The London Sustainable Drainage Proforma

Introduction

This proforma is intended to accompany a drainage strategy prepared for a planning application where required by national or local planning policy. It should be used to summarise the key outputs from the strategy to allow assessing officers at the Lead Local Flood Authority (LLFA) to quickly assess compliance with sustainable drainage (SuDS)

The proforma is divided into 4 sections, which are intended to be used as follows:

1. Site and project information - Provide summary details of the development, site and drainage
2. Proposed discharge arrangement – Summarise site ground conditions to determine potential for infiltration. Select a surface water discharge method (or mix of methods) following the hierarchical approach set out in the London Plan.
3. Drainage strategy – Prioritise SuDS measures that manage runoff as close to source as possible and contribute to the four main pillars of SuDS; amenity, biodiversity, water quality and water quantity.
4. Supporting information – Provide cross references to the page or section of the drainage strategy report where the detailed information to support each element can be found. This may be more than one reference

Policy

Drainage strategies for developments in the London Borough of Bromley need to comply with the following policies on SuDS:

1. Bromley Local Plan Policies 115 & 116
2. London Plan policy 5.13 and draft New London Plan policy SI13
3. The National Planning Policy Framework (NPPF)

Technical Guidance

- Post-development surface water discharge rate should be limited to greenfield runoff rates. Proposals for higher discharge rates should be agreed with the LLFA ahead of submission of the Planning Application. Clear evidence should be provided with the Planning Application to show why greenfield rates cannot be achieved.
- Greenfield runoff rate is the runoff rate from a site in its natural state, prior to any development. This should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS
- Attenuation storage volumes required to reduce post-development discharge rates to greenfield rates should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS
- 'CC' refers to climate change allowance from the current Environment Agency guidance.
- An operation and maintenance strategy for proposed SuDS measures should be submitted with the Planning Application and include the details set out in section 32.2 of CIRIA C753 The SuDS Manual. The manual should be site-specific and not directly reproduce parts of The SuDS Manual.
- Other useful sources of guidance are:
  - Guidance for SuDS in Bromley
  - The London Plan Sustainable Design and Construction SPG
  - DEFRA non-statutory technical standards for sustainable drainage
  - Environment Agency climate change guidance
  - CIRIA C753 The SuDS Manual
  - Bromley SFRA

GREATERLONDONAUTHORITY

1. Project & Site Details		
	Project / Site Name (including sub-catchment / stage / phase where appropriate)	133 Baston Road, Bromley, Kent BR2 7AB
	Address & post code	133 Baston Road, Bromley, Kent BR2 7AB
	OS Grid ref. (Easting, Northing)	E 540848
		N 165730
	LPA reference (if applicable)	
	Brief description of proposed work	Demolition of existing building and erection of 5 residential units
	Total site Area	5345 m^2
	Total existing impervious area	2157 m^2
	Total proposed impervious area	2075 m^2
	Is the site in a surface water flood risk catchment (ref. local Surface Water Management Plan)?	No
	Existing drainage connection type and location	below ground piped drainage
	Designer Name	Christian Maheshe
	Designer Position	Senior Civil Engineer
	Designer Company	Monson Engineering Ltd

2. Proposed Discharge Arrangements			
	2a. Infiltration Feasibility		
	Superficial geology classification	N/A	
	Bedrock geology classification	Harwich Formation - Sand and gravel	
	Site infiltration rate	2.70 x 10-5 m/s TBC	
	Depth to groundwater level	TBC	
	Is infiltration feasible?	Yes - Based on geology and Baston School	
	2b. Drainage Hierarchy		
		Feasible (Y/N)	*Proposed (Y/N)*
	1 store rainwater for later use	Y	Y
	2 use infiltration techniques, such as porous surfaces in non-clay areas	Y	Y
	3 attenuate rainwater in ponds or open water features for gradual release	Y	N
	4 attenuate rainwater by storing in tanks or sealed water features for gradual release	Y	Y
	5 discharge rainwater direct to a watercourse	N	N
	6 discharge rainwater to a surface water sewer/drain	N	N
	7 discharge rainwater to the combined sewer.	N	N
	2c. Proposed Discharge Details		
	Proposed discharge location	Into ground along access road, and in private gardens	
	Has the owner/regulator of the discharge location been consulted?	N/A	

3. Drainage Strategy

3a. Discharge Rates & Required Storage

	Greenfield (GF) runoff rate (l/s)	*Existing discharge rate (l/s)*	*Required storage for GF rate (m^3)*	*Proposed discharge rate (l/s)*
Qbar	0.09			
1 in 1	0.08			
1 in 30	0.21			
1 in 100	0.29			
1 in 100 + CC				
Climate change allowance used		40%		
3b. Principal Method of Flow Control		N/A		

3c. Proposed SuDS Measures

	Catchment area (m^2)	*Plan area (m^2)*	*Storage vol. (m^3)*
Rainwater harvesting	0		0
Infiltration systems	1921.3		0
Green roofs	0	0	0
Blue roofs	0	0	0
Filter strips	0	0	0
Filter drains	0	0	0
Bioretention / tree pits	0	0	0
Pervious pavements	153.7	0	0
Swales	0	0	0
Basins/ponds	0	0	0
Attenuation tanks	0		0
Total	**0**	**0**	**0**

4. Supporting Information

4a. Discharge & Drainage Strategy	*Page/section of drainage report*
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	To be confirmed at detailed design stage
Drainage hierarchy (2b)	See Drainage Strategy Report
Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	See Drainage Strategy Report Thames Water Sewer Records
Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	See Drainage Strategy Report
Proposed SuDS measures & specifications (3b)	See Drainage Strategy Report
4b. Other Supporting Details	*Page/section of drainage report*
Detailed Development Layout	Subject to detailed design
Detailed drainage design drawings, including exceedance flow routes	Subject to detailed design
Detailed landscaping plans	Subject to detailed design
Maintenance strategy	See Drainage Strategy Report
Demonstration of how the proposed SuDS measures improve:	See Drainage Strategy Report
a) water quality of the runoff?	Block Paving, raingardens
b) biodiversity?	
c) amenity?	Rain gardens