Surface Water Drainage Proforma

West Sussex County Council (WSCC) as Lead Local Flood Authority recommends this proforma is completed and submitted to support any planning application for a major development. The information contained in this form will be used by WSCC officers in their role as 'statutory consultee' on surface water drainage. The proforma should accompany the site-specific Flood Risk Assessment and Drainage Strategy submitted as part of the planning application.

1. Site Details

No.	Requirement	Answer	Application Type
1.1	Address including postcode	Eastmere stables, Eastergate Lane, Eastergate, West Sussex PO20 3SJ.	Outline & Full
1.2	OS grid reference (easting and northing)	E 495217 N 106198	Outline & Full
1.3	Planning application reference	NA	Outline & Full
1.4	Total site area (hectares)	0.71ha	Outline & Full
1.5	Pre-development use	Open field with some areas of hardstanding	Outline & Full
1.6	Proposed design life	The developmental proposals are for 9 residential units which have a minimum design life of 100years. However, the design life of the proposed permeable paving is 25 years	Outline & Full
1.7	Have agreements in principle for discharge been provided (where applicable)? (YES/~~NO~~) Infiltration is the proposed method of discharge		Outline & Full
1.8	Topographic Survey Plan showing existing site layout, site levels and drainage system	See Appendix B	Outline & Full

2. Discharge Hierarchy/Methods of Discharge[1]

No.	Requirement	Answer	Application Type
2.1	Store rainwater for later use (reuse) (YES/NO)	Yes - Water Butts	Full
2.2	Infiltration techniques such as soakaways, permeable paving, etc (YES/NO)	Yes - soakaways and permeable paving	Outline & Full
2.3	Hybrid (YES/NO)	No - only infiltration techniques	Outline & Full

[1] Runoff may be discharged via one or multiple methods.

No.	Requirement	Answer	Application Type
2.4	Attenuation with restricted discharge to watercourse (YES/NO)	No	Outline & Full
2.5	Attenuation with restricted discharge to surface water sewer (YES/NO)	No	Outline & Full
2.6	Attenuation with restricted discharge to combined sewer (YES/NO)	No	Outline & Full

3. Calculation Inputs

No.	Requirement	Answer	Application Type
3.1	Area within site which is drained by SuDS[2] (hectares)	0.295 Ha	Outline & Full
3.2	Impermeable area drained pre-development[3] (hectares)	0 Ha	Outline & Full
3.3	Impermeable area drained post-development[3] (hectares)	0.295 Ha	Outline & Full
3.4	Urban Creep (hectares)	10% 0.325 Ha	Outline & Full
3.5	Climate change factor applied (1 in 30 and 1 in 100) (percentage)	1 in 30 - 40% 1 in 100 - 45%	Outline & Full

4. Infiltration Feasibility/Ground Investigations

No.	Requirement	Answer	Application Type
4.1	Has winter groundwater monitoring and infiltration been undertaken? (YES/NO)	Yes - Appendix E	Outline & Full
4.2	Period of winter groundwater monitoring (from/to)	September 2022 to April 2023	Outline & Full
4.3	Depth to highest recorded groundwater level (mAOD)	1.7m below ground level	Full
4.4	Infiltration rate	The infiltration results demonstrate that infiltration varies across the site from 1.329 x 10-3 m/s to 6.797 x 10-5 m/s.	Outline & Full

[2] Impermeable area should be measured pre and post development. Impermeable surfaces include roofs, pavements, driveways and paths, where runoff is conveyed to the drainage system.

[3] 10% Urban Creep should be added to the volumes required for storage and not increase discharge rates.

