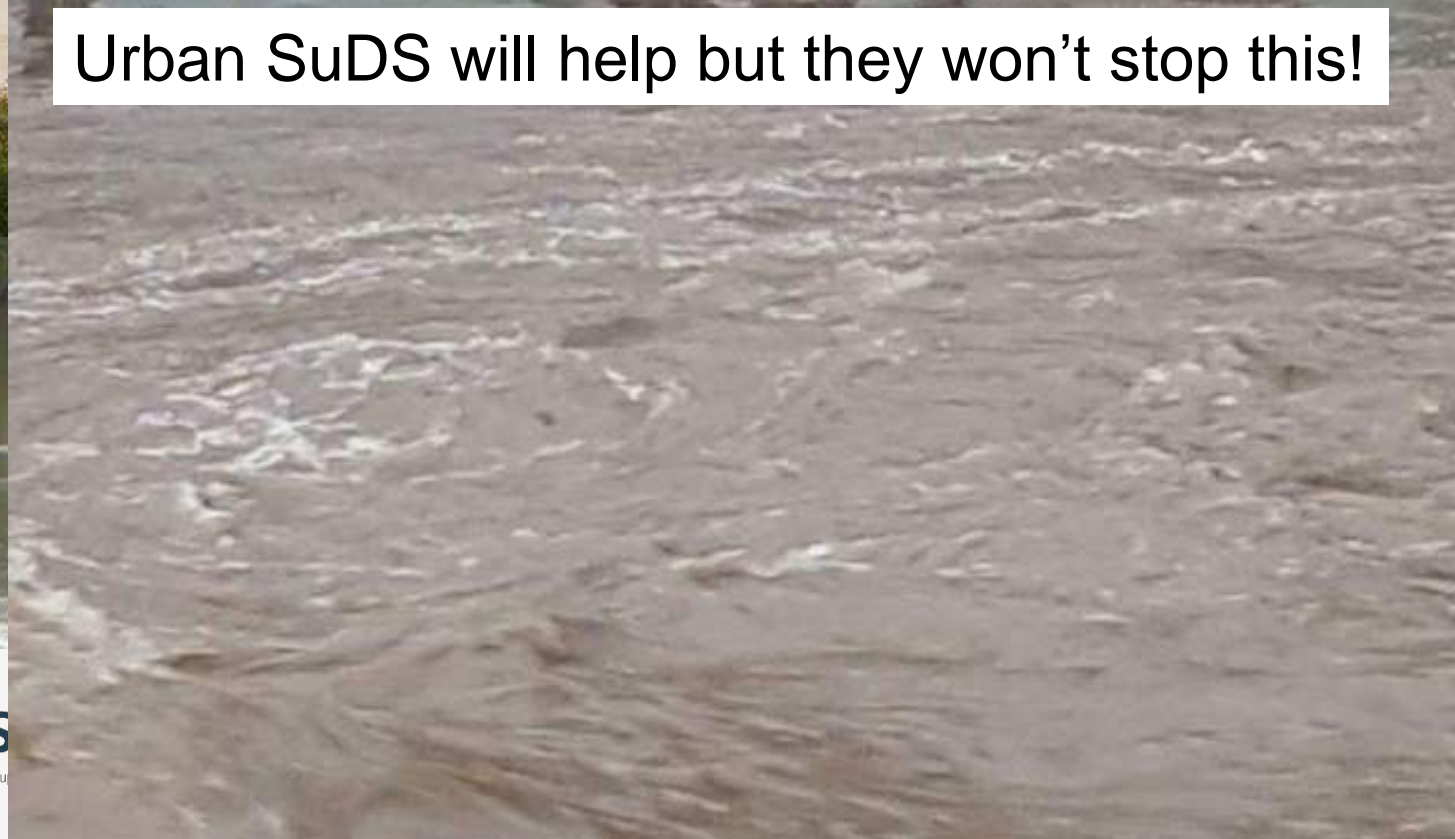
1 Parked Street
Cardiff, Wales
Cardiff CF10 1QP
United Kingdom
005000000000000000000000



Last week in Wales October 2018



Urban SuDS will help but they won't stop this!



A Decade of Improvement in Managing Storm Water?

What's been good?

What's been not so good?

In the next decade – some suggestions....

What needs to change?

What is changing?

