



Scottish Executive Environment Group

**Implementing the Water Environment and
Water Services (Scotland) Act 2003:**

Water, Sewerage and Drainage Infrastructure:
Construction Standards and Vesting Conditions
A Consultation

April 2007

CONSTRUCTION STANDARDS AND VESTING CONDITIONS

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Consultation Arrangements

The Water Environment and Water Services (Scotland) Act 2003 in its Part 2 introduced new provisions into the Water (Scotland) Act 1980 and the Sewerage (Scotland) Act 1968. These provisions deal with construction standards and vesting conditions for the adoption by Scottish Water of privately constructed water or sewerage and drainage infrastructure.

This consultation invites comments on the core standards and conditions that developers will be required to meet for water and sewerage infrastructure, including Sustainable Urban Drainage Systems (SUDS), to be connected to the public network. The consultation also seeks views on whether there is a need for regulation to ensure compliance with these standards and conditions.

We are inviting written responses to this consultation paper by 5 July 2007.

Early responses would be welcomed.

Responses received will be made available publicly unless respondents ask for their comments to remain confidential. Respondents are requested to complete the attached Consultee Information Form.

Please send your response to:

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1. Synopsis

This consultation paper sets out proposals for construction standards for water and sewerage infrastructure, with particular reference to sustainable urban drainage systems (SUDS). Where SUDS are in public spaces and the standards are satisfactory in line with ‘Sewers for Scotland 2’, they should be adopted by Scottish Water and maintained as part of the sewerage network. Such public systems should be an integral part of the SUDS provision for which several bodies are responsible.

A draft of the Sewers for Scotland 2 (SfS 2) manual is linked to this paper. Please send comments on SfS 2 to Scottish Water; a copy to the Executive would be appreciated.

2. Introduction

Scottish Water owns and maintains the public water and waste water infrastructure for Scotland. All new developments require waste water and water services and for the majority of cases this will be obtained by connecting to the public network. The Scottish Executive’s aim is to provide objective public standards that are a reference for developers, such that there is a consistent and even-handed approach for all new connections. (In the water and sewerage legislation, and in this consultation, “sewerage” includes surface water drainage.)

Developers require approval from Scottish Water to connect to its water supply and waste water networks. Scottish Water has obligations under the Water (Scotland) Act 1980 and the Sewerage (Scotland) Act 1968 which allow developers to connect to the public networks where practical and at reasonable costs. Approval is granted only when capacity is available, discharges to the water environment meet the relevant environmental regulations, and abstractions are within the limits of water use licences. It is common practice that developers construct water supply and/or sewerage facilities, including drainage, for new buildings and that they gain approval for these assets to connect to Scottish Water’s public network. Existing documentation sets out Scottish Water’s responsibility for new site infrastructure and connections, and the process of adoption of eligible assets, as well as the charges and financial contributions that may be applicable for the provision of the new infrastructure.

The Scottish Executive considers that such arrangements are an economic means of developing the water and sewerage network in Scotland, and that it is in the public interest that these arrangements should continue for water and sewerage, including sustainable urban drainage systems (SUDS) in public spaces.

Sustainable urban drainage (SUD) systems are a fairly new type of asset for Scottish Water, and SUDS are still evolving in terms of design and technical standards. The advantages of SUDS are best realised where SUD components are constructed at various stages within a development’s drainage system; there are therefore responsibilities for all parties involved in the planning and construction of SUDS as well as the statutory responsibility of Scottish Water for the drainage of surface water from private curtilages.

3. Purpose

The Scottish Executive's aim is to provide objective public standards that are a reference for developers, such that there is a consistent and even-handed approach for all new connections.

The Executive recognises that Scottish Water wishes to be assured that the asset that it is to connect and adopt will be designed and constructed to a proper and consistent standard. This should ensure that the facilities are fit for purpose in operation and that the costs of maintenance over the life of the asset are not excessive. Developers, for their part, wish to be sure that agreement with Scottish Water on the water and sewerage infrastructure will be reached early in the planning process, and that, where they construct these facilities to the set standards, they can expect that the infrastructure will be adopted by Scottish Water.

The arrangements to provide for development of the water and sewerage infrastructure and for its future maintenance should make clear what are:

- the construction standards needed to ensure that the facilities function properly (that is, are of satisfactory quality and reliability), and
- the conditions under which Scottish Water will adopt facilities constructed by others ("self-lay"), and manage and maintain the facilities.

The Executive's aims are to provide:

- protection of the water environment through encouraging sustainable drainage options
- standards for new infrastructure to ensure Scottish Water does not incur excessive costs and therefore uses customers' money efficiently
- clarity and comfort to developers that if infrastructure is built to a set standard the systems will be adopted by Scottish Water
- clarification of different stakeholders' roles and responsibilities in terms of SUDS and setting Scottish Water's responsibilities in relation to others
- policy measures which provide for urban drainage to cope with storm events and which encourage integrated surface water drainage; therefore promoting sustainability
- objective public standards for SUD systems that are a reference to developers and that ensure there is fairness between developers.

4. Legislative position

The Water Environment and Water Services (Scotland) Act 2003 ("the WEWS Act") in its Part 2 introduced new provisions into the Water (Scotland) Act 1980 ("the 1980 Act") and the Sewerage (Scotland) Act 1968 ("the 1968 Act"). The amending provisions deal with construction standards and vesting conditions for the adoption by Scottish Water of privately constructed water or sewerage, including drainage, infrastructure.

Detailed provision for the laying of water mains by persons other than Scottish Water may be made through the commencement of the relevant provisions in the 2003 Act to amend the 1980 Act to add three new sections: 23A, 23B and 23C. These provide for Scottish Water to authorise another person to lay a main and clarify the arrangements for subsequently vesting

the main (section 23A); a regulation-making power to prescribe the construction standards which a main laid by a person other than Scottish Water must meet (section 23B); and arrangements for vesting conditions between Scottish Water and the person who laid the main, including a regulation making power for Scottish Ministers, and which may include payments from either party (section 23C).

Detailed provision on construction standards, connection agreements and takeover conditions for private sewers and sewage treatment works and sustainable urban drainage (SUD) systems, are also provided for in Part 2 of the 2003 Act, which when commenced, will amend sections 3A, 8 and 12 of the 1968 Act and add three new sections: 14A (on construction standards), 14B (on design requirements for SUDS) and 14C (on vesting conditions and takeover arrangements) to the 1968 Act.

These amending provisions provide that sewers or SUD systems to be vested in Scottish Water must comply with the construction standards specified in regulations (section 14A) and in the case of SUDS also with the requirements in relation to the nature, design and layout of the system (section 14B). They also include arrangements for vesting conditions, takeover conditions and connection conditions for sewers, sewage treatment works and SUD systems (section 14C).

Section 12(3) of the 1968 Act already provides that: *The owner of any premises who proposes to connect his drains or sewers with the sewers or works of Scottish Water... shall give to Scottish Water notice of his proposals, and within 28 days of receipt by it of the notice Scottish Water may refuse permission for the connection or grant permission, subject to such conditions as it thinks fit and any such permission may in particular specify the mode and point of connection.* This clause provides Scottish Water with the powers to request that new sewerage assets must meet certain standards and also provides Scottish Water with the power to refuse permission of connection. Scottish Water sets out the standards for new sewerage infrastructure in their technical manual 'Sewers for Scotland'. Waste water treatment works are not included within the technical manual as they are more complex facilities which are negotiated on an individual basis with Scottish Water. For this reason these assets are not discussed in this consultation.

In line with Scottish Water's current approach to the different areas of water services infrastructure, this paper looks at water and sewerage separately, and then at surface water drainage specifically.

Scottish Water uses a technical manual, *Water for Scotland (WfS)*, which is currently being re-drafted, for water standards. It has also commissioned the amendment of the sewerage equivalent technical manual, *Sewers for Scotland (SfS)*. Regulations by their nature are binding, whereas the manuals prescribe standards which are intended to ensure compliance with what might otherwise be provided for in regulations. The parties to an agreement, provided they act reasonably, can apply the standards specified in the manuals in the light of particular circumstances and taking account of new or more advanced technical evidence.

Where developers build to these standards, Scottish Water will adopt the facilities and maintain them as part of the public network.

These sections in the WEWS Act, whilst confirming the responsibility of Scottish Water for public surface water drainage systems including SUDS, do not alter the other provisions of the WEWS Act or its subordinate legislation which provide for direct regulation by SEPA and which may involve a liability for Scottish Water to comply with a licence or other specific condition.

