Epsom & Ewell Borough Council

Advice note on the required contents of a Sustainable Drainage Statement

1. Introduction

1.1 The Government has strengthened planning policy on the provision of sustainable drainage and new consultation arrangements for 'major' planning applications are being introduced from 6 April 2015.

1.2 Decisions about the suitability of sustainable drainage provision are made by the local planning authority. However, under the new consultation arrangements Surrey County Council, in its role as Lead Local Flood Authority, is a statutory consultee for all major applications. Previously the Environment Agency had that statutory responsibility.

1.3 All major applications submitted from 6 April 2015 are therefore required to include a Sustainable Drainage Statement.

1.4 The purpose of this advice note is to set out what information should be included in such statements. This advice note forms part of the Council's local validation requirements list and major applications that are not submitted with an appropriate Sustainable Drainage Statement will not be regarded as a 'valid' application.

2. Requirements

a. General

2.1 It will be essential that the type of sustainable drainage system (SuDS) for a site, along with details of its extent/position, is identified at the design stage of the whole scheme. This information will be required for both outline and full applications so it is clearly demonstrated that the SuDS can be accommodated with the development that is proposed.

2.2 It will not be acceptable to leave the design of SuDS to a later stage and dealt with by conditions after the form of development on the site has already been agreed.

2.3 The proposed SuDS scheme must adhere to the principles contained in the SuDS National Standards as published by DEFRA.

2.4 Surface water run-off should be controlled as near to its source as possible through a sustainable drainage approach to surface water management. SuDS seek to mimic natural drainage systems and retain water on or near to the site, when rain falls, in contrast to traditional drainage approaches, which tend to pipe water off site as quickly as possible. SuDS therefore offer significant advantages over conventional piped drainage systems.

2.5 Approved Document Part H of the Building Regulations 2010 also establishes a hierarchy for surface water disposal, which encourages a SuDS approach beginning with infiltration where possible e.g. soakaways or infiltration trenches. Where SuDS are used, it must be established that these options are feasible, can be adopted and properly maintained and would not lead to any other environmental problems.

2.6 Where the intention is to dispose to soakaway, these should be shown to work through an appropriate assessment carried out under Building Research Establishment Digest 365.

2.7 Before disposal of surface water to the public sewer is considered all other options set out in Approved Document Part H of the Building Regulations 2010 should be exhausted. When no other practicable alternative exists to dispose of surface water other than the public sewer, the Water Company or its agents should confirm that there is adequate spare capacity in the existing system taking future development requirements into account.

2.8 Where an application is part of a larger site which already has planning permission it is essential that the new proposal does not compromise the drainage scheme already approved.

2.9 Development which involves a culvert or an obstruction to flow on an Ordinary Watercourse will require consent under the Land Drainage Act 1991 and the Floods and Water Management Act 2010. In the case of an Ordinary Watercourse the responsibility for Consenting lies with the Lead Local Flood Authority (LLFA). An Ordinary Watercourse is defined as any watercourse not identified as a Main River on maps held by the Environment Agency and DEFRA. For further information on Ordinary Watercourses contact the LLFA. Surrey County Council would still wish to be consulted on any proposed culverting or an obstruction to flow on a Main River.

b. Content of the Sustainable Drainage Statement

2.10 The Statement will draw on other information contained with the Planning Application and in particular any Flood Risk Assessment and must provide a clear explanation of the surface water drainage strategy for the site and the reasons why it is the most suitable.

2.11 As a minimum the following information must be provided in the statement:

a. Site location plan.

b. Topographical survey information to show existing site layout, drainage system and site levels.

c. Details of the site's geology/drift material overlaying it and, where there is a high ground water table, the hydrology.

d. Details of any contamination on the site and how this has been taken into account in the SuDS design

e. Proposed type of development and detailed layout to an identifiable scale.

f. Demonstration that the proposed form of sustainable drainage proposed has had regard to the SuDS hierarchy.

g. Detailed layout showing where the sustainable drainage infrastructure will be located on the site (e.g. location of water storage and any integral landscaping). To include phasing information and suitable construction detail.

h. Details demonstrating that any third party agreements required using land outside the application site have been secured.

i. Details of any proposed drainage off the site (e.g. groundwater movement, ditches, pipes, etc) and where it will drain to. To include full design calculations

j. Micro-drainage calculations of existing and proposed run-off rates and volumes unless full infiltration test in accordance with BRE 365 are submitted. Back-up attenuation scheme if on-site infiltration is proposed.

k. Details of how drainage will be managed during the construction period including any necessary connections, impacts, diversions and erosion control.

l. Details of the management and maintenance plan for the SuDS, including for individual plots, so it continues to meet the requirements (currently in the draft National Standards) for the lifetime of the development. To include a health and safety plan where open water is involved.