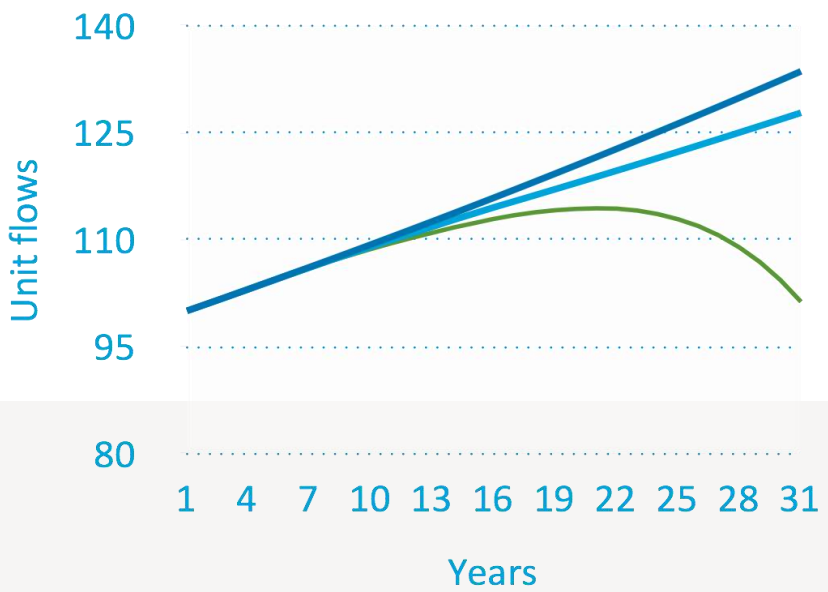
What are the challenges?



Why old methods need an upgrade in thinking?



Flow reduction strategy



- Continue as at present
- Control Future Dev Flows
- Control Future Dev + Reduce Existing

What's been good?

. Planning

- *SuDS part of planning approval in 80% of new developments*

. SWM embraced by Water Companies

- *RainScape from DCWW*
- *Anglian Water*
- *Thames Water*
- *Scottish Water*
- *Others following (BAU)*

. Legislation & Guidance

- *SFA embracing SuDS*
- *Scottish legislation puts emphasis on maintenance with LAs*
- *Schedule 3 to be commenced in Wales*

. Some Local Authorities keen to change

- *Cardiff, Nottingham, Oxford, Cambridge, Edinburgh, Sheffield to name a few*



Engineering or Biodiversity?



Engineering or Biodiversity?



Challenges or opportunities?



Community focus



Grangetown - Pocket parks



BEFORE



AFTER



Grangetown – reclaiming the streets for the community



Before



After



Grangetown – Recent photos



SWMS : Seabegs Road, High Bonnybridge

- Drainage Function
- Multiple Benefits
 - Improved street scene and visual amenity
 - Provide links to community facilities and canal side
 - Improves local property prices and promotes sense of community
 - Promotes walking, play and healthy outdoor activities



SWMS : Seabegs Road, High Bonnybridge

- Road runoff disconnection
- open space used for SUDs
- existing traffic calming re-designed



SWMS : Seabegs Road, High Bonnybridge

- Derelict brownfield site
- Previously no capacity for development
- New development enabled with high amenity capacity after SW removal



What's been not so good?

. Planning

- *The emphasis is on Flooding and not all of the benefits e.g. Quality, Amenity, Biodiversity*

. Failure to commence Schedule 3

- *Wales will be interesting?*

. Collaboration

- *There are good examples but many consider “its not their job.....”*

. Facilitation

- *Organisations don't necessarily understand the duties and responsibilities of others*

. Not all disciplines believe they are part of this

- *Some disciplines are reticent or unwilling to accept their statutory powers can provide a vehicle for solution*

. Legislation

- *Is this an excuse? If Legislation doesn't say you can do something, is saying you can't?*





Communal space: informal



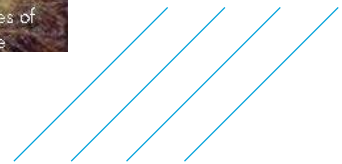
Communal space: amphitheatre



Play space - Triangle, Swindon



Planted slope with species of visual & ecological value



What needs to change?