5. Proposals for legislation on construction standards

When the WEWS Act was passed in 2003, it was envisaged that there would be regulations on construction standards and vesting conditions for water and sewerage. We understand, however, that developers and Scottish Water are generally clear on the requirements for the self-lay of water and sewerage infrastructure and in particular of the construction standards and vesting requirements.

There would be difficulties in putting the contents of the technical manuals into regulations. The manuals refer to “outside” publications, such as Codes of Practice, which are not part of the general law, and they allow some degree of discretion. They go wider than construction standards, such as the attributes of the main or a pipe, and extend to the activities and processes involved in the installation of the infrastructure.

The Scottish Executive therefore sees no need at present for regulations, but the parties concerned are encouraged to agree the standards set out in the technical manuals as the basis for connection.

Scottish Water is reviewing the current technical approval documentation issued to developers. The review includes development of a technical approval certificate that will be issued to developers along with the approval letter that is currently issued. The Scottish Executive welcomes this review and trusts that this will provide developers with further clarity on the requirements for vesting water infrastructure in Scottish Water. The existing system of issuing approval letters for connection to the sewerage network will continue.

QUESTION 1. Are you content that the current approach of agreement involving approval letters should be maintained and developed? Or do you consider there is a need for Regulations on water and/or sewerage connections, and if so why?

6. SUDS

The WEWS Act makes provision explicitly for the vesting of sustainable urban drainage systems (SUD systems or SUDS).

SUD systems are a relatively new form, or series of forms, of drainage, which has considerable environmental benefits. Best practice is to address what is now often called the SUDS triangle: the slowing of flows (related to flooding), reduction of diffuse pollution, and amenity (which may include nature conservation). SUDS can play a part in a sustainable flood management strategy, as identified by the Avoidance sub group of the Flooding Issues Advisory Committee (FIAC), set up by the Scottish Executive in 2005. The Executive is committed to promoting the use of SUDS, both in public open spaces and within private

curtilages, and has given effect to this policy with the introduction of General Binding Rule 10 (d)(i) in the Controlled Activities Regulations (2005, amended in 2007).

In the WEWS Act, and thus for the purposes of the 1968 Act as amended, a SUD system is defined as a drainage system which “(a) facilitates attenuation, settlement or treatment from two or more premises (whether or not together with road water), and (b) includes one or more of the following: inlet structures, outlet structures, swales, constructed wetlands, ponds, filter trenches, attenuation tanks and detention basins (together with any associated pipes and equipment)”. S33 of the WEWS Act inserts this definition into section 59(1) of the 1968 Act.

The SUDS concept is one of working with natural processes, and this is often contrasted with heavily engineered systems. A key concept of SUDS is of the “treatment train”, whereby features are constructed at different stages on the source-pathway-receptor progression and combine to attenuate, settle and treat surface water.

This paper deals with the issue of public SUDS in their context. For SUDS to be a success in Scotland it is recognised that effective implementation must involve the co-operation of several bodies within an integrated planning framework. This issue is discussed in this paper, although it has been previously identified that there is a need for further constructive dialogue between all parties involved in SUDS; this is provided at national level by the Sustainable Urban Drainage Scottish Working Party (SUDSWP). SUDSWP is convened by SEPA. Scottish Water, developers (through Homes for Scotland) and the Scottish Executive are represented; local authorities have representation through the Society of Chief Officers for Transportation in Scotland (SCOTS).

Whereas water supply and “foul” sewerage have long been core functions of Scottish Water, and there are well-established arrangements for the adoption of such facilities, there are concerns about the vesting of SUDS.

- Scottish Water has concerns that poorly designed SUDS might have adverse effects on the rest of the drainage system for which they are responsible or that they will be committed to excessive maintenance costs; or that if the system does not function properly they may have to replace the whole asset.
- SEPA has concerns that poorly designed or constructed SUDS will be ineffective in their primary purpose of protecting the environment.
- Developers wish to have certainty that the SUD systems they construct to agreed standards will be adopted by Scottish Water and thus will function as useful components of the drainage systems managed by Scottish Water.

