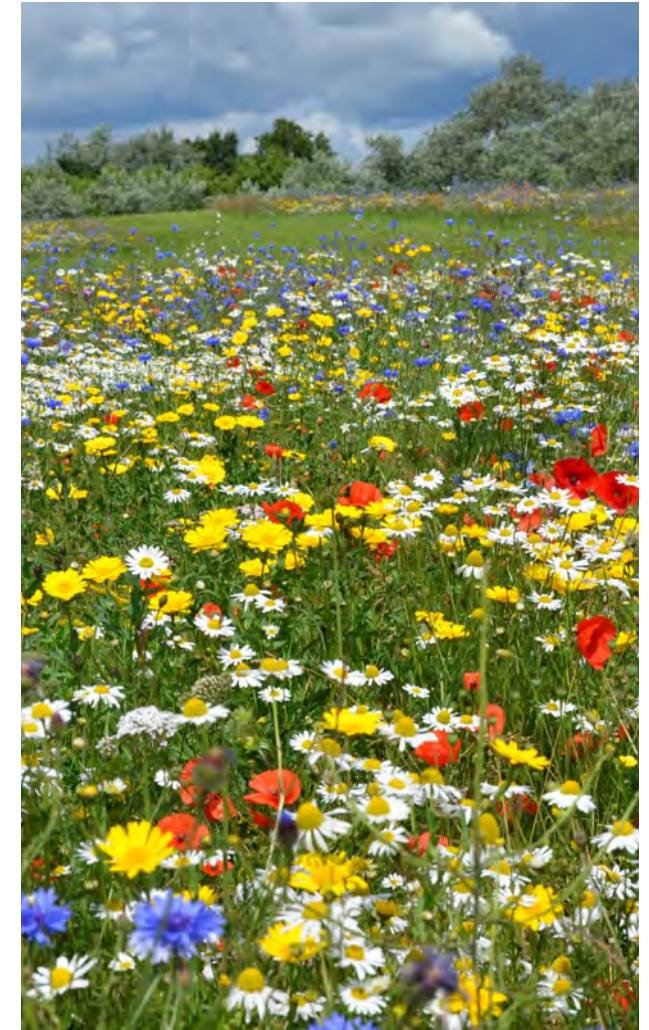


Planting for wildlife: Trees, and woodland, meadows and other natural planting enhance the biodiversity value of development, providing habitat for a wide variety of species. Larger and linked areas are of much greater value than isolated pockets of habitat. Image: Camelon Park meadow, Falkirk (below right and middle) and Grangepans meadow, Bo'ness (below left).