- Better Collaboration

- *We are all in this together and diversity of duties and responsibilities also provide the powers to work together*

- Clear Direction from Government

- *It is not enough to say we need better Flood Protection or more Homes*
- *They have to listen to expert opinion on HOW to deliver*

- You can't pave over the UK without corresponding impact on Flooding and Natural Capital

- *The All Party Parliamentary Group are listening but how loud is their voice alongside other issues*





Planted pond



Urban SUDS pond



Integrated landscape features and trees



What is changing?

Drainage and Wastewater Management Plans

- *Government Regulators Water Companies and Local Authorities are coming together to instigate change in Bus. Plans*
- *Clear, coherent, uniform and transparent plans.*

Storm Water Management is now BAU in most Water Companies and a number of LA's

- *Pay respect for existing Infrastructure*
- *Work with finite assets*
- *Not logical or economically viable to replace the country's infrastructure*



What is a DWMP?

A company wide long-term strategic plan that will set out how water companies, working with other stakeholders, intend to extend and maintain a robust and resilient drainage and wastewater system

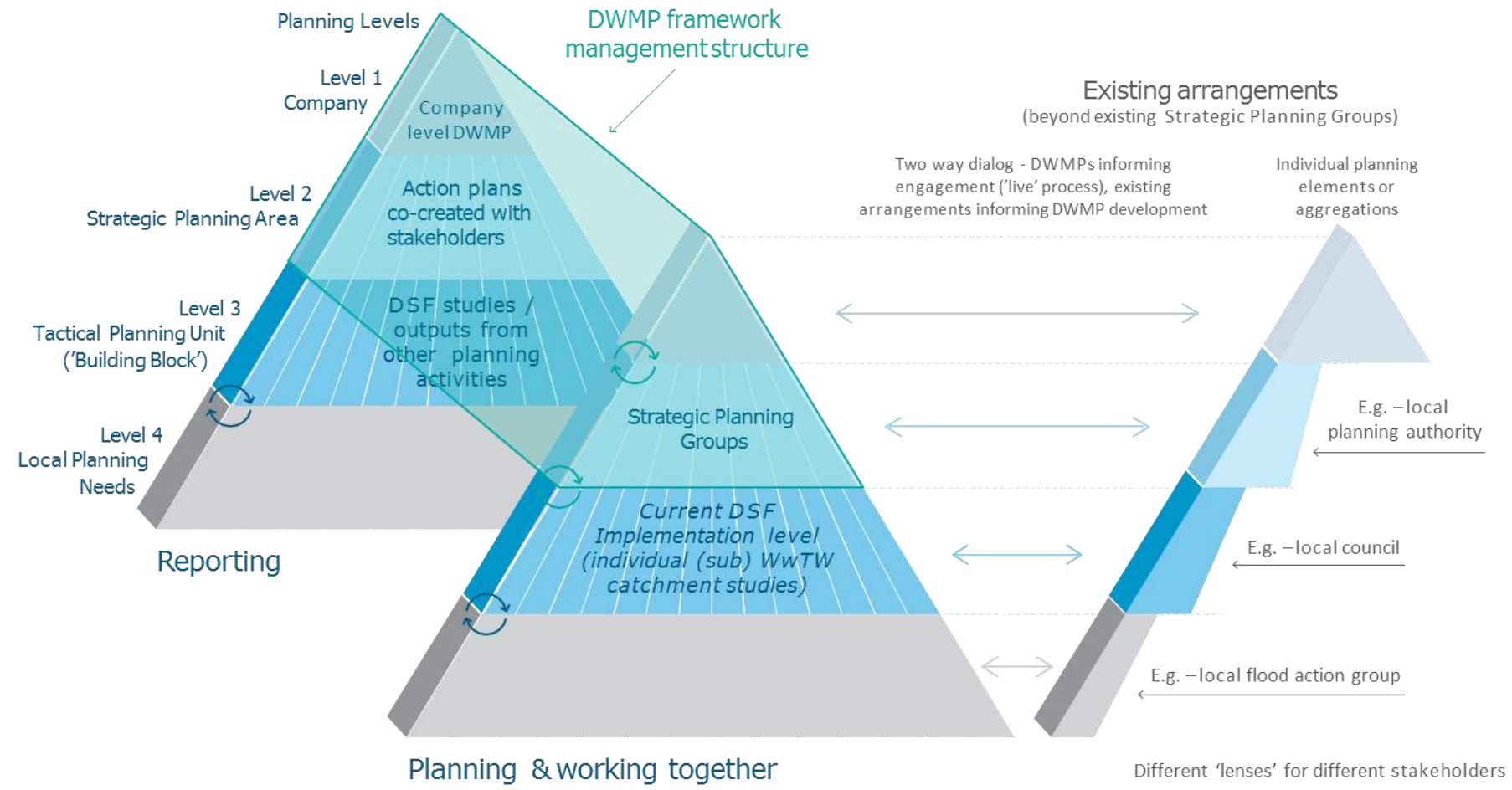
◆ Planning period appropriate to the risks faced by each company, but with a minimum period of 25 years

