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SCOTTISH BORDERS COUNCIL
LOCAL DEVELOPMENT PLAN
SUPPLEMENTARY PLANNING GUIDANCE
SUSTAINABLE URBAN DRAINAGE SYSTEMS



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INTRODUCTION

This document provides guidance supplementary to the Local Development Plan and commentary to support the effective implementation of Policy PMD1— Sustainability, Policy IS8 – Flooding and Policy IS9 - Waste Water Treatment Standards and Sustainable Urban Drainage. This Supplementary Planning Guidance (SPG) is a material consideration in the determination of planning applications where a Sustainable Urban Drainage System (SUDS) is required.

WHO'S THIS SUPPLEMENTARY PLANNING GUIDANCE FOR?

- Agents
- Developers
- Landscape Architects
- Urban Designers
- Planning Officers (Development Management)

PURPOSE OF THE SUPPLEMENTARY PLANNING GUIDANCE

This Supplementary Planning Guidance sets out good practice procedures for the design of SUDS, and gives reference to other documents where more detailed information can be obtained if desired. It expands current development plan policy and is primarily intended for any interested party seeking guidance on Scottish Borders Council's requirements for the design of SUDS in the region.

The SPG is intended to highlight that the disposal of surface water requires early consideration in the development process and provide guidance on the measures and opportunities available to developers to integrate sustainable surface water management into their developments. The guidance is relevant for all developments where buildings and/or hard surfaces will create run-off and provides a checklist for applicants to ensure the required level of information is submitted as early as possible in the planning application process.

This SPG primarily relates to Development Management issues although it also gives guidance on the requirements of Building Standards, Roads Planning Services, Scottish Water and Scottish Environment Protection Agency (SEPA).

CURRENT PLANNING POLICY & GUIDANCE

- **NATIONAL PLANNING FRAMEWORK 3 (NPF3)**

National Planning Framework 3 recognises that Scotland’s environment is a dynamic resource rather than a fixed asset. *“To better reflect this, more proactive and innovative environmental stewardship is required.....A planned approach to development helps strike the right balance between safeguarding assets which are irreplaceable, and facilitating change in a sustainable way”* (Paragraph 47 of NPF3).

- **SCOTTISH PLANNING POLICY (SPP)**

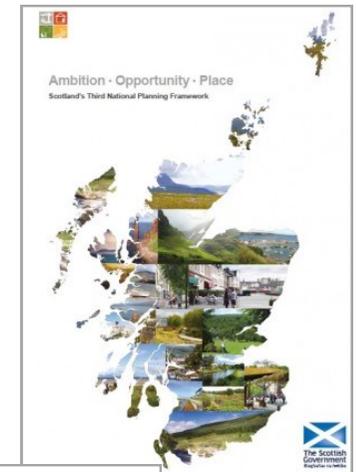
Scottish Planning Policy states that the planning system should promote the *“avoidance of increased surface water flooding through requirements for Sustainable Urban Drainage Systems (SUDS) and minimising the area of impermeable surface”* (Paragraph 255 of SPP).

Paragraph 254 of SPP states that NPF3 *“supports a catchment-scale approach to sustainable flood risk management. The spatial strategy aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Flooding can impact on people and businesses. Climate change will increase the risk of flooding in some parts of the country. Planning can play an important part in reducing the vulnerability of existing and future development to flooding.”*

- **LOCAL DEVELOPMENT PLAN (LDP)**

Policy IS8 - Flooding: The principle aim of Policy IS8 is to discourage development from taking place in areas which are, or may become, subject to flood risk. The main source of flood risk in the Borders is from rivers and coastal flooding but there is also a risk of flooding from surface water run-off. An acceptable approach which can help mitigate flood risk involves the use of SUDS. Such systems can help prevent flooding by attenuating surface water flows from new developments. Policy IS8 should be cross referenced with Policy IS9 to address flooding and pollution issues that stem from direct discharge of water into watercourses.

Policy IS9 - Waste Water Treatment Standards and Sustainable Urban Drainage: The principal aim of Policy IS9 in terms of Sustainable Urban Drainage is to address the pollution and flooding problems that stem from direct discharge of surface water into watercourses. Developers should take the land requirement implications of SUDS into account in their consideration of layout and design and consider green infrastructure and habitat benefits from SUDS. Policy IS9 intends that surface water drainage should be managed in such a way as to protect the water environment, avoid unacceptable flood risk and secure benefits in terms of biodiversity and amenity. This should include arrangements for long term management in accordance with current best practice.



LEGISLATIVE & REGULATORY REQUIREMENTS

Under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) it is a legal requirement for new developments with surface water drainage systems that are discharging to the water environment or a surface water drainage system to pass through SUDS. All reasonable steps must be taken to ensure protection of the water environment. As a minimum, all discharges of surface water require to comply with the General Binding Rules (GBRs) for surface water discharges or license (depending on the scale of the development) however there are two exceptions to this requirement:

1. Where the development is only a single dwelling;
2. Where the discharge is directly to coastal waters (this does not include transitional waters, and may exclude bathing or shellfish water)

Whilst the regulations make SUDS a legal requirement for most new developments to reduce the adverse effects that it can have on water quality, the location, design and type of SUDS are largely controlled through the planning system. SUDS can also help alleviate flooding by controlling the flow of surface water run-off into watercourses which could otherwise lead to overflow on-site or elsewhere in the catchment area.

[Planning Advice Note 61 \(Planning and Sustainable Urban Drainage Systems\)](#) and [Planning Advice Note 79 \(Water and Drainage\)](#) provide good practice advice for planners and developers.