Scottish Water, through a firm of consultants, has commissioned a revision of the technical manual, SfS 2. The Executive does not consider that the manual can simply be put into regulations, but it would be practical for agreements between Scottish Water and developers to be based on the manual’s requirements as regards SUDS.

The environmental protection provisions under the WEWS Act (specifically GBR 10 in Controlled Activities Regulations) require the use of SUDS for new developments. Whilst this requirement can be met by the provision of public SUDS serving a development, it is better if the technology is applied as close to source as possible (for example at each property or alongside roads): source control. Where public SUDS are provided by developers as part

of a treatment train, the source control SUDS can reduce the size of, for example, a pond or basin that is to be vested in Scottish Water, and allow a more cost-effective drainage option.

Construction in Scotland is subject to the building regulations which prescribe mandatory standards, several of which control the design and installation of drainage systems within the curtilage of a building. The Scottish Building Standards Agency has a policy of continuous review of the standards and there is, at present, a Building Standards Advisory Committee Working Party in the process of reviewing the standards and guidance relating to flooding and surface water drainage.

Full details of any source control SUDS that connect directly to a public system, including drawings and calculations, together with maintenance provisions, should be supplied to Scottish Water by developers, for evaluation as indicated in Sfs 2. This should enable Scottish Water to make an overall assessment of the drainage system, and it may indicate that enhanced source control would make a public SUDS more effective and acceptable.

The Executive proposes that:

- SUDS should be constructed to good industry standards, set out in the Sewers for Scotland 2 (Sfs 2) manual, which is based on the same body of knowledge as is in the new SUDS Manual (C697) published by CIRIA.
- They should be designed and constructed to be cost-effective.
- If constructed in this way, where drainage is the responsibility of Scottish Water, public SUDS should be vested in Scottish Water.
- Details of any source control SUDS should be supplied to Scottish Water by developers, for evaluation, as indicated in Sfs 2, of the whole drainage system.

QUESTION 2. Do you agree with this statement of policy? If not, what alternative would you propose? Are there any modifications or additions you would like to see?

QUESTION 3. Do you think the proposal for assessment of source control SUDS is likely to be an effective means of ensuring that the components of a drainage scheme which will not be vested (eg source control) are adequate?

The SUDS philosophy is to mimic natural drainage through the treatment train, a series of features from source control to receptor. Scottish Water is responsible for sewerage and thus for SUDS in public spaces. However, the SUD systems for which Scottish Water will be responsible will be affected by drainage facilities elsewhere. For instance, if source control is practised, it may be possible to limit the size of pond or other SUDS feature that is needed downstream. Similarly if there is an element of pre-treatment in the drainage from a road, there will be less of a diffuse pollution load in the public drainage facility. The Executive re-affirms that it is important that all parties responsible should contribute to the development of the SUDS treatment train.

Previous advice has been that the parties concerned in a SUDS development should meet at an early stage and agree on the form of SUDS that should be constructed as part of a development. Agreement is important, but it can be time-consuming, and the Executive would like to see standard procedures used to improve administrative efficiency.

Scottish Water is planning to bring the approval of SUDS designs and the vesting of these assets into their existing process for approval of sewerage infrastructure. The process entails issuing an approval letter, which covers both foul water and surface water sewerage. It is proposed that this be expanded to include SUDS systems. Developers would not need, and presumably would not wish to have, separate discussions for foul sewerage and surface water sewerage and SUDS. The Executive considers such an arrangement should be the standard situation: a developer designs (and constructs) SUDS for a new development in accordance with standards, normally those set out in SFS 2, which are consistent with the CIRIA SUDS Manual (C697).

QUESTION 4. Do you consider that this proposal should be regarded as the standard situation and that it gives effect to the purpose of the provisions on SUDS in the WEWS Act? If not, what alternative would you propose to implement the intention in the Act's provision that arrangements should be made for the development and the ongoing maintenance of SUD systems?

7. Objectives of and criteria for SUD systems

The Scottish Executive considers that it could be valuable to have a set of objectives incorporating the standards which SUD systems in public spaces should meet if they are to be adopted by Scottish Water.

