



Sustainable Drainage in Cornwall

Jackie Smith
Sustainable Drainage Lead Officer

Background

- December 2014, the Secretary of State for Communities and Local Government announced that Flood and Water Management Act Schedule 3 would not be enacted
- Strengthening existing planning policy
- Ministerial statement said that Local Planning Authorities were to:

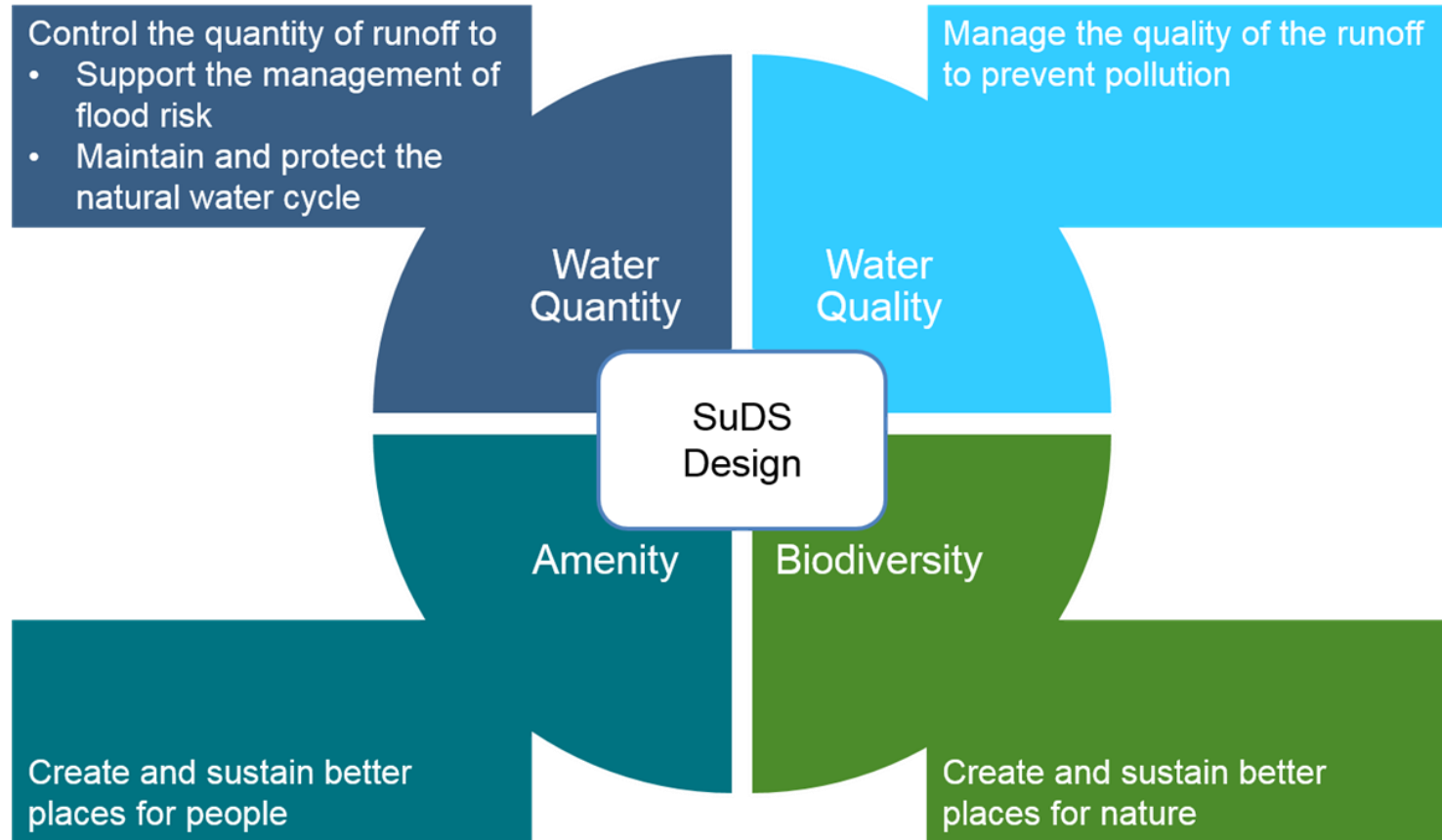
"ensure that sustainable drainage systems for the management of run-off are put in place, unless demonstrated to be inappropriate"

Sustainable Drainage Systems (SuDS)

Sustainable Drainage System (SuDS) aim to reduce the impacts of surface water on new and existing developments and so manage potential flood risk, but there is more to it..