CONVENTIONAL DRAINAGE SYSTEMS

Traditionally, removing surface water from built up areas would involve underground piping systems designed to convey water as quickly as possible from a development. This system is efficient in preventing localised flooding on a site but it does cause significant environmental and amenity issues elsewhere in the catchment area. This could include flooding downstream, erosion of watercourses, pollution of watercourses, overloading of combined sewer systems and reduced groundwater recharge.

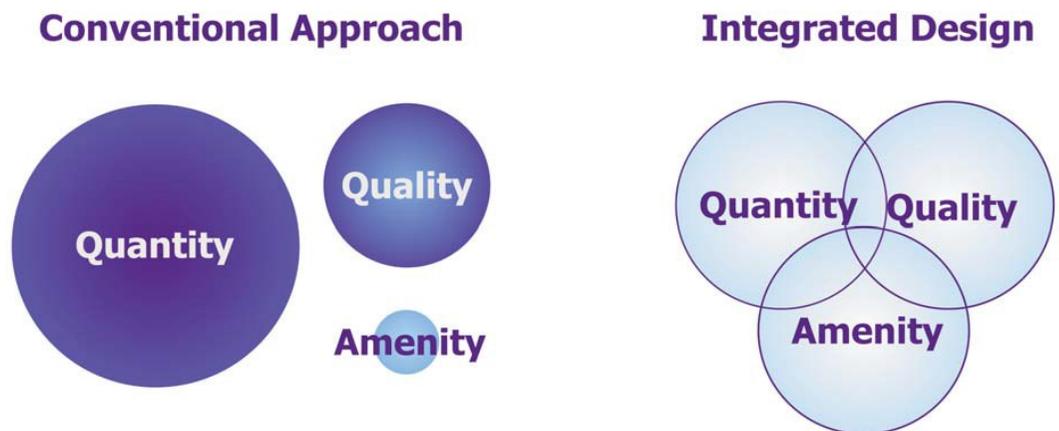


FIGURE 1: A CONVENTIONAL APPROACH TO DRAINAGE COMPARED TO AN INTEGRATED DESIGN

WHAT ARE SUSTAINABLE URBAN DRAINAGE SYSTEMS (SUDS)?

Sustainable Urban Drainage Systems provide an alternative to the traditional surface water drainage approach and seek to mimic natural drainage processes by allowing rainfall to soak into the ground or by delaying discharges to watercourses. SEPA defines SUDS as “A sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than what has been the conventional practice of routing run-off through a pipe to a watercourse”. The implementation of SUDS is expected to help secure the objectives arising from the requirements of the Flood Risk Management (Scotland) Act 2009. SUDS are the preferred solution of SEPA and Scottish Borders Council for the drainage of surface water run-off in all proposed developments including the potential use within green networks.

SUDS can be developed in line with sustainable development principles taking account of quantity, quality and amenity issues as close as possible to the source in order to create an integrated drainage system. This differs significantly from conventional drainage systems which are not designed to take account of wider issues such as down stream flooding, erosion of watercourses, pollution and amenity. SUDS are more sustainable than conventional drainage methods because they:

- help to reduce flood risk by managing run-off flow rates;
- improve water quality by treating pollution whilst protecting and enhancing the environment;
- provide an ecosystem to help provide clean drinking water and decomposition of wastes;
- are sympathetic to climate change and protect against the consequences of flooding;
- create enjoyable and high quality environments; and
- encourage biodiversity and amenity by improving habitats for wildlife and enhancing visual and quality benefits for the community.

In line with national and local policy, Scottish Borders Council encourages developers to integrate SUDS into their site layouts. A range of sustainable drainage techniques are available and more than one technique may be appropriate depending on site characteristics and constraints. It is good practice to select the most relevant technique or combination of techniques from the following SUDS hierarchy in order to achieve the best results in terms of volume and rate of surface water run-off. Scottish Borders Council also encourages early consideration of SUDS as part of the design process to ensure a high quality and efficient development. It is the responsibility of the developer to ensure the scheme meets the requirements of Scottish Borders Council, Scottish Water and SEPA.

The SUDS hierarchy also includes small scale preventative measures such as rainwater harvesting, water butts or ‘green’ vegetated roofs that reduce the amount of surface water run-off to be dealt with by drainage systems. These measures encourage rainwater recycling and retains rainwater within the property curtilage. [Greener Gardens: An Introduction to Raingardens for Developers](#) is a practical guide on incorporating small scale green infrastructure into a development.

WHAT ARE SUSTAINABLE URBAN DRAINAGE SYSTEMS? (CONTINUED)

The SUDS hierarchy generally sets out the preferred method of selecting which Sustainable Urban Drainage System is most appropriate. The hierarchy includes a range of techniques such as living roofs (green roof), basins and ponds, filter strips, swales, infiltration devices, permeable surfaces, filter drains and tanked systems. The hierarchy includes the function of each technique and grades the techniques from the most to least sustainable.

- Within the hierarchy soft SUDS such as ponds and swales are the preferred drainage systems as they mimic natural drainage and provide a number of benefits. Basins and ponds such as constructed wetlands, balancing ponds and detention basins are the preferred sustainable drainage systems on sites large enough to accommodate these techniques. These ponds collect surface water run-off from large catchment areas via pipes or a network of other SUDS techniques and provide flow attenuation and storage capacity. Basins are generally dry, except after rainfall, whereas ponds and wetlands, by contrast, retain a constant body of water. These areas can provide an opportunity to create or enhance wildlife habitats and biodiversity and provide recreational opportunities. Smaller developments may not have the physical room for ponds and basins therefore other drainage systems may be required.
- Filter strips, filter drains and swales receive water at or near where it falls (source control) and work by attenuating the flow of surface water run-off, allowing time for filtration and sedimentation. They convey water and are generally used in conjunction with other sustainable drainage techniques.
- Infiltration devices such as soakaways, trenches and basins drain water directly to the ground and can be used at source or surface water run-off can be conveyed to the infiltration device via a pipe or swale.
- Permeable surface treatments allow water to infiltrate the underlying subsoil and reduce the amount of surface water run-off. These should replace impermeable hard surfaces which channel water directly to underground piping systems often found in conventional drainage systems.