The question to be considered here is whether there should be SUDS Regulations. These could provide that the construction standards and construction requirements for all SUD systems should satisfy the following criteria:

- the hydraulic capacity shall be sufficient to contain the run-off volume of water for a 1 in 30 year storm.
- the SUD system shall be designed so that in more extreme events (than a storm of a 30 year return period) any escape of water shall have a designated route and not cause flooding of buildings, and there shall be no flooding of neighbouring buildings (including cellars) as a result of the new SUD system.
- Any pond or series of ponds shall be constructed to have a storage capacity of at least $1 V_t$ [Treatment volume] and shall be sufficient to enable the natural treatment of surface water to take place.
- Any pond or series of ponds or basins shall include a sedimentation forebay to trap incoming sediments.
- Soil embankments shall be stabilised with vegetation cover, using native plants.
- Scottish Water shall have reasonable access to any part of the SUD system, including by agreement to land which is privately owned, to enable them to carry out repair or other maintenance work.

The governing legislation, the 1968 Act as amended, does not restrict the type of drainage system for which Scottish Water is responsible. The SfS 2 manual identifies detention basins and retention ponds as being effective SUD systems. This does not preclude the adoption of other types of system, but the onus is on developers to show that any other proposed system is the correct solution for that site and will help control the flow of water and mitigate diffuse pollution without undue risks. Any alternative design would also be subject to SEPA approval.

The treatment volume, which is a prime criterion for the size of a retention pond, is based on the area of the surface that is drained and on other characteristics such as soil type and rainfall that may be expected in a defined storm. It should be calculated by a recognised method. In some circumstances, such as where an industrial estate is drained the pond may need to be as much as 3 or 4 Vt to bring about good water quality. The regulatory body with the remit to ensure the type of SUDS is appropriate for protection of the environment under WEWS Act is SEPA, and developers and Scottish Water should be guided by SEPA, especially in these circumstances.

In the Scottish Executive's view, these "high level" standards should give an assurance to developers that if they comply with them, and with any provision in the agreement (approval letter) entered into between them and Scottish Water, the SUD system will be vested in Scottish Water. All systems would be subject to the standards in the proposed SfS 2 on appropriate construction requirements and to an examination of suitability for the particular site. It would be advantageous if approval or agreement in principle that a development's SUDS will be vested in Scottish Water were to be reached at an early stage.

Approval letters would constitute agreements between Scottish Water and developers individually. Agreements have the capacity to achieve the objectives listed above without the need for legislation. There is the necessity to ensure that all parties are confident that the conditions of such agreements are robust, including the environmental regulator SEPA, as that Agency may require. Agreements would also mean developers would be given assurances at an early stage, and this would ensure that developers could build with confidence of vesting on completion. Scottish Water would also be in a position to expect that their future asset would be fit for purpose. Agreements can be expected to deliver the benefits that regulations would offer, and have the advantage of being adaptable to specific circumstances by agreement.

The Executive has considered criteria for public SUDS, such as: not cause flooding, provide 1 Vt in a pond or series of ponds, not be dangerous, provide a sedimentation forebay or equivalent sedimentation feature etc. It would be feasible to make these criteria statutory requirements, but the Executive's view is that they should be given as guidance; it is not necessary to set them in legislation.

QUESTION 5. Are you content with these criteria and that they should be adopted through SfS 2? If not, what alternatives would you propose? Do you consider that they, or any of them, should be statutory? Is there a need to have regulations to apply these criteria?

8. Integrated drainage planning: drainage from roads

In many situations the best results in terms of drainage and the prevention of diffuse pollution will require the co-operation of all the parties involved, including source control in the curtilage of private property within the development. In these cases developers should use their best endeavours to include appropriate source control measures and be prepared to consider representations to this effect made by Scottish Water or SEPA. There is now a substantial body of evidence available to local authorities, who have a key role as the planning authorities, of the desirability of such source control and of pre-treatment within curtilages.

If a coherent approach to SUDS is applied, Scottish Water may make agreements with individual local authorities. Many developments will involve roads which will be built by or adopted by local authorities. The Executive recognises the desirability of SUDS features, such as permeable paving, for roads in residential areas. Where there is reason to consider that there may be a significant amount of diffuse pollution from a road, it should be standard practice for a “pre-treatment” feature, such as a swale or source control filter drain, or combination of features, to be constructed. In normal situations provision should be made for the drainage from roads to join that from other parts of the development, for which SW will be responsible, thus avoiding a “3-pipe” drainage solution. Scottish Water and the roads authority should be expected to make agreements under section 7 of the Sewerage (Scotland) Act 1968 to make the most cost-effective arrangements for drainage from the site.