2.12 In all cases the pro-forma at Appendix A to this Advice Note must be submitted.

3. Further information and guidance

3.1 Applicants are strongly advised to discuss their proposals with Surrey County Council at the pre-application stage to ensure that an acceptable SuDS scheme is submitted. This will be subject to Surrey County Council's schedule of pre-application fees.

3.2 For general clarification of these requirements please contact the Borough Council on 01372 732000 or via email contactus@epsom-ewell.gov.uk

Appendix A

Pro-forma to accompany Sustainable Drainage Statements

This pro-forma accompanies Epsom & Ewell Borough Council's Advice Note on the required contents of a Sustainable Drainage Statement. It must be completed in full and attached to that Statement and will form part of the essential information required by Surrey Council in its role as Lead Local Flood Authority and statutory consultee on SuDS for all major planning applications. The pro-forma is supported by the Defra/EA guidance on Rainfall Runoff Management and uses the storage calculator on www.UKsuds.com. The pro-forma should be considered alongside other supporting SuDS Guidance, but focuses on ensuring flood risk is not made worse elsewhere. This pro-forma is based upon current industry standard practise.

1. Site Details

Site	Click here to enter text.
Address & post code or LPA reference	Click here to enter text.
Grid reference	Click here to enter text.
Is the existing site developed or Greenfield?	Click here to enter text.
Total Site Area served by drainage system (excluding open space) (Ha)*	Click here to enter text.

***** The Greenfield runoff off rate from the development which is to be used for assessing the requirements for limiting discharge flow rates and attenuation storage from a site should be calculated for the area that forms the drainage network for the site whatever size of site and type of drainage technique. Please refer to the Rainfall Runoff Management document or CIRIA manual for detail on this.

2. Impermeable Area

	Existing	Proposed	Difference (Proposed-Existing)	Notes for developers & Local Authorities
Impermeable area (ha) (areas to be shown on a plan)	☐	☐	Click here to enter text.	If the proposed amount of impermeable surface is greater, then runoff rates and volumes will increase. Section 6 must be filled in. If proposed impermeability is equal or less than existing, then Section 6 can be skipped & Section 7 filled in.
Drainage Method (infiltration/sewer/watercourse)	☐	☐	N/A	If different from the existing, please fill in Section 3. If existing drainage is by infiltration and the proposed is not, discharge volumes may increase. Fill in Section 6.

3. Proposing to Discharge Surface Water via

	Yes	No	Evidence that this is possible	Notes for developers & Local Authorities
Infiltration	☐	☐	Click here to enter text.	e.g. soakage tests. Section 6 (infiltration) must be filled in if infiltration is proposed.
To watercourse	☐	☐	Click here to enter text.	e.g. Is there a watercourse nearby? Please provide details of any watercourse to which the site drains including cross-sections of any adjacent water courses for appropriate distance upstream and downstream of the discharge point (as agreed with the LLFA)
To surface water sewer	☐	☐	Click here to enter text.	The Confirmation from sewer provider that sufficient capacity exists for this connection.
Combination of above	☐	☐	Click here to enter text.	e.g. part infiltration part discharge to sewer or watercourse. Provide evidence above.

4. Peak Discharge Rates – This is the maximum flow rate at which storm water runoff leaves the site during a particular storm event.