SuDS Design Aims

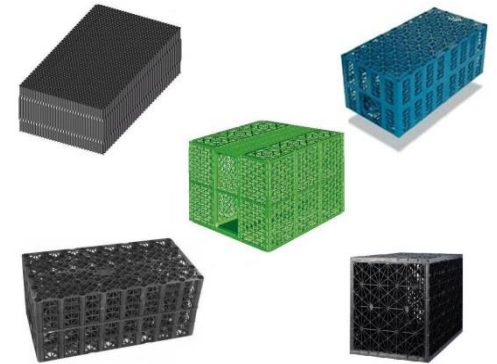
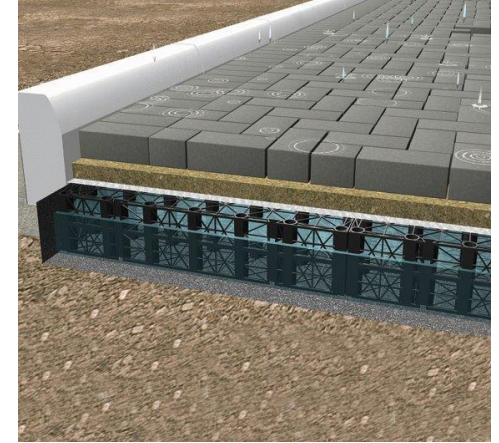


Key Benefits

Well designed, constructed and maintained SuDS can:

- Deliver water quantity and water quality benefits
- Deliver attractive, pleasant, “liveable” urban environments
- Aid health, wellbeing and quality of life
- Enhance places where people live and work
- Encourage biodiversity
- Be aesthetically pleasing

SuDS Components



SuDS Design Requirements

- DEFRA Non-statutory technical standards for sustainable drainage systems (March 2015)
- Cornwall Council Sustainable Drainage Policy (2016)
- CIRIA C753 The SuDS Manual
- Flood Zone and Critical Drainage Area requirements
- Tailored solution, not “one size fits all” approach
- Management and maintenance must be addressed

Design Standards in Cornwall

Non-Critical Drainage Areas:

- Developments with an area $> 1\text{ha}$ or in Flood Zones 2 or 3 require a Flood Risk Assessment
- 1 in 100 year peak rainfall event contained on site
- 40% climate change allowance applied
- Mimic greenfield runoff rates
- Factors of safety applied based on flood consequences
- Flow exceedance managed
- Site constraints considered e.g. mining, slope stability
- Management and maintenance considered

- Bodmin
 - Bude
 - Camborne, Pool, Illogan and Redruth
 - Falmouth and Penryn
 - Flexbury
 - Hayle
 - Helston
 - Launceston
 - Liskeard
 - Lostwithiel
 - Padstow
 - Penzance
 - Saltash
 - St Austell
 - St Blazey
 - St Ives
 - Truro - (Kenwyn, Allen, Tregolls Rd.)
 - Truro (Tinney)
 - Wadebridge

Critical Drainage Area Requirements

Stricter regulation in CDA's and locations of known drainage problems and flood risk:

- Each CDA has its own standards
- Flood Risk Assessment for all developments
- 1 in 100 year peak rainfall event plus 40%CC
- Factor of safety of between 5 and 10 for infiltration systems
- Rule of thumb 1.5 l/sec discharge rate for single dwellings
- Where the 1 in 10 year greenfield runoff rate is < 5 l/sec the LLFA will generally accept 5 l/sec

Cornwall College - Pool



Heartlands - Pool



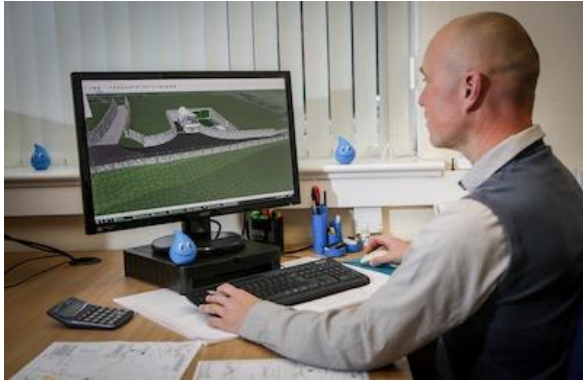
Old Redruth Brewery Site - Redruth



Bodmin



Vision for all SuDS in Cornwall



**Well Planned
Well Designed
Well Constructed
Well Maintained**



Contact details

Jackie Smith
Sustainable Drainage Lead Officer

Sustainable Drainage mailbox: sudsdrainage@cornwall.gov.uk

Flood Risk mailbox: floodrisk@cornwall.gov.uk