The Scottish Executive notes concerns that the implementation of integrated drainage has not progressed as quickly as it should have. The reasons may include:

- Leadership/responsibility
- The challenges of collaboration and partnership working
- Stakeholder engagement
- Guidance/information issues

The Executive recommends that all parties take these issues into consideration and hopes that resolving them will provide opportunities to develop plans and effective solutions to tackle water quality and drainage issues. Improved planning may involve:

- Publicising current and developing programmes
- Identify what needs to be done.
- Establish ways in which these actions may be put into practice.

QUESTION 6. Are you content that there should be agreements between Scottish Water and local authorities on road drainage? Are there any reasons why or circumstances in which the parties should not enter into agreements of the type prescribed in section 7 of the Sewerage (Scotland) Act 1968?

At the conference on Sustainability in Roads Drainage Systems, held in Edinburgh in November 2006, there was a strong welcome for the use of SUDS techniques in road construction, for instance with the M74 and other trunk roads. But for the smaller road and street networks, it was clear that more detailed guidance was needed. The Society of Chief Officers for Transportation in Scotland (SCOTS) proposes to review the issues with a view to the development of guidance for roads authorities (i.e. the local councils rather than Transport Scotland which has responsibility for trunk roads and motorways).

QUESTION 7. Do you consider that there is a need to prepare guidance specifically for local authorities on the use of SUDS in relation to roads?

9. Non-standard situations

It may be impracticable or unduly expensive to apply the SFS 2 standards in some situations, but it may still be desirable that there be SUDS features which would be vested in Scottish Water. There is nothing in the 1968 Act as amended by the WEWS Act which would preclude SW continuing to be the drainage authority in non-standard situations. SEPA might advise that a retention pond would need to be more than 1 Vt to deal with diffuse pollution risks in a particular situation. Examples may include:

- industrial/commercial premises; or
- very large, phased or multiple developments, which may need to be assessed on an individual basis and have additional standards and SUDS types to those set out in SFS 2.

These situations are likely to require a surface water management plan to be developed by the developer(s), Scottish Water, SEPA, the local authority and any other stakeholders.

In addition there may be other non-standard situations for small developments where there may not be a SUDS feature that would be vested in Scottish Water. Examples may include:

- small developments in rural locations where a pond or sometimes even a basin may not be the best drainage option; or
- small urban in-fill developments

In such situations the onus will be on the developer to show that the SUDS proposed, which may include proprietary products, will be effective for the purpose and will not entail undue risks or undue future operational costs.

QUESTION 8. Do you agree that these are the main categories of non-standard situation? And that in appropriate situations the parties concerned should reach a bespoke agreement on vesting (on the basis that SW will develop standard conditions for all other agreements)?

QUESTION 9. For small developments in rural or urban locations, do you consider there is a scale of development (eg number of houses) for which the standards in Sfs 2 should be relaxed? If so, at what level might that be and should national guidance establish it? What equivalent guarantee of good design and construction standards can be provided for such circumstances?

The Executive expects the parties involved in the drainage of developments to act on the basis of openly available data, demonstrating the effectiveness, the maintenance requirements and the costs of the SUDS. The parties should be required, to act reasonably and with consideration for the costs incurred or likely to be incurred by others.

The Executive is concerned that any standards that are to be non-negotiable should be ones that are appropriate in all cases. There will be cases where SUD systems will be compliant with GBR 10 and with planning permission, but not with Sfs 2. In some cases, eg source control in curtilages or roads which are a local authority asset, the system may not be suitable for adoption by Scottish Water. In these circumstances it needs to be clear who is the relevant authority or party responsible for the future maintenance of the feature(s) or there may be an “orphan system”. The Executive wants to ensure that orphan systems are avoided as they are likely to result in the system not working effectively, and may have an adverse impact on Scottish Water’s drainage network. It would thus preclude the benefits anticipated by the WEWS Act, and entail water problems downstream.