	Existing Rates (l/s)	**Proposed Rates (l/s)**	**Difference (l/s) (Proposed-Existing)**	**Notes for developers & Local Authorities**
Greenfield QBAR	Click here to enter text.	N/A	N/A	QBAR is approx. 1 in 2 storm event. Provide this if Section 6 (QBAR) is proposed.
1 in 1	Click here to enter text.	Click here to enter text.	Click here to enter text.	Proposed discharge rates (with mitigation) should be no greater than existing rates for all corresponding storm events. e.g. discharging all flow from site at the existing 1 in 100 event increases flood risk during smaller events.
1 in 30	Click here to enter text.	Click here to enter text.	Click here to enter text.	
1in 100	Click here to enter text.	Click here to enter text.	Click here to enter text.	
1 in 100 plus climate change	N/A	Click here to enter text.	Click here to enter text.	To mitigate for climate change the proposed 1 in 100 +CC must be no greater than the existing 1 in 100 runoff rate. If not, flood risk increases under climate change. 30% should be added to the peak rainfall intensity.

5. Calculate additional volumes for storage –The total volume of water leaving the development site. New hard surfaces potentially restrict the amount of stormwater that can go to the ground, so this needs to be controlled so not to make flood risk worse to properties downstream.

	Existing Volume (m^3)	**Proposed Volume (m^3)**	**Difference (m^3) (Proposed-Existing)**	**Notes for developers & Local Authorities**
1 in 1	Click here to enter text.	Click here to enter text.	Click here to enter text.	Proposed discharge volumes (without mitigation) should be no greater than existing volumes for all corresponding storm events. Any increase in volume increases flood risk elsewhere. Where volumes are increased Section 6 must be filled in.
1 in 30	Click here to enter text.	Click here to enter text.	Click here to enter text.	
1in 100	Click here to enter text.	Click here to enter text.	Click here to enter text.	
1 in 100 plus climate change	Click here to enter text.	Click here to enter text.	Click here to enter text.	To mitigate for climate change the volume discharge from site must be no greater than the existing 1 in 100 storm event. If not, flood risk increases under climate change.

6. Calculate attenuation storage – Attenuation storage is provided to enable the rate of runoff from the site into the receiving watercourse to be limited to an acceptable rate to protect against erosion and flooding downstream. The attenuation storage volume is a function of the degree of development relative to the greenfield discharge rate.

		Notes for developers & Local Authorities
Storage Attenuation volume (Flow rate control) required to retain rates as existing (m^3)	Click here to enter text.	Volume of water to attenuate on site if discharging at existing rates. Can't be used where discharge volumes are increasing

7. How is Storm Water stored on site?

Storage is required for the additional volume from site but also for holding back water to slow down the rate from the site. This is known as attenuation storage and long term storage. The idea is that the additional volume does not get into the watercourses, or if it does it is at an exceptionally low rate. You can either infiltrate the stored water back to ground, or if this isn't possible hold it back with on-site storage. Firstly, can infiltration work on site?

			Notes for developers & Local Authorities
Infiltration	**State the Site's Geology and known Source Protection Zones (SPZ)**	Click here to enter text.	Avoid infiltrating in made ground. Infiltration rates are highly variable and refer to Environment Agency website to identify and source protection zones (SPZ)
	Are infiltration rates suitable?	Click here to enter text.	Infiltration rates should be no lower than $1x10^{-6}$ m/s.
	State the distance between a proposed infiltration device base and the ground water (GW) level	Click here to enter text.	Need 1m (min) between the base of the infiltration device & the water table to protect Groundwater quality & ensure GW doesn't enter infiltration devices. Avoid infiltration where this isn't possible.
	Were infiltration rates obtained by desk study or infiltration test?	Click here to enter text.	Infiltration rates can be estimated from desk studies at most stages of the planning system if a backup attenuation scheme is provided..
	Is the site contaminated? If yes, consider advice from others on whether infiltration can happen.	Click here to enter text.	Water should not be infiltrated through land that is contaminated. The Environment Agency may provide bespoke advice in planning consultations for contaminated sites that should be considered.
In light of the above, is infiltration feasible?	**Yes/No? If the answer is No, please identify how the storm water will be stored prior to release**	Click here to enter text.	If infiltration is not feasible how will the additional volume be stored?. The applicant should then consider the following options in the next section.

7a. Storage requirements

The developer must confirm that either of the two methods for dealing with the amount of water that needs to be stored on site.

Option 1 Simple – Store both the additional volume and attenuation volume in order to make a final discharge from site at **QBAR** (Mean annual flow rate). This is preferred if no infiltration can be made on site. This very simply satisfies the runoff rates and volume criteria.