◆ Will inform short-term (business plan) and medium term intervention proposals

◆ Encompass all drivers, all investment, that contribute to outcomes related to the drainage and wastewater service



DWMP framework management structure



DWMP production – a role for stakeholders

Strategic planning groups

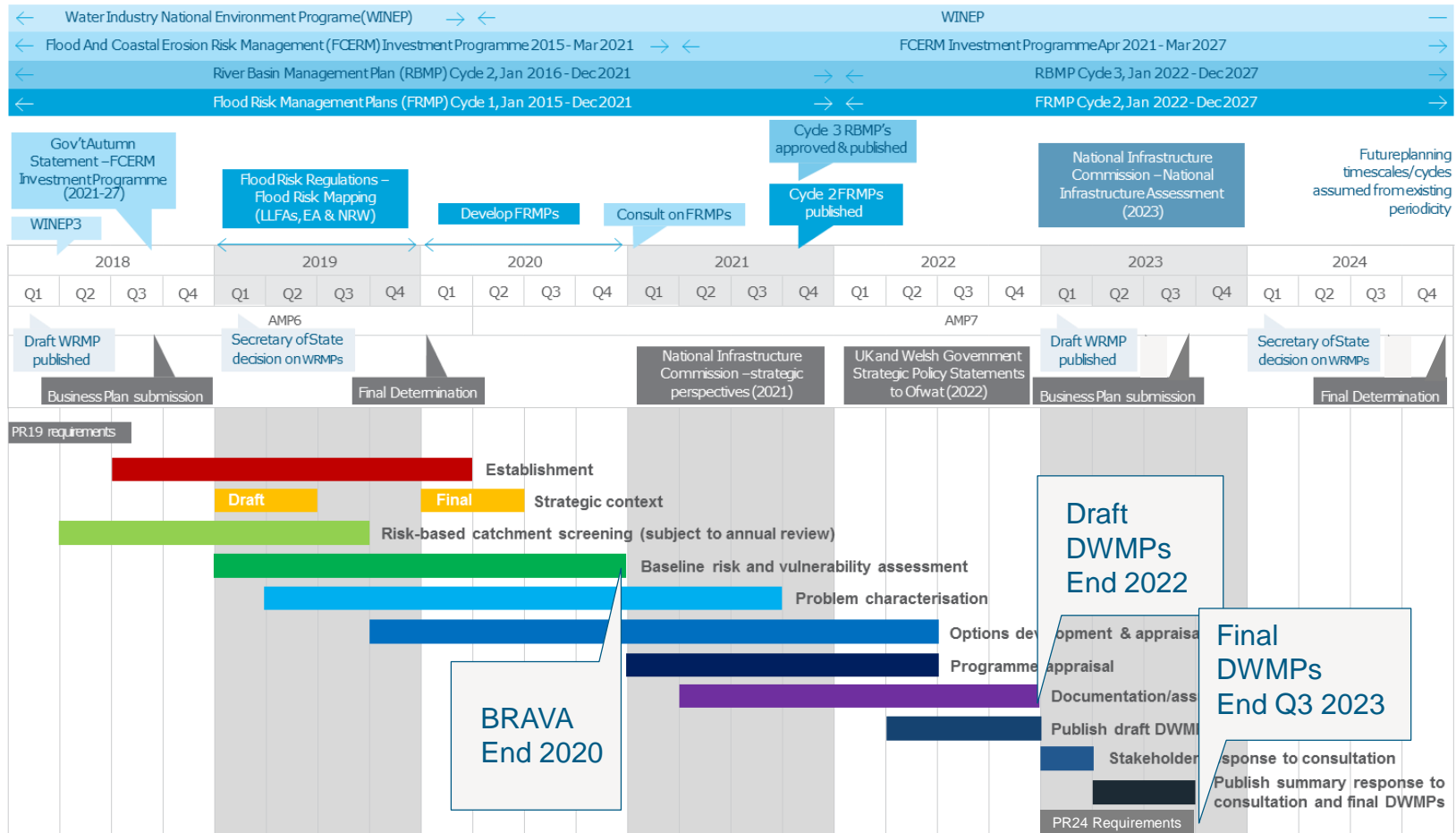
- › Transparency
- › Pro-active early engagement
- › Agreement on risk profiles
- › Identification and assessment of potential options
- › Buy-in to future proposals
- › Plan/data sharing
- › Define ownership



