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)

v2.0 issued 071125

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 (Qbar)	*FEH method or similar approved; based on pre-development catchment*		
On-site infiltration testing	*BRE365-compliant tests at SuDS location/depth; safety factor applied*		
Groundwater monitoring (if relevant)	*Demonstrates seasonal high water table is >1m below base*		
Catchment and drainage areas	*Plans show areas drained and contributing catchments for each SuDS feature*		
Climate change allowances	*EA guidance applied to rainfall intensity*		
Urban creep allowance	*10% additional impermeable area unless justified*		
Design rainfall	*Latest FEH data; FSR not accepted without justification*		
Cv value	*1.0 applied to all impermeable surfaces*		
Hydraulic calculations	*1 in 1, 1 in 30, 1 in 30 + CC, and 1 in 100 + CC critical storm durations; no flooding*		
Flow control structures	*Head-discharge curve, outlet sizing, orifice protection from blockage*		
SuDS layout plan	*Full drainage layout with invert levels, cover levels, flow directions, and labels*		
Longitudinal and cross sections	*For basins, pipes, flow controls, below-ground structures*		
Exceedance flow routing	*Plans show how exceedance flows are managed/safely routed*		
Finished floor levels	*FFLs at least 150mm above surrounding ground/exceedance routes*		
Water quality treatment	*Simple Index Approach; mitigation index ≥ hazard index*		
Proprietary systems (if used)	*Certification, design basis, and O&M provided*		
SuDS details	*Type, size, function, inlet/outlet, invert and cover levels, safety features*		
Maintenance plan	*Asset register and inspection/maintenance schedule; CIRIA Table 32.1 referenced*		
Maintenance party and mechanism	*Legal body named; landowner, management company or adoption route clear*		
For infiltration based strategies			
Soakaway or infiltration design	*Sizing for 6-hour 1 in 100 +CC storm; half-drain time <24h*		
For strategies which discharge to watercourse			
Discharge to watercourse	*Restricted to Qbar; 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	*Qbar max unless sewerage undertaker agrees higher rate*		
Sewer connection approval	*Undertaker correspondence confirming acceptability of rate and location; S106 not required*		

Attenuation sizing	*Demonstrates storage for 1 in 100 +CC event without flooding*		

PART 2 – FOUL WATER DRAINAGE DESIGN CHECKLIST

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