



5 July 2007

Sewers for Scotland 2 consultation coordinator
Scottish Water
Castle House
Carnegie Campus Dunfermline
Fife
KY11 8GG

By e-mail

Dear Sir/Madam

Scottish Water (SW) Public Consultation – Sewers for Scotland 2 (SfS2)

Homes for Scotland does not consider it necessary to add to the detailed consideration of SfS2 carried out between SW and HfS from August 2006 until May 2007.

A copy of the initial HfS response submitted in September 2006 together with all subsequent correspondence is enclosed for information together with the completed respondent form as requested.

A copy of the general HfS response to the concurrent Scottish Executive consultation is also enclosed for information.

Yours faithfully

A handwritten signature in black ink, appearing to read "David Little".

David Little

Head of technical Services

cc Scottish Executive Water Division

From: David Little [d.little@homesforscotland.com]
Sent: 12 September 2006 11:32
To: Barbara Barbarito
Cc: Morag Garden; Miriam McLeod
Subject: SW/HFS Consultation Closing 8.09.06 - SFS2/WFS2 - HFS Response

Attachments: 06-09-08 SW-Hfs Cons Sfs2, Wfs2 - Cover.doc; 06-09-08 SW-Hfs Cons Sfs2, Wfs2 - Summary Statement.doc; 06-09-08 SW - Hfs Cons Sfs2 - Key Issues.doc; 06-09-08 SW-Hfs Cons Sfs2 - Hfs Comments.doc; 06-09-08 SW-Hfs Cons Wfs2 - Hfs Comments.doc
Barbara

Following my email to you on Friday I now attach the Homes for Scotland consultation response for the consideration of Scottish Water.

Regards

David

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Response to Scottish Water 2006 Consultation: 11 Aug to 8 Sept

Sewers for Scotland (SfS) 2 – Draft 6 Updated 11 Aug

Water for Scotland (WfS) 2 – Draft Updated 9 Aug

Enc:

- 1. Summary Statement**
- 2. Key Issues Document**
- 3. Schedule of comments in detail - SfS2 and WfS2**

Summary Statement

Homes for Scotland (HfS) is the representative body for the private home building industry in Scotland. In 2005 some 24,000 dwellings were constructed in Scotland, 18,000 of which were built by the private sector without recourse to public subsidy. Homes for Scotland represents the interests of about one hundred companies (M) who provide 95 of every 100 homes built for sale in Scotland and we have a rapidly expanding membership of professional and other service businesses (AM) engaged in our industry.

This consultation response, at the invitation of Scottish Water to their draft revised policy and guidance documents, Sfs 2 and Wfs 2, is in advance of the related and forthcoming public consultation through the Water Environment and Water Services (Scotland) Act 2003 (WEWS) to produce new Regulations addressing:-

- 1) The Construction Standards & Vesting Conditions for Sewerage Infrastructure (including SUDS)
- 2) The Construction Standards & Vesting Conditions for Water Infrastructure

The representatives of the HfS working group who met with representatives of Scottish Water (SW) and WRc at Castle House, Dunfermline on 3 August 2006 are listed below. The working group, in completing this consultation, is unable to endorse or approve the draft documents on behalf of HfS at this stage, in advance of the public consultation, for the reasons stated in the accompanying Key Issues Document. However this lack of endorsement has not prevented HfS comment in detail on the draft documents in the accompanying Schedule of Comments.

While it would be inappropriate to make recommendations for action in advance of the public consultation it is clear there is presently considerable cross party confusion, particularly over the inclusion of SUDS in Sfs 2, which in resolving will require an holistic and flexible approach to engagement by Scottish Water.

HfS Working Group Representatives

Arthur Dryden, GS Brown Construction Ltd (M)
Ron Jack, Walker Group (Scotland) Ltd (M)
John Millar, Persimmon Homes (East Scotland) (M)
Martin Reoch, Taylor Woodrow Developments Ltd (M)
Ed Connon, WA Fairhurst & Ptrs (AM)
Gordon Laing, URS Corporation (AM)
David Little, HfS

Edinburgh - 8 September 2006

Homes for Scotland

Sewers for Scotland 2 Draft Consultation Response to Scottish Water

Key Issues Document

The attached Schedule of comments is a first pass review of the Draft version of Sewers for Scotland 2 and Water for Scotland 2 as issued to by Scottish water as part of preliminary consultation with Key stakeholders in advance of the preparation and issue of regulation to address 'The Construction Standards and Vesting Conditions for Sewerage Infrastructure (including SUDS)' and 'The Construction Standards and Vesting Conditions for Water Infrastructure'. The comments contained therein reflect a first pass review of the draft documents and reflect preliminary comment from Homes for Scotland on the content of the Documents.

Homes for Scotland would indicate that the content in the Schedules is of a preliminary nature and does not compromise our right to make further comment on impending public consultation pertaining to 'The Construction Standards and Vesting Conditions for Sewerage Infrastructure (including SUDS)' and 'The Construction Standards and Vesting Conditions for Water Infrastructure' Regulations.

The comment below summarises the analysis undertaken by a working group commissioned by Homes for Scotland to review the draft Sfs2 and Wfs2 documentation. Detailed comment is contained in the Schedules attached.

Sewers for Scotland 2

1. From the discussion held at Castle House, Dunfermline in early August 2006, the philosophy behind the preparation of Sfs2 has been to incorporate the terminology and practice suggested by Sewers for Adoption 6th Edition as developed by the Water Companies in England and Wales. This has led to the development of an extremely prescriptive document, with little room for variation to specified procedures and practices.

Homes for Scotland believe that the prescriptive nature of the document does not give sufficient scope to developers to implement alternative proposals that may be fit for purpose and meet the overall requirements of the CESWI Specification, upon which Sewers for Scotland 2 is based.

Some key examples are related to limits on vestable SUDS treatment and attenuation features, which will limit opportunity to develop small housing sites. