

DETAILED DRAINAGE DESIGN CHECKLIST – CONDITION DISCHARGE STAGE

Checklist for Applicants and Agents (Aligned with Defra June 2025 National standards for sustainable drainage systems (SuDS) and CIRIA SuDS Manual C753)

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PURPOSE OF THIS CHECKLIST

This checklist supports applicants, agents, and drainage engineers in preparing condition discharge submissions to Mid Sussex District Council (MSDC) for surface water and foul drainage schemes. It is intended to ensure all submissions are:

- Technically complete and policy compliant
- Aligned with the National standards for sustainable drainage systems (SuDS) (Defra, June 2025)
- Aligned with the CIRIA SuDS Manual (C753)
- Consistent with West Sussex LLFA Policy and EA Climate Change Guidance

All drainage strategies and condition discharge submissions must follow the MSDC Detailed Drainage Design Technical Summary. This technical summary sets out the specific local implementation of national policy and SuDS standards, and defines MSDC's minimum expectations for buildability, hydraulic performance, water quality treatment, biodiversity, and long-term maintenance.

This checklist should accompany all formal submissions to discharge drainage conditions. It is designed to reflect the minimum technical content expected by MSDC. Where requirements are not met or are only partially addressed, this must be clearly justified within the submission.

Applicants are strongly advised to read this Checklist and accompanying Detailed Drainage Design Technical Summary guidance in full before preparing condition discharge submissions. Early compliance with these requirements will reduce risk of re-submission or refusal.

GENERAL GUIDANCE FOR APPLICANTS

This checklist is intended to support the discharge of post-permission drainage conditions. It does not replace validation guidance at application stage but should be used where conditions state:

- *"No development shall commence until a detailed surface water drainage scheme..."*
- *"The development hereby permitted shall not be commenced until details of the disposal of foul and surface water..."*
- Or similar wording requiring drainage design to be agreed prior to construction.

All submissions must demonstrate compliance with relevant drainage standards and be tailored to the specifics of the site, its constraints, and the proposed development.

Surface Water

Surface water drainage strategies must show how runoff will be managed in a safe, sustainable, and policy-compliant manner. In line with the MSDC Detailed Drainage Design Technical Summary, designs should:

- Demonstrate compliance with the drainage hierarchy, with priority given to infiltration-based solutions
- Include hydraulic calculations based on the critical storm duration for the 1 in 30 and 1 in 100-year events, with appropriate climate change uplift applied to rainfall intensity in accordance with the latest Environment Agency guidance
- Apply flow and volume control measures using FEH rainfall data, avoiding use of outdated methods such as FSR
- Use the Simple Index Approach to assess and provide appropriate water quality treatment
- Maximise amenity and biodiversity through the use of above-ground, vegetated SuDS features where feasible
- Provide a detailed layout showing catchments, flow paths, SuDS components, levels, and exceedance routing
- Include a clear maintenance and management plan, including named responsible party and legal mechanism
- Avoid siting SuDS components (e.g. basins, permeable paving) within flood zones or mapped surface water risk areas unless resilience under flood conditions can be clearly demonstrated

Submissions must be realistic and buildable. MSDC will not accept assumptions or data that do not reflect current best practice.

Foul Water

Applicants must provide a fully detailed foul drainage strategy that ensures effective and lawful discharge of wastewater from the site. The strategy must:

- Prioritise connection to the public sewer wherever viable
- Include evidence from the sewerage undertaker confirming availability or constraints to connection
- Where non-mains systems are proposed, provide justification for infeasibility of a mains connection and demonstrate full compliance with the General Binding Rules or applicable EA permit requirements
- Where an existing non-mains foul system (e.g. septic tank) is to be retained, include documented evidence that the system complies with the current General Binding Rules and any required discharge consents
- If the existing system is non-compliant, submit design proposals for an upgrade or replacement as part of the condition discharge submission

Foul water designs must also be supported by detailed layout plans, flow calculations, and where applicable, pumping station specifications.

Application Stage Best Practice

Applicants who wish to avoid pre-commencement drainage conditions altogether are strongly encouraged to follow this checklist and the MSDC Detailed Drainage Design Technical Summary at planning application stage.