- › Systems thinking – cannot work effectively in isolation
- › Collaborative planning not just partnering for implementation
- › Embed partnership working and scheme co-creation within the process
- › Effectively engage customers in identifying and prioritising planning objectives, risks and the interventions to address them



What implementation timescales are planned?



Challenges?

Skills Deficit

- *Pockets of good practice*
- *Greater numbers of expertise but more needed*
- *Imagination*
- *Innovation*

Retrofit

- *New Development is important but Retrofit is a bigger challenge*

Communication

- *We need to get better at it!*



Are we in a good place to face the next decade?

Overall - Yes

- *We understand the problems and challenges much better than 10 years ago*
- *We have examples that we can draw on*
- *Our skills have improved*
- *We are becoming more Innovative albeit slowly*
- *We need to understand the obstacles before we can overcome them.*

What are comparable examples

China?

- *Massive development has created infrastructure problems more rapidly.*
- *Sponge cities are seeking to solve the problems much quicker than we do.*

Canada

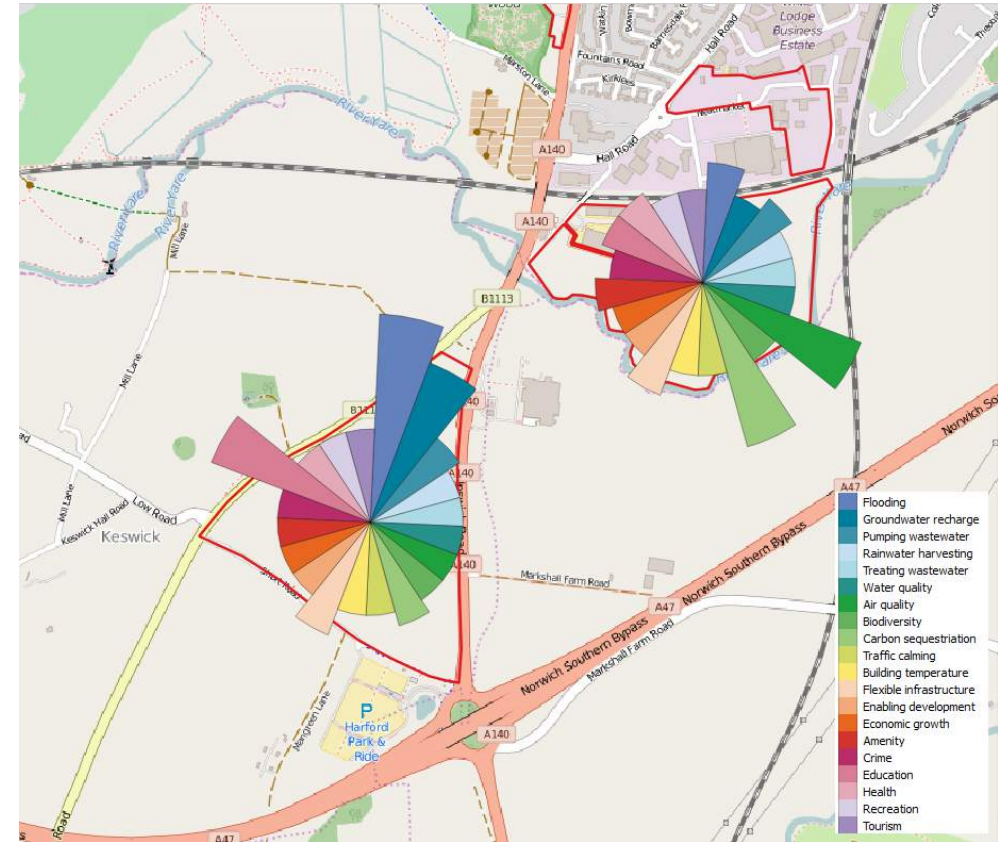
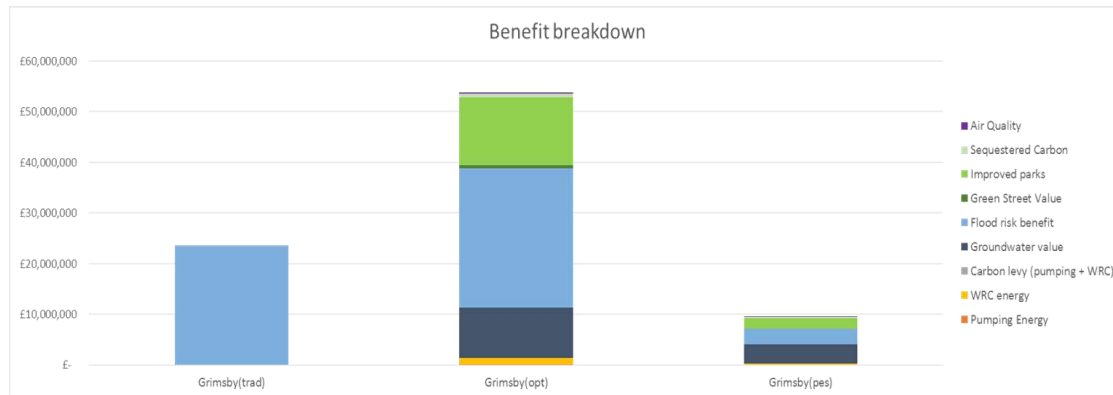
- *A growing infrastructure with increasing needs for newcomers.*
- *A more structured approach but probably where we were 20 years ago but they will learn fast and are prepared to listen*



