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) planning policy.

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 for each item.

Policy

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

1. London Borough of Hillingdon Local Plan policies EM 6 and DMEI 10
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:
  - London Borough of Hillingdon sustainable drainage requirements
  - 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

1. Project & Site Details

Project / Site Name (including sub-catchment / stage / phase where appropriate)	Former Regal Cinema
Address & post code	Former Regal Cinema, 233 High Street, Uxbridge, UB8 1LD
OS Grid ref. (Easting, Northing)	E 505876
	N 183968
LPA reference (if applicable)	Pre-app ref 3638//PRC/2024/208
Brief description of proposed work	Change of use of the listed building to a banqueting suite and new four storey hotel
Total site Area	3224 m^2
Total existing impervious area	3224 m^2
Total proposed impervious area	3156 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	
Designer Name	Mark Hamilton
Designer Position	Graduate Civil Engineer
Designer Company	Nimbus Engineering Consultants

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	1.7			
1 in 1	23.8	23.8	54.1	1.7
1 in 30	58.1	58.1	54.1	1.7
1 in 100	75.5	75.5	54.1	1.7
1 in 100 + CC			54.1	1.7
Climate change allowance used		40%		

3b. Principal Method of Flow Control	25mm Orifice Flow Control

3c. Proposed SuDS Measures

	Catchment area (m^2)	*Plan area (m^3)*	*Storage vol. (m^3)*
Rainwater harvesting	TBC		1.5
Infiltration systems	0		0
Green roofs	222	222	0
Blue roofs	0	222	19.9
Filter strips	0	0	0
Filter drains	0	0	0
Bioretention / tree pits	0	0	0
Pervious pavements	0	266	0
Swales	0	0	0
Basins/ponds	0	0	0
Attenuation tanks	784		34.2
Total	**1006**	**710**	**55.6**

2. Proposed Discharge Arrangements

2a. Infiltration Feasibility

Superficial geology classification	Langley Silt Member
Bedrock geology classification	London Clay Formation
Site infiltration rate	m/s
Depth to groundwater level	m below ground level
Is infiltration feasible?	No.

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	N	N
3 attenuate rainwater in ponds or open water features for gradual release	N	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	Y	Y
7 discharge rainwater to the combined sewer.	N	N

2c. Proposed Discharge Details

Proposed discharge location	Existing TW SW Sewer in High Street
Has the owner/regulator of the discharge location been consulted?	No.

4. Supporting Information

4a. Discharge & Drainage Strategy	*Page/section of drainage report*
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	C3783-R1: Section 1.4
Drainage hierarchy (2b)	C3783-R1: Section 5
Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	C3783-R1: Section 6
Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	C3783-R1: Section 6/Appendix B
Proposed SuDS measures & specifications (3b)	C3783-R1: Section 6/Appendix A

4b. Other Supporting Details	*Page/section of drainage report*
Detailed Development Layout	C3783-R1: Appendix A - C3565-03
Detailed drainage design drawings, including exceedance flow routes	C3783-R1: Appendix A
Detailed landscaping plans	
Maintenance strategy	C3783-R1: Section 7/Appendix A
Demonstration of how the proposed SuDS measures improve:	
a) water quality of the runoff?	C3783-R1: Section 5/6
b) biodiversity?	C3783-R1: Section 5/6
c) amenity?	C3783-R1: Section 5/6