Providing full drainage details with the initial submission increases the likelihood that conditions can be avoided, and allows drainage issues to be resolved earlier in the design process. This proactive approach promotes confidence in the deliverability of the drainage strategy and minimises delays later in the planning process.

PART 1 – SURFACE WATER DRAINAGE DESIGN CHECKLIST

Requirement	Summary of Expectation	Summary	Reference (Drawing / Report Section)
For all strategies			
Greenfield runoff rate (Q_{bar})	FEH method or similar approved; based on pre-development catchment	FEH	
On-site infiltration testing	BRE365-compliant tests at SuDS location/depth; safety factor applied	BRE 365	
Groundwater monitoring (if relevant)	Demonstrates seasonal high water table is >1m below base	500mm achieved	
Catchment and drainage areas	Plans show areas drained and contributing catchments for each SuDS feature	Roof and patio areas only adding to 262	sq.m
Climate change allowances	EA guidance applied to rainfall intensity	45% CC	
Urban creep allowance	10% additional impermeable area unless justified	10% UC added	
Design rainfall	Latest FEH data; FSR not accepted without justification	FEH used for area	
Cv value	1.0 applied to all impermeable surfaces	1.0 applied	
Hydraulic calculations	1 in 1, 1 in 30, 1 in 30 + CC, and 1 in 100 + CC critical storm durations; no flooding	30 year + CC used	
Flow control structures	Head-discharge curve, outlet sizing, orifice protection from blockage	n/a	
SuDS layout plan	Full drainage layout with invert levels, cover levels, flow directions, and labels	Refer drawings 100, 200 & 201	
Longitudinal and cross sections	For basins, pipes, flow controls, below-ground structures	n/a	
Exceedance flow routing	Plans show how exceedance flows are managed/safely routed	Exceedance flows to road	
Finished floor levels	FFLs at least 150mm above surrounding ground/exceedance routes	Generally except level threshold	
Water quality treatment	Simple Index Approach; mitigation index ≥ hazard index	Simple index for external car park for permeable	
Proprietary systems (if used)	Certification, design basis, and O&M provided		
SuDS details	Type, size, function, inlet/outlet, invert and cover levels, safety features	See SDA drawings 100,200 & 201	
Maintenance plan	Asset register and inspection/maintenance schedule; CIRIA Table 32.1 referenced	Indicated on drawing 100	
Maintenance party and mechanism	Legal body named; landowner, management company or adoption route clear	Hall and Woodhouse landowner	
For infiltration based strategies			
Soakaway or infiltration design	Sizing for 6-hour 1 in 100 +CC storm; half-drain time <24h	Peak volume	is at 10 hour storm
For strategies which discharge to watercourse			
Discharge to watercourse	Restricted to Q _{bar} ; outfall location and construction details provided		
Attenuation sizing	Demonstrates storage for 1 in 100 +CC event without flooding		
For strategies which discharge to sewer			
Discharge to sewer	Q _{bar} max unless sewerage undertaker agrees higher rate		
Sewer connection approval	Undertaker correspondence confirming acceptability of rate and location; S106 not required		

Attenuation sizing	<i>Demonstrates storage for 1 in 100 +CC event without flooding</i>		
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PART 2 – FOUL WATER DRAINAGE DESIGN CHECKLIST

Requirement	Summary of Expectation	Summary	Reference (Drawing / Report Section)
For all strategies			
Foul drainage layout	<i>Inverts, pipe sizes, gradients, connection points</i>	Refer SDA drawing 100	
System type	<i>Gravity or pumped; pump design and calculations if applicable</i>	Gravity system used.	
Peak flow rate	<i>Based on occupancy and discharge volume</i>	Hotel users as	British Water usage of
For strategies which discharge to sewer			
Public sewer connection	<i>Location confirmed; manhole ID and route to sewer</i>	All confirmed by survey	
Undertaker correspondence	<i>Email or letter showing awareness of proposal and preliminary approval</i>	Undertaker aware awaiting s106 approval.	
For strategies which discharge via non-mains foul system			
Non-mains foul system	<i>Justification for use; compliance with General Binding Rules</i>		
Drainage field infiltration	<i>BS6297-compliant infiltration test results provided</i>		
EA Permit	<i>Submitted or confirmed not required (e.g. for discharge to water)</i>		