



SuDS and the future

To compliance and beyond!

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CIRIA

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Overview



- Challenges
- Unlocking the potential
 - Activities
 - Research areas
- What's going on
- Some questions



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Challenges



- **No showstoppers**, lots of **nice to haves!**
- Challenges:
 - SuDS and the water cycle
 - SuDS design
 - SuDS and social science
 - SuDS performance
 - SuDS and green infrastructure
 - More from less



SuDS and the water cycle



- Runoff = resource not a nuisance (harvesting)
- Role in managing cycle of floods & droughts?
- **Progressing to Water Sensitive Urban Design?**



Lamb Drove detention basin ↑, swale ↓



SuDS design



- Interdisciplinary – right people
- Amenity & biodiversity - criteria
- Tricky SuDS
- Linkages
 - Highways
 - Green infrastructure
- Emerging approaches
 - Bioretention
 - Harvesting (risks)
 - Porous surfaces
 - Urban trees
- Evaluation/approval



Photographed by Bob Bray

SuDS design (2)

- Pollutions sources – designing treatment
- Designing for
 - Construction
 - Maintenance
- Rural SuDS
 - Sediment loadings
 - Nutrients
- Remaining robust?
 - Accreditation



Photographed by Steve Wilson

SuDS and social science



- The vision...
- Communicating the water cycle
- Communicating SuDS
- **Community engagement**
 - Risk
 - Acceptance
 - Management
- People
 - Perceptions (opportunity Vs challenge)
 - Passion
 - Partnerships



SuDS performance



- General
 - Setting a methodology for monitoring SuDS schemes
 - Assessing ecosystem services for all SuDS
- Water quality (treatment)
 - Assessment methodology
 - Performance of green and grey SuDS components



SuDS & green infrastructure etc



- Better integration
- **Synergies?**
- Models for local delivery



The High Line in New York City

SuDS getting more from less



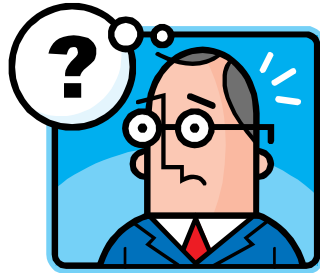
- Understanding “affordability”
- An approach to collate/present costs
- Certainty around WLC
- An approach to CBA
 - Ecosystem services
 - GI benefits
- Organisationally, spatially, temporally complex



What's going on



- National/local standards
- People in the industry
- Approaches
- Myriad of standards
- Lots of projects
- CIRIA
 - WSE
 - Land
- CIRIA future work
 - SuDS manual
 - Evaluation of CBA for retrofitting
 - Accreditation



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Key questions



- **Joining it up**
 - What can be done practically?
 - Should we base it on WSUD?
- **Design**
 - Can/should it all be included in the SuDS Manual update
 - How do we maintain quality
- **Social science**
 - Where do we need to work?
- **SuDS performance**
 - Sharing is caring (performance, benefits, costs etc)
 - What key aspects do we not know? (Need to prioritise)
- **SuDS and GI**
 - What synergies are there?
- **Getting more from less**
 - What can we do to encourage more monitoring