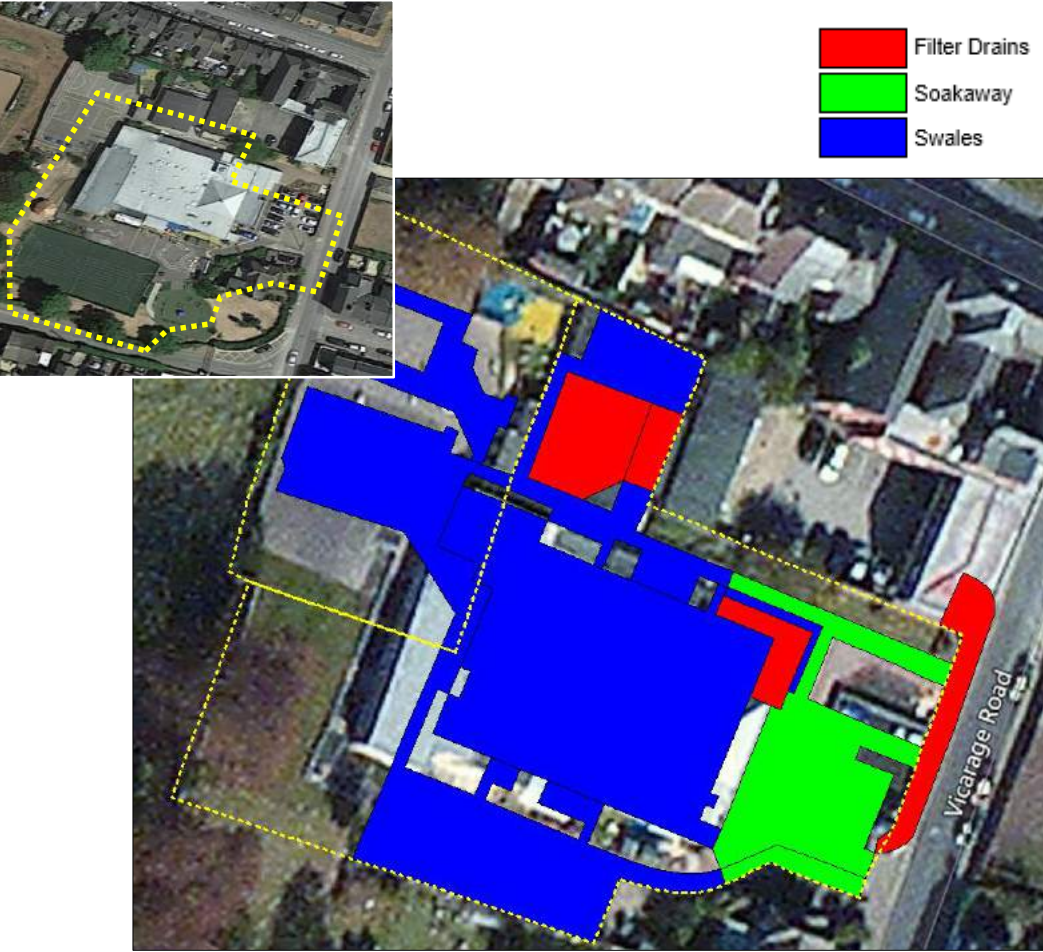
SuDS and natural capital (SWS and other companies)