Before



After



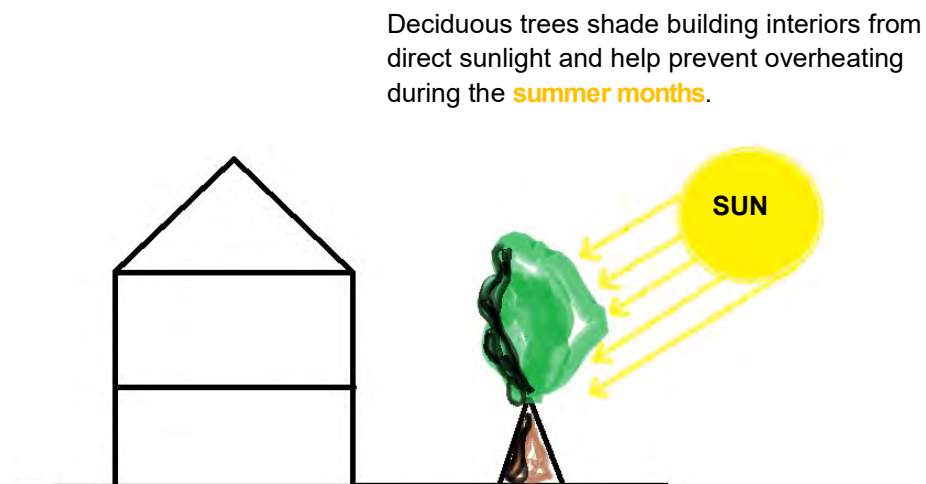
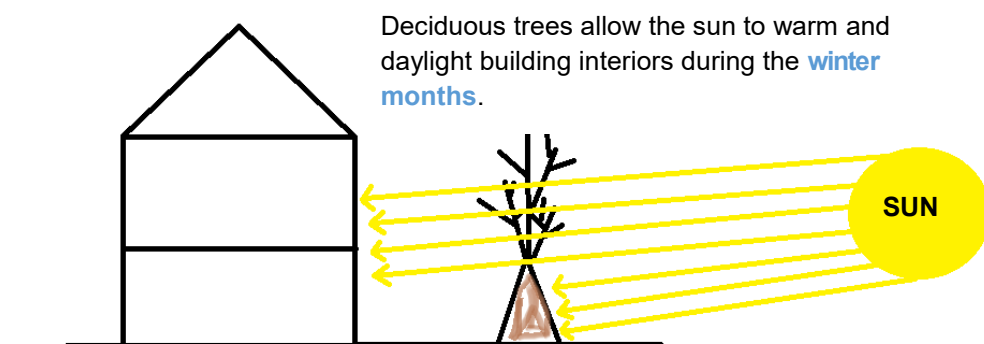
Design for future growth: Tree location and choice should allow for future canopy, trunk and root growth. The trees shown below have been deliberately chosen and planted to achieve an attractive rhythm. Images: Glenbervie, Larbert



Structure Planting: Structure planting is an essential tool in integrating large new developments into the landscape, particularly on the periphery of the urban area to soften the urban-rural transition. Planting will normally require to be 10-15 metres in depth to achieve the necessary effect. Images: new planting, Kinglass, Bo'ness (top left), mature planting, The Drum, Bo'ness (top right) and planting integrated with the path network, Mungall, Falkirk (bottom)



Moderating Climate and Air Quality: Suitably located planting can have positive effects on the microclimate within developments, providing shelter and shade. It can also have beneficial effects on air quality, particularly in urban situations, and contribute to carbon sequestration.



Leaf loss: The images, below, illustrate how natural screening can change seasonally with deciduous planting due to leaf loss. Appropriately chosen and placed evergreens can reinforce deciduous planting as well as provide natural variation and effective all year round screening.



Other Useful Guidance

BS 5837:2012 'Trees in relation to design, demolition and construction'

Landscape and Urban Design for Bats and Biodiversity

Royal Horticultural Society

Second Nature: A Biodiversity Action for Falkirk Council area

SG01 - Development in the Countryside

SG02- Neighbourhood Design Guidance

SG07 - Biodiversity and Development

SG09 - Landscape Character Assessment and Landscape

SG10 - Trees and Development

8. WATER: SUSTAINABLE DRAINAGE

Key Principles

- **The management of surface water and flood risk is a fundamental consideration in site planning**, and should be considered at the outset of the design process. Developers and designers should have an understanding of the site's hydrology and the space needed to deal with these issues.
- **Water and its management should be used positively and creatively**, to improve the amenity and sense of place, and to contribute to the wider green/blue network. It should be fully integrated with the strategy for landscape and open space. It should not be regarded purely as an engineering exercise, and should avoid overly engineered solutions.
- **All developments should incorporate requirements for sustainable urban drainage system (SUDS)**, which will be set out in the drainage strategy, having regard to the four 'pillars' of SUDS design, the SUDS management train, the range of available SUDS techniques, and the relevant policy and design guidance, as referred to on the following pages.
- **At the outset, developers should be mindful of Scottish Water's Surface Water Policy**. Scottish Water's most preferred solution is rainwater storage and use, and will only consider drainage to a combined sewer under exceptional circumstances.