FIGURE 2: SUDS HIERARCHY

	SUDS Technique	Flood Reduction	Pollution Reduction	Landscape & Wildlife Benefit
<p>Most Sustainable</p>  <p>Least Sustainable</p>	Living roofs	✓	✓	✓
	Basins & ponds - Constructed wetlands - Balancing ponds - Detention basins - Retention ponds	✓	✓	✓
	Filter strips & swales	✓	✓	✓
	Infiltration devices - Soakaways - Infiltration trenches and basins	✓	✓	✓
	Permeable surfaces & filter drains - Gravelled areas - Solid paving block - Porous paviers	✓	✓	
	Tanked systems - Oversized tanks/pipes - Storm cells	✓		

DRAINAGE ASSESSMENTS (DA)

WHAT IS A DRAINAGE ASSESSMENT?

A Drainage Assessment (DA) is a statement of the drainage issues relevant to a particular proposal and the preferred means of providing drainage. The length and detail contained within a DA should be proportionate to the development proposal and any associated issues. Further information can be found in SEPAs [Water Assessment And Drainage Assessment Guide](#).

WHO PRODUCES A DRAINAGE ASSESSMENT?

A DA is prepared by or on behalf of the developer, demonstrating the drainage issues relevant to a proposal and the suitable means of providing drainage.

MATTERS TO BE CONSIDERED

Before a planning application is submitted the following flood risk and drainage matters should be considered:

- is the development site at risk of flooding from any source which includes fluvial, coastal, pluvial, groundwater, drainage and infrastructure failure?
- would development of the site lead to increased flood risk elsewhere?
- would safe access and egress to and from the development be possible during flood events?
- is the development likely to prevent safe access to and maintenance of bodies of water and/or flood defence measures?
- is the development design employing SUDS?
- how is natural water emanating from the site being dealt with and managed?
- how is extraneous water being dealt with?
- what is to be done during construction phases to control water contamination and limit flow rates?

SUBMITTING A DRAINAGE ASSESSMENT

- A Drainage Assessment should include both foul and surface water drainage. It should be specific to a particular proposed development and should include what impact any future development will have on the pre-development situation
- Small developments may only require a Drainage Statement however a full Drainage Assessment will be required for larger developments
- As stated within LDP Policy IS9 *Waste Water Treatment Standards and Sustainable Urban Drainage* a drainage strategy should be submitted with planning applications to include treatment and flood attenuation measures and details for the long term maintenance of any necessary features.
- As previously mentioned, it is important that drainage issues are considered at an early stage in the design process. Therefore a Drainage Statement/DIA is to be submitted with the initial planning application, whether in principle or full, for any development which requires foul or surface water drainage.
- Sewers for Scotland - 4th edition, states that “*for all developments and at an early stage before a Drainage Assessment is submitted, the developer shall consult with Scottish Water on appropriate SUD system design and the practical aspects of servicing the development*”. It also states “*the developer shall agree the Drainage Assessment (DA) with the local Planning Authority and stakeholder organisations prior to submitting a formal application of their design to Scottish Water*”.

THE SUDS MANAGEMENT TRAIN

- The SUDS Management Train uses a logical sequence of SUDS facilities and drainage techniques to mimic natural catchment processes as closely as possible. This is fundamental to designing a successful SUDS scheme as it allows various drainage techniques to reduce pollution, flow rates and volumes of water that are discharged to the water environment. Dealing with water locally reduces the quantity that has to be managed at any one point and also reduces the need for conveying the water off site.
- Scottish Borders Council requires that developers maximise control of run-off opportunities (source control) early in the management train. Local Development Plan Policy PMD1 - *Sustainability* also encourages developers to incorporate the sustainable management of waste water into proposed developments, this may be the inclusion of rainwater harvesting features such as water butts/tanks. Commercial developments may incorporate the use of green roofs to maximise treatment and promote biodiversity.

THE MANAGEMENT TRAIN COMPRISES OF FOUR STAGES:

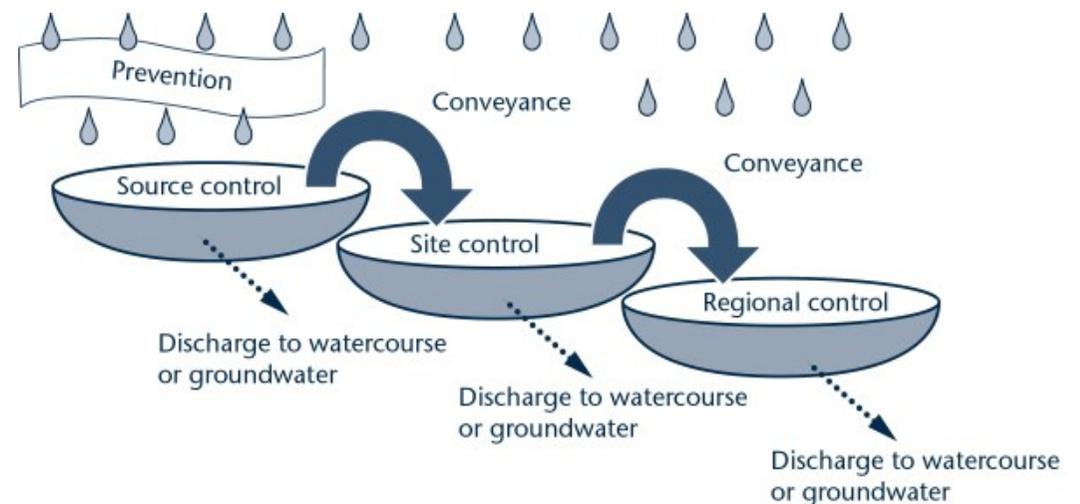
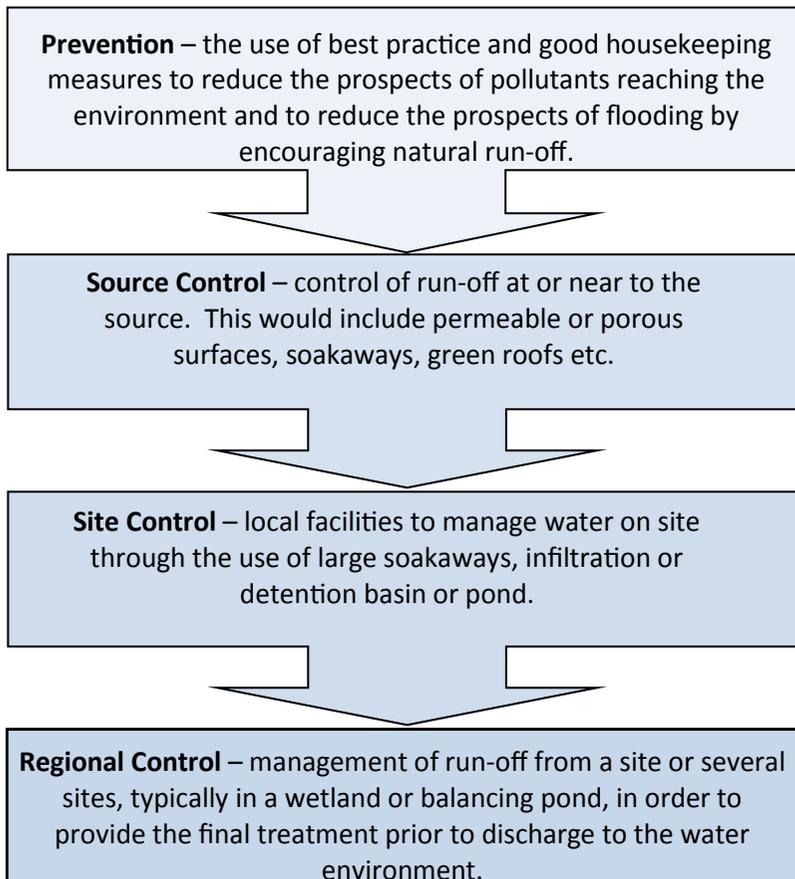


FIGURE 3: SUDS MANAGEMENT TRAIN

EXAMPLES OF SUSTAINABLE URBAN DRAINAGE SYSTEMS



PERMEABLE SURFACES ARE SUITABLE FOR PEDESTRIAN AND/OR VEHICULAR TRAFFIC, WHILE ALLOWING RAINWATER TO INFILTRATE THROUGH THE SURFACE INTO UNDERLYING LAYERS



INFILTRATION TRENCHES ARE STONE-FILLED RESERVOIRS TO WHICH STORMWATER RUN-OFF IS DIRECTED, AND FROM WHICH THE WATER GRADUALLY INFILTRATES INTO THE GROUND



DETENTION BASINS PROVIDE A STORAGE FACILITY WITHOUT PERMANENT WATER & OFTEN HAVE A GRAVEL BASE TO ENSURE GOOD DRAIN DOWN. DETENTION BASINS TEND TO BE USED FOR LARGER DEVELOPMENTS



RETENTION PONDS PROVIDE BOTH STORMWATER ATTENUATION & TREATMENT. THEY PROVIDE PERMANENT WATER STORAGE & ARE DESIGNED TO SUPPORT AQUATIC VEGETATION ALONG THEIR SHORELINE



GREEN ROOFS ABSORB AND STORE RAINWATER AND FILTERING ANY POLLUTANTS. THEY ALSO PROVIDE HABITATS FOR WILDLIFE WHILST PROVIDING INSULATION



SWALES ARE SHALLOW, BROAD AND VEGETATED CHANNELS DESIGNED TO STORE AND/OR CONVEY RUN-OFF & REMOVE POLLUTANTS

BENEFITS OF SUSTAINABLE URBAN DRAINAGE SYSTEMS

- **REDUCE FLOOD RISK:** SUDS schemes can be designed to slow water down and therefore can reduce peak flows to watercourses or sewers thereby potentially reducing the risk of flooding downstream
- **IMPROVED WATER QUALITY:** SUDS are designed to store run-off and release it slowly allowing water to soak into the ground filtering out pollutants and allowing sediments to settle by controlling the water flow
- **AMENITY:** well designed and maintained SUDS are visually attractive and can be integrated within the development landscape - however this requires all inlets, outlets and control structures to be visually acceptable. They can also provide multi-functional space for sports and recreation
- **BIODIVERSITY:** SUDS can incorporate open space and create attractive wildlife habitats to enhance biodiversity through the creation of habitats such as wetlands, ponds and planted rain gardens
- **WATER RESOURCES:** SUDS provide clean water for reuse by residents or businesses, either through an outdoor rainwater butt or internal rainwater recycling reducing water demand through rainwater harvesting techniques. Well designed SUDS replicate natural drainage patterns, including the recharge of groundwater so that base flows are maintained
- **COMMUNITY:** SUDS improve the quality and attractiveness, and in many cases the value, of private developments and the public realm by creating attractive landscape features
- **RECREATIONAL:** SUDS used for attenuation and storage can also provide multi-functional spaces to be used for sport and recreational areas
- **EDUCATION:** Many education establishments are incorporating SUDS into their grounds for use as an educational resource whilst also providing an attractive landscape setting
- **ENABLE DEVELOPMENT:** SUDS can enable development and the granting of planning consent. They can also provide savings on the overall construction and maintenance cost of drainage schemes.