We have produced SuDS retrofit opportunity mapping and quantified and valued the natural capital benefits that SuDS schemes can deliver

This can be used to enhance investment cases and identify opportunities for dual-funding with other organisations



Planning for future needs – schools



Planning for future needs – schools



allsaintsveva • Follow

allsaintsveva We were privileged to have a visit from Anglian Water this week and we learned more about all the hard work they've been doing in our school grounds over the holidays. The children found it fascinating to find out about water use and sustainable drainage. Have you seen the beautiful garden at the front of school?



Instagram

Anglian Water @AnglianWater · Apr 23
Work is progressing well to create a rainwater garden and outdoor classroom at All Saints School in Newmarket. We hope it will be a great way to teach youngsters about sustainable water use!

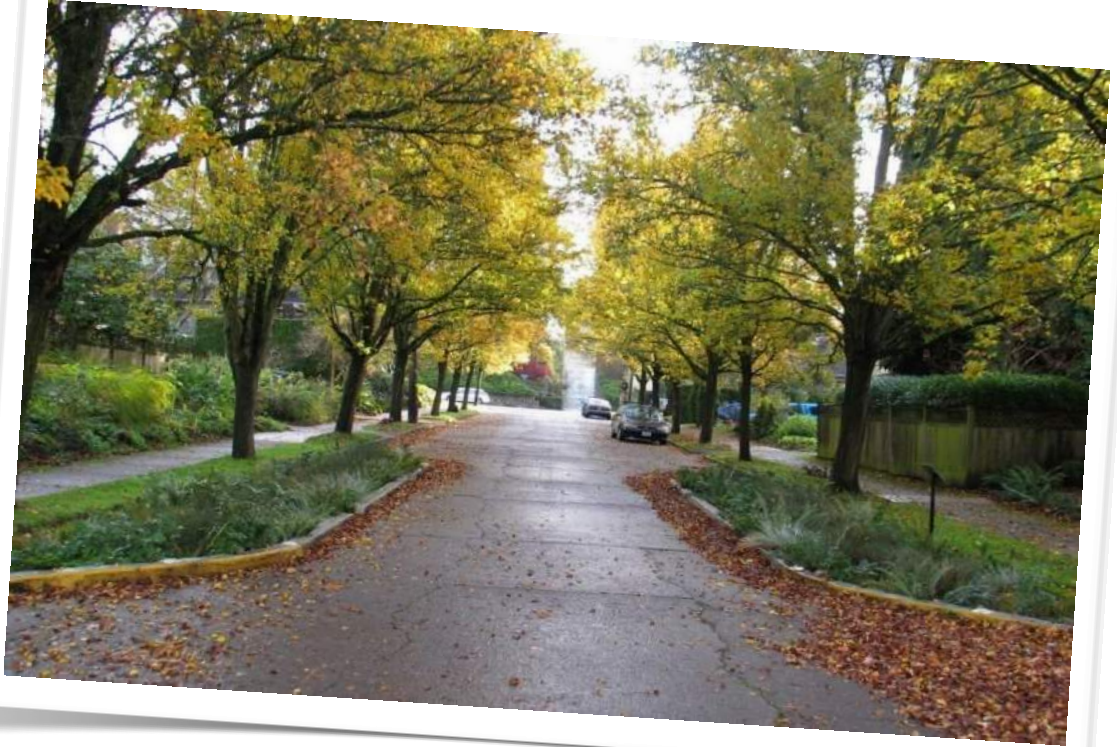


Anglian Water

@AnglianWater



Challenge how we approach our problems!





Thank you

Jeremy.jones3@atkinsglobal.com

