

Building Standards Service
Building Standards Drainage Design Guide No 6



This Design Guide **MUST** be read in conjunction with Section 3 of the Building Standards (Scotland) Regulations 2004 as amended and should be used by the Architect/Engineer for the preparation and review of the proposed drainage design **PRIOR** to submission of the Building Warrant Application to East Ayrshire Council.

Tech Standard	Description	✓
Procedures Regulations	<p>The architectural/engineering drawings must be provided to a scale not less than as detailed below: - Site Layout: - 1:500 Drainage layout: - 1:50 Internal drainage layout: - 1:50 Construction and engineering details: - 1:20 Existing and proposed site levels;</p> <p>and the accompanying specification must illustrate and clarify fully the proposed Drainage design and incorporating the design issues noted below: -</p>	
Appendix A Definitions	<p>DRAINAGE SYSTEM means the system of pipes and drains used for the drainage of a <i>building</i>, including all other fittings, appliances and equipment so used.</p> <p>GREYWATER means <i>wastewater</i> not containing faecal matter or urine.</p> <p>SITE in relation to a <i>building</i>, means the area of ground covered or to be covered by the <i>building</i>, including its <i>foundations</i>.</p> <p>SURFACE WATER means the run-off of rainwater from roofs and any paved ground surface within the <i>curtilage</i> of a <i>building</i>.</p> <p>WASTEWATER means water that is contaminated by use and normally discharged from a watercloset, shower, bath, bidet, washbasin, sink, washing machine, floor gully and similar facility and also includes rainwater when discharging in a <i>wastewater drainage system</i>.</p>	
General 0.8	The manufacturers materials, fittings and components must be specified and be suitably durable and fit for their intended use for under ground and above ground drainage.	
Environment 3.3.1	Detail the underground drainage proposals within the site to prevent the accumulation ground or floodwater to the building or adjacent building(s).	
Environment 3.5.2	Detail the underground drainage proposals where a <i>building or part thereof</i> is proposed to be erected over an existing drain, including a field drain, which is to remain active.	

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Environment 3.7.4	The designer must consult Scottish Water as to the design and location of the nearest sewer and whether the proposed sewerage system will be a combined or separate system.	
Environment 3.6.1	The designer must consult SEPA where a separate surface water drainage system is adopted and proposed outfall is to be connected to a Sustainable Urban Drainage System, water outlet, burn/river etc.	
Environment 3.7.3	Detail the proposed underground drainage system (including whether the drainage is a combined or two pipe system); all pipework connections; pipework dimensions and gradients; pipework beddings; access facilities including rodding points/access hand holes and access chambers/manholes; access chambers/manholes design sizes, disconnecting manhole position and all materials adopted.	
Environment 3.7.1	Detail the proposed sanitary pipework within the drainage system including the internal pipework sizes dimensions and gradients; trap sizes etc.	
Environment 3.7.1	Detail the proposed dimensions and positions of the rainwater pipes and gutter; rainwater traps positions (on combined drainage systems).	
Environment 3.7.1	Detail the structural protection where the new drainage pipes or existing drain pass through the proposed building.	
Environment 3.7.1	Detail the structural protection where the new drainage pipes pass below the foundation formation level or are within of the zone of influence of the foundations of the building.	
Environment 3.6.2	Paved surfaces with a surface area more than 200m ² require to be connected to a SUDS System or surface water system complying with 3.6.3 and 3.6.4 or 3.6.7.	
Environment 3.7.7	Indicate on the drainage plan the position of all Soil Vent Pipes (SVP) and Air admittance Valves (AAV) positions, along with the termination points on the relevant elevations, proximity to windows etc.	
Environment 3.7.3	Where the underground drainage system/sanitary appliances are located at an invert level below that of the public sewer and below the flood level of the <i>drainage system</i> with the possibility of surcharging full details of the pumping system is required to illustrate compliance with BS EN 12056-4: 2000.	

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Environment 3.6.8	Detail the position and design of any silt traps required to prevent silt and grit entering into the drainage system.	
Environment 3.6.4	Where a SUDS design is adopted it must be designed in accordance with the Sustainable Urban Drainage Systems: design manual for Scotland and Northern Ireland' and provide the following information: - <ul style="list-style-type: none"> • Soil infiltration rate; • Design calculations for the size of the SUDS; storage capacity, gradients, etc; • Construction design and materials adopted; • Inspection chamber location and design; • Layout design, position and proximity to buildings and the boundary; 	
Environment 3.6.3	Where a soakaway design is adopted it must be designed and constructed in accordance with BRE Digest 365 'Soakaway Design', or National annex NG.2 of BS EN 752-4: 1998 and provide the following information: - <ul style="list-style-type: none"> • Soil infiltration rate; • Design calculations for the size of the soakaway; storage capacity, gradients, etc; • Construction design and materials adopted; • Inspection chamber location and design; • Layout design, position and proximity to buildings and the boundary; 	
Environment 3.6.3	Where the rainwater from a <i>building</i> is connected to a storage container with an overflow discharging in the Sewer, SUDS system or SEPA approved outfall to a watercourse full details of the storage container design, materials, size and location is required.	
Environment 3.8.1	Where the wastewater cannot be connected to a public sewer full details are required of the proposed septic tank or private treatment works including the following information: - Septic tank or private treatment works location to buildings and boundary (Min 5.0m), tank sizes, design of sealed cover, inspection and sampling chamber position, manufacturers design specification, outlet position, specification for vehicular access to septic tank for desludging.	
Environment 3.8.5	Where an infiltration system is considered to serve the outfall from a private <i>wastewater</i> treatment plant or septic tank the suitability of the ground conditions must be assessed and percolation test carried out by a qualified engineer. Where the ground engineering assessment permits the use of an	

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	infiltration system the construction design, layout, materials and location to buildings, boundary watercourse and spring well or borehole used as a drinking water supply.	
Environment 3.12.1	The minimum number of sanitary facilities in a dwelling should be as follows: - a) 1 watercloset, or waterless closet, bath or shower and, washbasin where the <i>dwelling</i> is not more than 80 m ² total floor area b) 2 watercloset, or waterless closet, bath or shower and washbasin where the <i>dwelling</i> is greater than 80 m ² total floor area	
Environment 3.12.3	Detail the activity spaces to the accessible toilet.	
Environment 3.12.4	Toilet(s) must have access to a wash hand basin either directly or in an adjacent space.	
Environment 3.12.4	Toilet(s) must not have direct communication with any <i>room</i> or space used wholly or partly for the preparation or consumption of food.	
	Note: In addition to the above, the following applies in Non-Domestic situations	
Non Domestic 3.6.9	Where discharge into the drainage system contains silt, grit, oil, grease, the proposals should detail a silt trap or oil separator or grease trap as appropriate.	