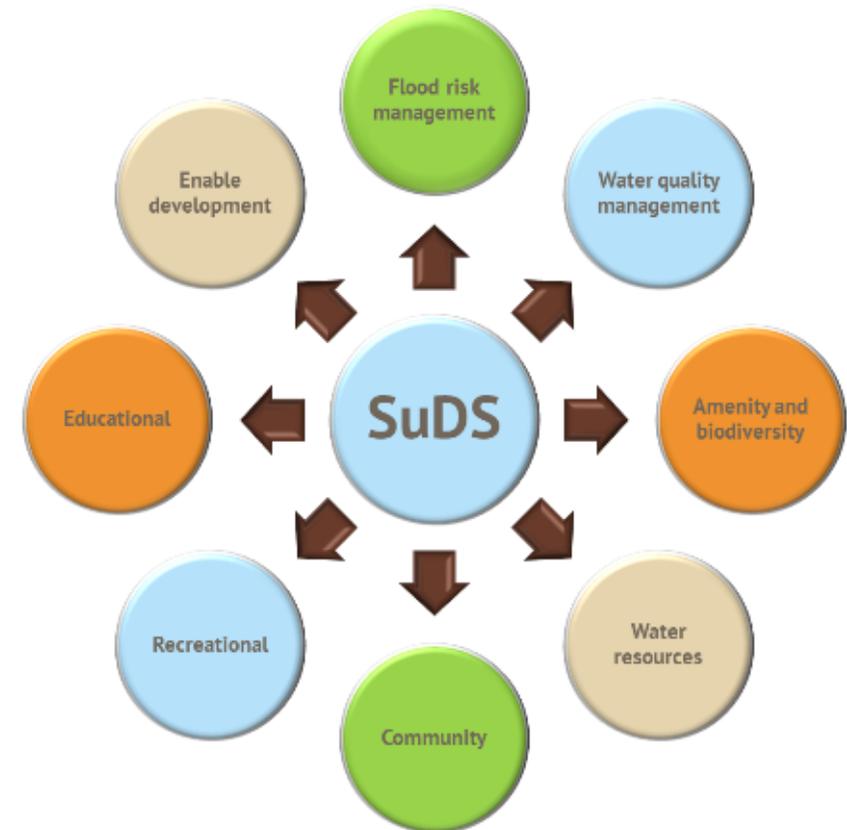


FIGURE 4: THE ASSOCIATED BENEFITS OF SUSTAINABLE URBAN DRAINAGE SYSTEMS

SUSTAINABLE URBAN DRAINAGE SYSTEMS & PLANNING

Surface and foul water drainage concepts for each site should be agreed in principle as early as possible in the planning application process via the submission of a Drainage Assessment as detailed within the [Water Assessment and Drainage Assessment Guide](#). This is in order to ensure that sustainable drainage features can be incorporated in the development where practicable. Developers should engage with Scottish Borders Council to ensure that adequate space is made available within proposed developments for SUDS schemes, as some forms of sustainable drainage may require a substantial area of land to be designated for this use.

Developers are encouraged to discuss drainage issues with Scottish Borders Council at the pre-application stage in order that the benefits to flood risk management, water quality, amenity and biodiversity are given full and proper assessment. Pre-application discussions are therefore an important stage to ensure applications are complete in terms of their information requirements. Resolving drainage issues at this stage in the application process can also help to speed up decision making when an application is submitted.

Each stage of the development planning process will require a different level of submission detail in terms of the design of the surface water management system, however the issues are relevant for all scales of development. Further guidance for developers is included in the appendices.

Surface water drainage proposals should:

- comply with current good practice, licensing and design standards for Sustainable Urban Drainage
- avoid pollution
- not increase unmanaged water run-off from the site onto neighboring land or onto the public road
- be visually sympathetic
- be safe, especially for young children
- provide for linking and creating wildlife habitat where appropriate
- be subject to long term maintenance

Where a proposed development is itself identified at risk of flooding, a Flood Risk Assessment (FRA) will be required to determine any appropriate mitigation measures required to protect the development from flooding and avoid increasing the potential for flood risk elsewhere. If deemed necessary, this assessment will be in addition to the need for a SUDS scheme being incorporated into the site.

DESIGN OF SUSTAINABLE URBAN DRAINAGE SYSTEMS

The overarching principle of SUDS design is that surface water run-off should be managed for maximum benefit. Scottish Borders Council encourage the design of SUDS to Scottish Waters current edition of [Sewers for Scotland](#). Where SUDS are not vested by Scottish Water then Ciria [The SuDS Manual \(C753\)](#) should be referred to. The following list provides a range of potential risk mitigation measures to be considered during the SUDS design process, this list is not exhaustive:

- ☑ avoid high vertical drops/headwalls;
- ☑ avoid steep slopes to ensure people and maintenance machinery can enter and leave the SUDS features safely;
- ☑ avoid fast flowing water and avoid areas that become inundated very quickly;
- ☑ fencing must be considered carefully and proportionate to the site risk level, unrestricted visibility is required to all accessible water features;
- ☑ marginal planting can create physical protection but should not obstruct visibility of the water from the surrounding area;
- ☑ safety grills should be placed on pipes where necessary;
- ☑ ensure the maximum storage depth of swales, basins and ponds is not exceeded;
- ☑ pollution and nutrients should be removed at source by designing the SUDS in accordance with the SUDS management train to avoid contamination and disease;
- ☑ where a person could fall, a fence should be considered (although this situation should be designed out wherever possible);
- ☑ a level dry bench at the top of all open structures allows stationary rest for a person and safe access – i.e. make it easy to exit;
- ☑ Signs and life-saving equipment for SUDS features should not be necessary where the conditions set out above are followed as SUDS should be considered inherently safe features in the landscape.