Option 2 Complex – If some of the additional volume of water can be infiltrated back into the ground, the remainder can be discharged at a very low rate of 2 l/sec/hectare. A combined storage calculation using the partial permissible rate of 2 l/sec/hectare and the attenuation rate used to slow the runoff from site.

		Notes for developers & Local Authorities
Please confirm what option has been chosen and how much storage is required on site.	Click here to enter text.	The developer at this stage should understand the site characteristics and be able to explain what the storage requirements are on site and how it will be achieved.

8. Additional Information

		Notes for developers & Local Authorities
Which Drainage Systems measures have been used?	Click here to enter text.	SuDS can be adapted for most situations even where infiltration isn't feasible e.g. impermeable liners beneath some SuDS devices allows treatment but not infiltration. See CIRIA SuDS Manual C697.
Drainage system can contain water in a 1 in 30 storm event without flooding	Click here to enter text.	This a requirement for sewers for adoption & is good practice even where drainage system is not adopted.
Any flooding between the 1 in 30 & 1 in 100 plus climate change storm events will be safely contained on site.	Click here to enter text.	**Safely:** not causing property flooding or posing a hazard to site users i.e. no deeper than 300mm on roads/footpaths. Flood waters must drain away at section 6 rates. Existing rates can be used where runoff volumes are not increased.
How are rates being restricted (hydrobrake etc)	Click here to enter text.	Hydrobrakes to be used where rates are between 2l/s to 5l/s. Orifices not be used below 5l/s as the pipes may block. Pipes with flows < 2l/s are prone to blockage.
Please confirm the owners/adopters of the entire drainage systems throughout the development. Please list all the owners.	Click here to enter text.	If these are multiple owners then a drawing illustrating exactly what features will be within each owner's remit must be submitted with this Proforma.
How is the entire drainage system to be maintained?	Click here to enter text.	If the features are to be maintained directly by the owners as stated in answer to the above question please answer yes to this question and submit the relevant maintenance schedule for each feature. If it is to be maintained by others than above please give details of each feature and the maintenance schedule. Clear details of the maintenance proposals of all element of the proposed drainage system must be provided. Poorly maintained drainage can lead to increased flooding problems in the future.

9. Management and Maintenance of SuDS

Details are required to be provided of the management and maintenance plan for the SuDS, including individual plots in perpetuity. If open water is involved, a health and safety plan will also be required.

		Notes for developers & Local Authorities
How is the entire drainage system to be maintained in perpetuity?	Click here to enter text.	Clear details of the maintenance proposals of all elements of the proposed drainage system must be provided to show that all parts of SuDS are effective and robust. Provide a management plan to describe the SuDS scheme and set out the management objectives for the site. It should consider how the SuDS will perform and develop over time anticipating any additional maintenance tasks to ensure the system continues to perform as designed. - Specification notes that describe how work is to be undertaken and the materials to be used. - A maintenance schedule describes what work is to be done using frequency and performance requirements as appropriate. - A site plan showing maintenance areas, control points and outfalls. Responsibility for the management and maintenance of each element of the SuDS scheme will also need to be detailed within the Management Plan. Where open water is involved please provide a health and safety plan within the management plan.
Please confirm the owners/adopters of the entire drainage systems throughout the development. Please list all the owners.	Click here to enter text.	If these are multiple owners then a drawing illustrating exactly what features will be within each owner's remit must be submitted with this Proforma. Please give details of each feature and how it will be managed in accordance with the details in the management plan.
Please provide details demonstrating that any third part agreements required using land outside the application site have been secured?	Click here to enter text.	

The above form should be completed using evidence from the Flood Risk Assessment and site plans. It should serve as a summary sheet of the drainage proposals and should clearly show that the proposed rate and volume as a result of development will not be increasing. If there is an increase in rate or volume, the rate or volume section should be completed to set out how the additional rate/volume is being dealt with. This form is completed using factual information from the Flood Risk Assessment and Site Plans and can be used as a summary of the surface water drainage strategy on this site.	
Form Completed By	Click here to enter text.
Qualification of person responsible for signing off this pro-forma	Click here to enter text.
Company	Click here to enter text.
On behalf of (Client's details)	Click here to enter text.
Date	Click here to enter a date.