No.	Requirement	Answer	Application Type
4.5	Depth of infiltration structure (mAOD)	14.9 m AOD	Full
4.6	Safety factor used for sizing infiltration storage	2	Outline & Full

5. Calculation Outputs: Greenfield Runoff Rates[4]

No.	Requirement	Answer	Application Type
5.1	Qbar (l/s)	0.13 l/s	Outline & Full
5.2	1 in 1 year rainfall (l/s)	0.11 l/s	Outline & Full
5.3	1 in 30 year rainfall (l/s)	0.31 l/s	Outline & Full
5.4	1 in 100 year rainfall (l/s)	0.43 l/s	Outline & Full

6. Calculation Outputs: Brownfield Runoff Rates (including Urban Creep) (if applicable)

No.	Requirement	Answer	Application Type
6.1	1 in 1 year rainfall (l/s)	NA - using infiltration	Outline & Full
6.2	1 in 30 year rainfall (l/s)		Outline & Full
6.3	1 in 100 year rainfall (l/s)		Outline & Full

7. Calculation Outputs: Volume Control/Infiltration Provision

No.	Requirement	Answer	Application Type
7.1	Infiltration (m^3)	762.5 m3	Outline & Full
7.2	Attenuation (m^3)	730 m2	Outline & Full
7.3	Separate volume designated as long-term storage[5] (m^3)		Full
7.4	Total volume control (sum of inputs for 7.1 to 7.3) (m^3)		Full

[4] Flows within long term storage areas should be infiltrated to the ground or discharged at low flow rate of maximum 2 litres per second per hectare (l/s/ha).

[5] In calculations and for the avoidance of doubt FEH shall be used FSR is not acceptable, and CV values must equal 1.

8. Calculation Outputs: Attenuation/Restricted Discharge

No.	Requirement		Answer	Application Type
8.1	Proposed discharge rate (critical storm)	1 in 1 (100%) AEP (m/s)		Outline & Full
		1 in 30 (3.33%) AEP (m/s)		Outline & Full
		1 in 30 (3.33%) AEP plus climate change (m/s)		Outline & Full
		1 in 100 (1%) AEP (m/s)		Outline & Full
		1 in 100 (1%) AEP plus climate change (m/s)		Outline & Full
8.2	Calculations show critical storm durations (both by max height and max discharge) for 1 in 1, 1 in 30, 1 in 30 plus climate change, 1 in 100 and 1 in 100 year plus climate change allowance can be accommodated on site (YES/NO)		Yes Appendix L	Outline & Full
8.3	Has treatment of potential contaminants been considered? (YES/NO)		Yes see Chapter 6	Outline & Full
8.4	Demonstration of source control features with substantive evidence why these cannot be used if not (YES/NO)		Yes see Chapter 6	Full
8.5	If discharging into a watercourse, piped system or the sea, has the proposed drainage network been modelled against predicted top water levels for the 1 in 100 year storm event plus climate change allowance, within the existing system? (YES/NO)		Yes see Chapter 6	Full

9. Other Supporting Details

No.	Requirement	Answer	Application Type
9.1	Plan detailing location of groundwater monitoring and infiltration testing	Appendix E	Outline & Full
9.2	Detailed drainage design layout	Appendix K	Full
9.3	Maintenance strategy	Chapter 7	Full

No.	Requirement	Answer	Application Type
9.4	Detailed development layout	Appendix K	Full
9.5	Impermeable area plan	Appendix J	Full
9.6	Phasing plan?	NA	Full
9.7	If ground levels are being raised over 300mm above existing levels and is unavoidable, have detailed plans been provided, together with drainage proposals, to address any potential drainage related issues?		Full

The above form should be completed using evidence from information which should be appended to this form. The information being submitted should be proportionate to the site conditions, flood risks and magnitude of development. It should serve as a summary of the drainage proposals and should clearly show that the proposed discharge rate and volume as a result of development will not be increasing. Where there is an increase in discharge rate or volume, then the relevant section of this form must be completed with clear evidence demonstrating how the requirements will be met.

This form is completed using factual information and can be used as a summary of the surface water drainage strategy on this site.

Form completed by	Victoria Berg Holdo
Qualification of person responsible for signing off this proforma	BENG, MSC, DIC MCIWEM
Company	Motion
On behalf of (client's details)	
Date	11th September 2024