

## **Appendix A - Local and National Standards**

### **Local Standard A Proposals for SuDS adoption**

The Applicant should summarise their proposals for adoption and maintenance of SuDS at Outline Planning Stage. Arrangements for this between the LLFA and Developer should be agreed prior to Outline Planning Permission being granted, otherwise they will be secured via Conditions.

Details of the maintenance agreement are required for full planning approval, whereas an agreement needs to be in place for discharge of conditions.

### **Local Standard B – Access for watercourse maintenance**

Layout plans shall demonstrate that the Applicant has considered access for watercourse and ditch maintenance. This shall include consideration of the alignment of boundary walls and fences.

### **Local Standard C - Impact of Downstream Water Levels**

If high water levels within a receiving watercourse into which a SuDS scheme discharges are anticipated, the LLFA will expect that they will not adversely affect the function of that SuDS system.

### **Local Standard D – Conformity with the SuDS Management Train Principles**

The LLFA will expect the SuDS design to follow conventional SuDS practices and demonstrate how the principles of the SuDS Management Train have been taken into account

### **Local Standard E – Pollution Prevention and Control**

The LLFA will expect the Applicant to demonstrate how pollutants are prevented or controlled as part of the SuDS scheme. This should include consideration of the sensitivity of receiving waterbodies and particular attention should be given to the first 5mm of rainfall ('first flush' that mobilises the most pollutants).

### **Local Standard F – Climate Change**

The LLFA will expect SuDS design to include an allowance for an increase in rainfall for a 100 year rainstorm event determined based on the design life of the development in order to accommodate climate change (see Table 8.10).

### **Local Standard G – Urban Creep**

For all residential housing estates of 10 houses or more, the SuDS design shall include an allowance for an increase in impermeable area to accommodate urban creep (Table 8.11).

### **Local Standard H - Maintenance Requirements**

The LLFA will expect SuDS to be designed so that they are easy to maintain. Proper use of the SuDS management train, including surface features and upstream treatment, can reduce the maintenance burden.

At Outline stage, the developer must set out who will the system and how the maintenance will be funded.

At Discharge of Conditions, a Maintenance Plan is required. The plan is to be presented to the future landowner during the conveyancing process.

For a small site the Maintenance Plan could be contained on a few drawings.

Where SuDS assets are to be maintained by a Management Company, a more extensive Maintenance Plan is required. Maintenance responsibilities for the respective components of the SuDS system need to be shown. A maintenance schedule should be included. The process for levying fees and the issuing of interim payment certificates needs to be defined.

Developments shall include for the provision of maintenance access to and alongside drainage features that are not readily accessible from the public highway, including vehicular access as necessary.

## **National Standards**

### **Peak flow control**

**S2** For Greenfield developments, the peak runoff rate from the development to any highway drain, sewer or surface water body for the 100% Annual Exceedance Probability rainfall event and the 1% Annual Exceedance Probability rainfall event should never exceed the peak Greenfield runoff rate for the same event.

**S3** For developments which were previously developed, the peak runoff rate from the development to any drain, sewer or surface water body for the 100% Annual Exceedance Probability rainfall event and the 1% Annual Exceedance Probability rainfall event must be as close as reasonably practicable to the Greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the development prior to redevelopment for that event.

### **Volume control**

**S4** Where reasonably practicable, for Greenfield development, the runoff volume from the development to any highway drain, sewer or surface water body in the 1% Annual Exceedance Probability, 6 hour rainfall event should never exceed the Greenfield runoff volume for the same event.

**S5** Where reasonably practicable, for developments which have been previously developed, the runoff volume from the development to any highway drain, sewer or surface water body in the 1% Annual Exceedance Probability, 6 hour rainfall event must be constrained to a value as close as is reasonably practicable to the Greenfield runoff volume for the same event, but should never exceed the runoff volume from the development site prior to redevelopment for that event.

**S6** Where it is not reasonably practicable to constrain the volume of runoff to any drain, sewer or surface water body in accordance with S4 or S5 above, the runoff volume must be discharged at a rate that does not adversely affect flood risk.

### **Flood risk within the development**

**S7** The drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur on any part of the site for a 1 in 30 year Rainstorm.

**S8** The drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur during a 100 Year Rainstorm event in any part of: a building (including a basement); or in any utility plant susceptible to water (e.g. pumping station or electricity substation) within the development.

**S9** The design of the site must ensure that, so far as is reasonably practicable, flows resulting from rainfall in excess of a 100 Year Rainstorm event are managed in exceedance routes that minimise the risks to people and property.

### **Structural integrity**

**S10** Components must be designed to ensure structural integrity of the drainage system and any adjacent structures or infrastructure under anticipated loading conditions over the design life of the development taking into account the requirement for reasonable levels of maintenance.

**S11** The materials, including products, components, fittings or naturally occurring materials, which are specified by the designer must be of a suitable nature and quality for their intended use.

### **Designing for maintenance considerations**

**S12** Pumping should only be used to facilitate drainage for those parts of the site where it is not reasonably practicable to drain water by gravity.

### **Construction**

**S13** The mode of construction of any communication with an existing sewer or drainage system must be such that the making of the communication would not be prejudicial to the structural integrity and functionality of the sewerage or drainage system.

**S14** Damage to the drainage system resulting from associated construction activities must be minimised and must be rectified before the drainage system is considered to be completed.