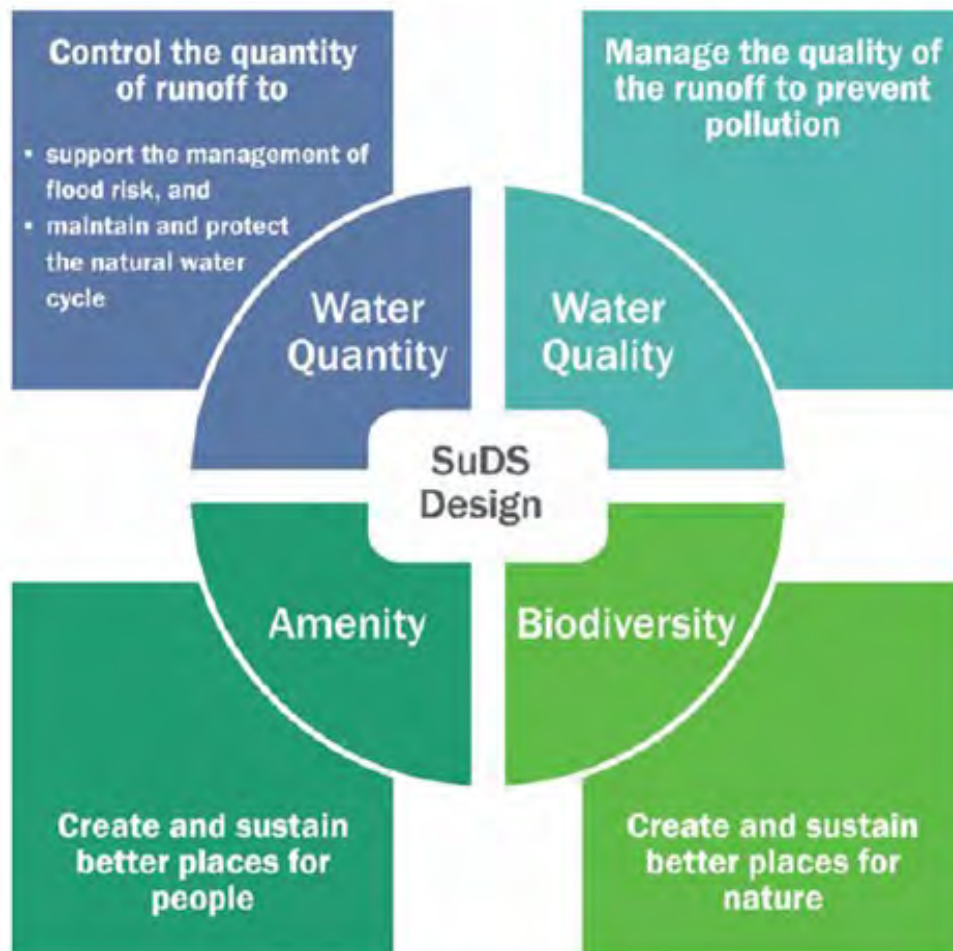
Key LDP Policies

- PE01 Placemaking
- PE12 Canals
- PE13 Green and Blue Network
- PE19 Biodiversity and Geodiversity
- PE22 The Water Environment
- PE24 Flood Management
- IR02 Developer Contributions
- IR10 Drainage Infrastructure



Good Practice

Four pillars of SUDS design: Schemes should replicate the natural drainage as closely as possible, maximising the benefits for water quantity, water quality, biodiversity and amenity. Each category should have an equal footing in the design process. Image: B Woods Ballard *et al* (2015), The SuDS Manual, CIRIA C753, London (ISBN: 978-086017-760-9), Go to CIRIA.org



SUDS management train: SUDS should not be considered as individual items but as an interconnected system where different SUDs components are linked and used to manage the flow and water quality of run-off in stages close to the surface as much as possible. Different SUDS components should be integrated at every scale of development from individual buildings to large areas of open space. The management train provides resilience in the SUDS system enabling it to still work after one component fails. The first 5mm of surface water run off (or first flush) carries the vast majority of pollutants. It is important to intercept this early in the management train to prevent pollution entering receiving water such as streams and rivers. Image: Stephen Dickie *et al* (2010), Planning for SUDs - making it happen, CIRIA C687 (ISBN 978-0-86017-687), Go to CIRIA.org