OTHER CONSIDERATIONS:

- Maintenance of SUDS within the boundaries or curtilage of a private property, such as a residential driveway or a supermarket car park, is the responsibility of the land owner or occupier. The Scottish Environment Protection Agency's (SEPA's) preference is for SUDS constructed outside the boundaries or curtilage of a private property to be adopted by Scottish Water, the local authority or a public body, and as such SEPA seeks a guarantee for the long term maintenance and sustainability of any SUDS implemented
- Scottish Waters current edition of [Sewers for Scotland](#) contains Scottish Water's technical specification for the design and construction of sewerage infrastructure (including foul and statutory surface water sewers) for housing and industrial/commercial developments, which is to vest in Scottish Water
- Section 7 of the Sewerage (Scotland) Act 1968 allows for the roads authority and Scottish Water to connect to each other's drainage systems where reasonable to do so. The SUDS for Roads guidance document was published in 2010 and provides a collaborative framework for a more integrated drainage approach. It is anticipated that in a growing number of circumstances Scottish Borders Council, in its role as the roads authority, may maintain part or all of the SUDS as part of a surface water management plan.

MAINTENANCE, OPERATION & ADOPTION OF SUSTAINABLE URBAN DRAINAGE SYSTEMS

The arrangements for adoption and future maintenance of the system must be considered. It is recommended that maintenance should be the responsibility of a publicly accountable body, this may require the payment of a commuted sum or a legal agreement. A privately owned SUDS is not a preferred option and where one is proposed, the applicant will usually be required to provide a maintenance regime as part of the planning process. The adopting organisation will request to discuss and approve the design before construction. Regular maintenance of all drainage features is essential in order to ensure their safe and successful operation. As with more traditional drainage systems SUDS also require effective maintenance, tables setting out the range of maintenance activities required for SUDS are included in CIRIA [The SuDS Manual \(C753\)](#).

The ongoing management and maintenance of SUDS features should not compromise the biodiversity or other amenity value of the site. Careful consideration should be given to the method and timing of such operations. For example, avoid weed cutting during bird's nesting seasons. Conversely, it should be remembered that the primary purpose of SUDS is sustainable water management.

It must be established during early discussions with the Council who will be responsible for the long term maintenance of any SUDS features. By deciding who will take long term future responsibility of the SUDS this may determine the design as there are various types of SUDS each with different adoption criteria. Information on what the each of the adoption authorities accept can be found in the supporting documents published by each authority, including SUDS for Roads (SCOTS Group and others), National Roads Guidelines (SCOTS Group) and Sewers for Scotland current edition (Scottish Water). Other advice can also be sought from the relevant authority as part of the design process.

MAINTENANCE

Consideration must be given to the following points in relation to the long term maintenance of SUDS:

- all SUDS features should incorporate a safe and secure access for maintenance;
- wherever possible, SUDS schemes, excluding source control methods such as green roofs, raingardens, permeable driveways, infiltration trenches/soakaways and water butts, should be located in the public realm to facilitate access for maintenance;
- any drainage asset that requires maintenance must have suitable vehicular access;
- access points for vehicles should be level, secure and stable;
- access must be available to all parts of a SUDS feature and at least from one side for machine work;
- any above ground SUDS feature shall be designed without steep slopes to allow for maintenance, access and egress;
- other than for ponds, the maximum depth of standing water should not exceed that stated within Sewers for Scotland current edition or Ciria [The SuDS Manual \(C753\)](#) (whichever is applicable);
- an appropriate maintenance strategy should be in place;
- in addition, maintenance staff should be educated to observe safe systems of work in order to mitigate any remaining risk associated with untreated/polluted water.

MAINTENANCE, OPERATION & ADOPTION OF SUSTAINABLE URBAN DRAINAGE SYSTEMS (CONTINUED)

OPERATION

- It is important that owners and occupiers of the site are informed about the function of their local SUDS and the level of risk posed by the feature. Good design as well as raising awareness with local residents/site users can be crucial in managing and addressing any perceived risks
- Where appropriate, warning signs should be displayed next to any hazard in order to raise risk awareness and educate users of any potential risks however care should be taken not to unduly scare users of the site
- Ideally SUDS features should be as shallow as possible with gentle side slopes and shallow water depths. Large, deep ponds with steep sides are not considered appropriate. It is vital that all SUDS features regardless of type are safe, particularly for children and appropriate safety measures identified with their risk assessment must be in place to ensure this



POORLY DESIGNED SUDS CAN RESULT IN RESTRICTED ACCESS TO RECREATION AREAS DUE TO SAFETY ISSUES. IF DESIGNED MORE APPROPRIATELY THEN FENCING WOULD NOT BE REQUIRED.



