



Cambourne

SUMMARY

KEYWORDS

Affordable housing, SUDS, sustainable drainage features, combination flooding events, wildlife habitats.

NAME OF AUTHORITY

Cambridgeshire County Council

SERVICE AREA

Housing

BUILDING CAPACITY/TAKING ACTION

Taking action

SUMMARY

Cambridge Housing Society development of a small scale affordable housing development in Cambourne (35 dwellings, 1ha site). Sustainable drainage features included in design and construction – permeable paving, detention basins, swales, green roof demo, water butts. Monitoring project set up.

Site selection January 2004. Two years to design and install SUDS features. Residents moved in spring/early summer 2006.

DESCRIPTION

DRIVERS

- Growing pressure for new housing in the UK. Cambridgeshire is a key growth area under the government's housing strategy, with up to 50,000 new houses planned to be built by 2016.
- It is also a relatively low-lying county where flooding in river valleys and urban watercourses is a major concern. The area is susceptible to combination events – where pluvial, fluvial and tidal flooding can occur together. There is also a high water table and a layer of impermeable clay, both of which contribute to the flooding risk.
- The Water Framework Directive has a target of 'good' quality ground and surface water by 2015.

METHODS

- Identification of flooding risk – sources and routes of flooding. Installation of a variety of measures to manage rainwater and attenuate extreme rainfall. Examples include permeable paving, detention basins, swales, a green roof, and water butts. Two year monitoring project set up to evaluate performance of individual features. Results to be compared with a control site with traditional drainage.

OUTCOMES

- Generally, SUDS can bring reduced risk of flooding, groundwater levels replenished, new habitats for wildlife, cost savings, reduced water consumption, improved water quality returning to cycle.

KEY PLAYERS/PARTNERS

- Cambridge Housing Society
- Cambridgeshire County Council
- South Cambridgeshire District Council
- Flagship
- Cambridgeshire Wildlife Trust
- Royal Haskoning
- Defra
- EA
- Cambridgeshire Horizons
- RSHydro
- Robert Bray Associates

ANALYSIS

STRENGTHS

- See under “Outcomes”, above.
- Comprehensive SUDS system installed, approval of residents, enhanced opportunities for wildlife, improved water quality leaving the site than would be under traditional regime, cost savings – for development and for householders (no storm water drainage charges).

CONSTRAINTS

- The use of public open spaces, including adjacent, off-site open spaces, provides a viable solution to the problem of accommodating softer landscaped SUDS within housing developments. This will become more of an issue due to the Government’s policy within PPS3 of higher density developments (from Lamb Drove case study on Ciria website).

KEY MESSAGES AND LEARNING POINTS

- Opportunities exist for the installation of SUDS measures even in small developments. Need specialist advice depending upon the scale of the development/installations.

FURTHER INFORMATION

CONTACT NAME AND DETAILS

- Flood and Water Manager, Cambridgeshire County Council, 01223 699976, floodandwater@cambridgeshire.gov.uk

REFERENCES, WEB LINKS

- ACRE/Defra report on local councils' action on adaptation <http://www.defra.gov.uk/environment/climate/action/documents/adapt-localcouncilguide.pdf>
- Cambridgeshire County Council www.cambridgeshire.gov.uk/environment/planning/flows
- Environment Agency: techniques, policy etc. www.environment-agency.gov.uk/business/sectors/36998.aspx
- Ciria: Guidance and information on SUDS www.ciria.com/suds/index.html
- European funded programme – FLOWS www.flows.nu
- Cambridgeshire Wildlife Trust <http://www.wildlifebcnp.org/>