Surface Water Management Plans – The Importance of an Integrated Regional Drainage Strategy

1. Surface water flooding frequently develops quickly and can be difficult to predict. Flooding occurs when man-made and natural drainage systems have insufficient capacity to cope with the amount of rainfall. The critical factors for surface water flooding are the volume of rainfall, the rainfall intensity and the permeability of the surface onto which the rainfall falls. In urban areas where the ratio of impermeable surfaces to vegetated areas is high, sudden and intense rainfall drained through conventional drainage piped systems designed to remove surface water from a site as quickly as possible, can lead to downstream flooding problems.

2. The urban drainage system is a complex interaction of the urban landscape including buildings, roads, public sewers, private sewers and watercourses. The integrated approach by partners and stakeholders in the preparation of Surface Water Management Plans (SWMPs) will give the roads authorities clear roles where the roads form a key part of the drainage or alleviation of flood risk, namely:

a) Retain data relating to location and serviceability of existing road drainage; and
b) Design road drainage to minimise surface water run-off.

3. SWMPs should be referred to in planning policy as a tool to manage surface water flood risk on a local basis by improving and optimising coordination between relevant stakeholders. SWMPs build on Strategic Flood Risk Assessments (SFRAs) and provide the vehicle for local organisations to develop a shared understanding of local flood risk, including setting out priorities for action, maintenance needs and links into local development frameworks and emergency plans.

4. The purpose of the SWMP is to make sustainable urban surface water management decisions that are evidence based, risk based, future proofed and inclusive of stakeholder views and preferences.

5. The key aims of the SWMP are:

a) Ensuring that development allocations within an area are properly supported by adequate surface water management; and
b) Providing a common framework for stakeholders to agree responsibilities for tackling existing drainage problems and preventing future problems.
c) Where development pressures are high it can be part of a Water Cycle Strategy
d) Demonstrating how capital investment, infrastructure and maintenance can deliver the required surface water management

6. The SWMP considers the regional management of surface water under a full range of rainfall events, from short, high intensity rainfall events that impact on water quality to the longer duration infrequent events that may generate overland flood flows.

7. Central to a risk based surface water management approach is the prediction of the occurrence and frequency of flooding events. Provision should be made in relation to the following areas:

a) Coordination and cooperation within the domain of flood risk management;

b) Assessment of flood risk and preparation of flood risk maps and flood risk management plans;

c) Amendments to local authority and Environment Agency functions for flood risk management;

d) A revised statutory process for flood protection schemes; and

e) Amendments to the enforcement regime for the safe operation and monitoring of flood and surface water attenuation areas.

HCC Potential Long-term Transport Links

Long Term – Urban Extensions & Densification

What transport schemes would be needed for the long term if growth is concentrated in and around Hertfordshire's existing urban areas through large-scale urban extensions, and more dense forms of development?