BLOCKED OR PARTIALLY BLOCKED INLET/OUTLET PIPES DUE TO A PROBLEM WITH DRAINING CAN RESULT IN FLOODING UPSTREAM AND POOR WATER QUALITY DUE TO STAGNANT WATER AND POOR SEDIMENTATION MANAGEMENT



FENCING DETRACTS FROM THE AMENITY VALUE AND THE AESTHETIC QUALITY OF FEATURES, IT ALSO ACTS AS A BARRIER TO EFFICIENT MAINTENANCE. WELL DESIGNED SUDS SHOULD GENERALLY NOT REQUIRE FENCING

ADOPTION

- Scottish Water design guidance sets out the types of SUDS which the organisation will vest and to the standard that will need to be built to in order for them to be deemed cost effective to operate and maintain. Only once SUDS are fully compliant with the standards set out by Scottish Water will they be vested
- For detailed guidance on design criteria for SUDS refer to [Sewers for Scotland current Edition](#) produced by Scottish Water and [The SuDS Manual](#) published by CIRIA.

ALTERNATIVE FORMAT/LANGUAGE

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CONTACT:

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APPENDIX 1: PLANNING PERMISSION IN PRINCIPLE CONSIDERATIONS FOR DEVELOPERS FOR DRAINAGE ASSESSMENT

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SITE ANALYSIS

1. Examine current/historic drainage patterns:

- Any local development plan allocation site requirements
- Culverted watercourses
- Water table/ aquifers
- European protected species

2. Approach Scottish Water for confirmation of sewer network capacity to accommodate:

- waste water drainage for development site
- statutory and non-statutory surface water drainage (ie; capacity to take from road)
- or sewerage systems constraints statements

3. Undertake pre and post-development run-off surface water drainage calculations that address:

- surface water drainage requirements
- treatment
- storage solutions

DESIGN CONSIDERATIONS

4. Consider linkages for green networks and other associated benefits whilst designing the SUDS layout for example:

- amenity
- biodiversity
- SEPA's river basin planning objectives
- flood risk management

5. Indicate types and the number of levels of SUDS proposed in relation to SEPA treatment requirements

6. Engage early with Scottish Borders Council and Scottish Water to determine acceptability of proposals

7. Provide evidence and/or undertake tests for suitable subsoil porosity and suitability for SUDS. If developer proposes infiltration devices, then indicate:

- ground water levels
- water table levels influence on SUDS for infiltration (NB: consider underlying aquifers)

8. Consider the need for a fluvial flood risk assessment

9. Estimate necessary land take for SUDS due to: - initial surface water calculations - necessary storage solutions

10. Provide an outline surface water management plan that ties together all drainage issues outlined above and relating to other master planning documents

APPENDIX 2: DETAILED PLANNING PERMISSION CONSIDERATIONS FOR DEVELOPERS FOR DRAINAGE ASSESSMENT

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1. Provide details for the site and development concept in relation to:

- water quantity, quality and velocity
- landscape, biodiversity and amenity

2. Consider any potential effects on related and adjacent sites:

- upstream and downstream
- on existing waste water network
- surface flows/sub catchment

3. Provide detailed drainage strategy report and plan covering:

- waste drainage and sustainable surface water drainage
- land take requirements
- final discharge points
- survey of existing habit and species with proposals to incorporate habitat creation, landscape and amenity

4. Pre and post-development run-off surface water drainage calculations that address:

- surface water drainage requirements
- treatment
- storage solutions

5. Confirm SUDS measures are suitable to the Roads Authority relating to roads drainage design

6. Consider the need for a fluvial flood risk assessment

7. Confirm future maintenance arrangements for the SUDS scheme

8. Consider safety measures of the SUDS scheme with full health and safety risk assessment for open water structures.

APPENDIX 2: DETAILED PLANNING PERMISSION CONSIDERATIONS FOR DEVELOPERS FOR DRAINAGE ASSESSMENT

(CONTINUED)

RELATED DOCUMENTS RELEVANT TO THIS SPG

SCOTTISH ENVIRONMENT PROTECTION AGENCY

Further SEPA considerations and guidance can be viewed online using the links below:

- [Advice for planning authorities on how and when to consult SEPA on development management consultations](#)
- [CAR—A Practical Guide](#). A guide providing practical advice on: The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)
- [Planning Background Paper: Water Environment](#)
- Advice on the procedures for a range of water and drainage matters: [Water Assessment and Drainage Assessment Guide](#)
- [Water Environment Hub —Interactive Mapping Tool](#)
- [Regulatory Method \(WAT-RM-08\) - Sustainable Urban Drainage Systems](#) provides guidance on the regulation of surface water discharges from built developments
- [WAT-SG-12: GBR for Surface Water Drainage Systems](#)
- [WAT-SG-75: Sector-specific Guidance - Construction Sites](#)

Contact details for SEPA: <https://www.sepa.org.uk/contact/>

SCOTTISH WATER

- Developer should apply to Scottish Water using the [Pre-Development Enquiry Form](#) with further information available on their website [Connecting to Our Network](#). Refer to [Sewers for Scotland 4th Edition](#) for drainage guidance

For further information contact Scottish Water [Contact us](#)

OTHER

- Ciria— [The SuDS Manual \(C753\)](#) Details of construction phase of SUDS are contained in Chapter 31.
- Scottish Government—[Delivering sustainable flood risk management: guidance \(2019\)](#)
- Scottish Government—[Green Infrastructure: Design and Placemaking](#)
- Scottish Government—[Surface water management planning: guidance \(2018\)](#)
- SUDS Working Party—[SUDS for Roads](#)
- Legislation: [Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011](#)

APPENDIX 3: DEVELOPMENT MANAGEMENT CONSIDERATIONS FOR SUSTAINABLE URBAN DRAINAGE SYSTEMS

APPENDIX 3: DEVELOPMENT MANAGEMENT CONSIDERATIONS FOR SUSTAINABLE URBAN DRAINAGE SYSTEMS

The level of surface water treatment required is dependant on the nature of the proposed development (for example residential or non residential), the size of development, and the environmental risk posed by the development. The environmental risk is principally determined by the type of activity being proposed (residential, industrial, etc), the available dilution, and the sensitivity of the receiving waterbody. The considerations and requirements at each stage of the planning application process is detailed below:

- **PRE-APPLICATION STAGE**

It is essential that the consideration of SUDS takes place at an early stage of the development process as this will assist with the delivery of well designed, efficient systems. Scottish Borders Council encourages early pre-application discussions between all relevant stakeholders including Scottish Water and SEPA.

- **PLANNING PERMISSION IN PRINCIPLE (PPP)**

Effective and sustainable surface water run-off management should be considered from the outset, and integrated throughout the development where appropriate. Although specific development information may be limited at this early stage, an application for planning permission in principle will still need to give consideration to, and make a commitment to, the requirements of LDP Policy IS9. This will require sufficient detail to be submitted alongside the application to enable a judgement to be taken, for example by expressing a maximum development area.

If submitting details for layout and scale as part of an outline application, the Council will expect more detailed information on the proposed form of SUDS to be provided at the Full Planning Application or Approval of Matters Specified in Conditions stage.

- **FULL PLANNING APPLICATION (FUL) OR APPROVAL OF MATTERS SPECIFIED IN CONDITIONS (AMC)**

Full planning applications will need to address the key principles included within the SUDS Supplementary Planning Guidance and conform to Local Development Plan Policy IS9—*Waste Water Treatment Standards and Sustainable Urban Drainage*. If the site has previous outline permission the details being proposed as part of the full application should be in line with previous proposals. If different, a justification should be provided to the Council setting out any differences and reasons for change. The details of the requirements for various development types are detailed in Appendix 1.

- **PLANNING CONDITIONS**

The Council will expect planning applications, whether PPP, FUL or AMC to demonstrate how SUDS will be incorporated into development proposals, and for detailed design information to be submitted at the appropriate stage. The Council will make use of conditions to secure the implementation and maintenance of SUDS, where appropriate.

APPENDIX 4: ROADS PLANNING CONSIDERATIONS FOR SUSTAINABLE URBAN DRAINAGE SYSTEMS

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PRE-APPLICATION AND PLANNING PERMISSION IN PRINCIPLE APPLICATION

- These discussions should confirm the extent of development and any SUDS proposals for initial comment
- At this stage, once the extent of development has been confirmed, it should be confirmed who the applicant proposes to be responsible for the long term maintenance of the SUDS.

DETAILED PLANNING APPLICATION

- This should include details of the SUDS proposals, their location within the development and who is to be responsible for their maintenance
- Confirmation in writing from Scottish Water should be provided at this stage, if not already submitted, as to what they propose to adopt upon satisfactory completion
- Details of the SUDS will include design information by an appropriately qualified person confirming the size and nature of the SUDS are appropriate for the level of development.

ROAD CONSTRUCTION CONSENT (RCC)

- This, in tandem with the planning process, will include details of the SUDS features proposed for the development
- It will also include any Section 7 agreements (between the Roads Authority and Scottish Water) required for the development as a consequence of either party accepting the others surface water drainage in their part of the system
- Details of the SUDS will include design information, provided by an appropriately qualified person, confirming that the size and nature of the SUDS are appropriate for the level of development
- The RCC process will also confirm if Technical Approval is required for any structures required and whether these will be publicly maintained.

SINGLE DWELLING

- Surface water run-off from any driveway should drain either straight through the drive via porous material or to a private soak-away or ground
- Subject to the approval of Scottish Water, the run-off may be tied into the existing surface water drainage associated with the dwelling.

PRIVATE ACCESS OR OTHER SMALL DEVELOPMENTS

- Surface water run-off from any driveway should drain either straight through the drive via porous material or to a private soak-away. If Scottish Water approval is obtained, it may be tied into the existing surface water drainage associated with the development. If the development is business in nature, there may be other criteria which have to be met to satisfy the requirements of Scottish Water and SEPA with regards industrial run-off.

PUBLIC ROAD OR LARGE DEVELOPMENTS

- The surface water run-off must be treated as many times as Scottish Water determine for the level and/or nature of the development. Where SUDS are required to accommodate the run-off associated with prospective public roads, these will require to form part of, and be approved via a RCC and the appropriate information and agreements will be submitted as part of that application. The form of SUDS will be determined after confirmation is provided as to the areas the SUDS are to treat and who will be responsible for their maintenance in the long term. A SUDS Agreement, as per the *National Roads Guide*, may have to be submitted and entered into depending on the level of development, as may a Section 7 Agreement.

APPENDIX 5: BUILDING STANDARDS CONSIDERATIONS FOR SUSTAINABLE URBAN DRAINAGE SYSTEMS

APPENDIX 5: BUILDING STANDARDS CONSIDERATIONS FOR SUSTAINABLE URBAN DRAINAGE SYSTEMS

Scottish Borders Council, as Building Standards authority, must be satisfied that suitable provision has been made for drainage and prevention of flood risk. Any proposed scheme should be designed and constructed to meet the Mandatory Standards for compliance with the Building (Scotland) Regulations 2004, as amended. The current building warrant application process for SUDS is detailed on the right of this page.

Any identified site specific risk of flooding to a building or its occupants should be assessed to allow sustainable design mitigation. Building site flood risk assessments should be an integral part of the design and construction process with the appraisal also considering the effects that the development may have on adjoining ground.

If the proposals are to connect the surface water drainage to an existing sewer under a building warrant application Scottish Water should be consulted. If, and other than from a single dwelling, the surface water drainage is proposed to connect into SUDS then the Scottish Environment Protection Agency (SEPA) should be consulted. The consultation response will then be checked with the relevant information submitted as part of the building warrant application.