SUDS features which are not going to be adopted by Scottish Water, including source control measures, will normally have a distinct point of connection to the public system and it must be clear who is responsible for them. Scottish Water should have responsibility for the rest of the surface water drainage system. The public surface water drainage system vested in Scottish Water must be continuous and it will normally be owned by Scottish Water without breach to ensure proper ownership and maintenance. The Executive considers that this is in the interest of developers and their clients and of Scottish Water and its customers. We also note that under S25 of the Water Industry (Scotland) Act 2002 Scottish Water at its discretion may engage with 3rd parties to carry out activities that are consistent with its core function. Scottish Water could thus contract with local authorities or private contractors on SUDS issues such as shared maintenance.

QUESTION 10. Do you agree that responsibilities need to be clearly defined as proposed here?

10. Cost, safety and nature conservation considerations

The Executive is concerned that the maintenance of SUDS should not involve Scottish Water in unreasonable costs. Scottish Water is justified in expecting the SUDS which they will adopt to be effective and not entail excessive risk.

Construction standards should require systems to be designed and constructed to minimise any serious risks and future maintenance work. At the same time they must be proportionate, and if they are to be applied nationally they must be appropriate in all circumstances. The Executive would consider requirements which take no account of the costs to other parties to

be unacceptable. This applies even when the costs involved are likely to be passed on to third parties such as local residents, businesses or Scottish Water's customers.

Scottish Water has commissioned research on the whole-life costing of SUDS. Whole-life costs must include the main relevant capital and operational costs, such as maintenance. Assessment of whether a SUD system is cost-effective must have regard to the whole-life costs, using where available the research compiled by Scottish Water. It should also consider the social costs involved, such as that any excessive land-take could reduce the number of houses or the amenities of those houses on a particular site. In this context it is noted that SUDS ponds and basins should be attractive features of new developments, and the Executive notes the advice in PAN 61 that SUDS features may be regarded as part of the public open space allocation.

In some cases there will be a trade-off between a more expensive outlay and greater maintenance costs; in these cases judgement of what is acceptable should be based on industry experience. The CIRIA Manual includes information on the costs of different SUD systems.

QUESTION 11. Do you agree that cost-effectiveness should be a criterion for the vesting of SUDS in public spaces? And that the assessment of costs should be based on whole-life costing?

Where a pond is being worked on, normal Health and Safety rules will apply. The Executive has no plans to introduce such rules for SUDS or to encourage others to do so.

Concern has been expressed that open water, as may be found in SUDS such as a pond, may be a hazard. Good design based on experience can minimise the risks to the public. In line with SfS 2 Scottish Water will require a safety risk assessment to be undertaken by the developer, before adoption, as a guide to the management of the proposed system.

All public bodies, including Scottish Water, are bound under the Nature Conservation (Scotland) Act 2004 to promote wild life and especially indigenous biodiversity. While developers are not normally public bodies, they will be building assets to hand over to such a public body, where vesting is anticipated. Scottish Water will wish to act in the spirit as well as the letter of the legislation. In the Scottish Executive's view this should be implemented in a proportionate way and without excessive cost. In some cases these considerations will save money by minimising the construction of hard roads, by reduced frequency of grass cutting, and reduced planting costs by favouring native plants over exotic species.

QUESTION 12. Do you agree with the Scottish Executive's view that account should be taken of safety and that proportionate measures should be applied? Do you agree that the principles of nature conservation should be applied in a proportionate way in the construction and maintenance of SUDS features?

11. Conclusions

SUDS are a form of drainage, and are thus within the provisions of the 1968 Act, as amended by the WEWS Act. The Executive sees many potential advantages, such as minimising flooding and pollution, and promoting wildlife and biodiversity. The Controlled Activities Regulations make the technology a requirement for new developments in the situations specified in GBR 10.

SUDS should normally be part of a treatment train; that provides for successive stages of stormwater management and pollutant removal, with consequential greater amenity benefits and lower maintenance in terms of sediment removal for the public SUDS.

There is a case for guidance on SUDS for roads, including the use of section 7 agreements as applied to SUDS under the 1968 Act.

The ultimate objective of sustainable urban drainage systems cannot be achieved without cooperation of all organisations involved in development. Sustainable urban drainage is not the sole responsibility of Scottish Water. There are roles for local authorities, developers, SEPA and Scottish Water, and a clear regulatory framework will clarify those roles and establish the basis for working in partnership.

To ensure the continued success of SUDS in Scotland we aim to reach the position where it is normal practice that SUDS in public spaces are vested in Scottish Water.

12. Scottish Water Technical Manuals (WfS 2, SfS 2)

Scottish Water's technical manuals are; design and construction guides for developers in Scotland for the provision of water and sewerage infrastructure.

Scottish Water has been working with consultants to produce revisions of the WfS and SfS technical manuals. The revised WfS (Water for Scotland 2) incorporates some minor changes in Scottish Water policy and procedures; makes reference to new or amended legislation; and places stronger emphasis on compliance with Scottish Water's Hygiene Code of Practice (HCoP) and Distribution Operation Maintenance Strategy (DOMS).

The amendments to Sewers for Scotland (SfS 2) are more significant due to the inclusion of new standards for SUDS. The current draft is on the Scottish Water website and can be found on Scottish Water's website using the following link [Sewers for Scotland 2](#). Comments should be sent directly to Scottish Water, and it is requested that a copy of the comments is forwarded to the Scottish Executive along with any consultation comments.

QUESTIONS

1. Are you content that the current approach of agreement involving approval letters should be maintained and developed? Or do you consider there is a need for Regulations on water and/or sewerage connections, and if so why?
2. Do you agree with this statement of policy? If not, what alternative would you propose? Are there any modifications or additions you would like to see?
3. Do you think the proposal for assessment of source control SUDS is likely to be an effective means of ensuring that the components of a drainage scheme which will not be vested (eg source control) are adequate?
4. Do you consider that this proposal should be regarded as the standard situation and that it gives effect to the purpose of the provisions on SUDS in the WEWS Act? If not, what alternative would you propose to implement the intention in the Act's provision that arrangements should be made for the development and the ongoing maintenance of SUD systems?
5. Are you content with these criteria and that they should be adopted through Sfs 2? If not, what alternatives would you propose? Do you consider that they, or any of them, should be statutory? Is there a need to have regulations to apply these criteria?
6. Are you content that there should be agreements between Scottish Water and local authorities on road drainage? Are there any reasons why or circumstances in which the parties should not enter into agreements of the type prescribed in section 7 of the Sewerage (Scotland) Act 1968?
7. Do you consider that there is a need to prepare guidance specifically for local authorities on the use of SUDS in relation to roads?
8. Do you agree that these are the main categories of non-standard situation? And that in these situations the parties concerned should reach a bespoke agreement on vesting (on the basis that SW will develop standard conditions for all other agreements)?
9. For small developments in rural or urban locations, do you consider there is a scale of development (eg number of houses) for which the standards in Sfs 2 should be relaxed? If so, at what level might that be and should national guidance establish it? What equivalent guarantee of good design and construction standards can be provided for such circumstances?
10. Do you agree that responsibilities need to be clearly defined as proposed here?
11. Do you agree that cost-effectiveness should be a criterion for the vesting of SUDS in public spaces? And that the assessment of costs should be based on whole-life costing?
12. Do you agree with the Scottish Executive's view that account should be taken of safety and that proportionate measures should be applied? Do you agree that the principles of nature conservation should be applied in a proportionate way in the construction and maintenance of SUDS features?

RESPONDENT INFORMATION FORM

Please complete the details below and attach it with your response. This will help ensure we handle your response appropriately:

Name:

Postal Address:

Consultation title:

1. Are you responding as: (please tick one box)

(a) an Individual (go to 2a/b)

(b) **on behalf of** a group or organisation (go to 2c)

2a.INDIVIDUALS:

Do you agree to your response being made available to the public (in SE library and/or on SE website)?

Yes (go to 2b below) No, not at all

2b. Where confidentiality is not requested, we will make your response available to the public on the following basis (**please tick one** of the following boxes)

Yes, make my response, name and address all available

Yes, make my response available, but not my name or address

Yes, make my response and name available, but not my address

2c ON BEHALF OF GROUPS OR ORGANISATIONS:

Your name and address as respondees **will be** made available to the public (in the SE library and/or on SE website). Are you content for your response to be made available also?

Yes No

SHARING RESPONSES/FUTURE ENGAGEMENT

3. We will share your response internally with other SE policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for the Scottish Executive

to contact you again in the future in relation to this consultation response?

Yes No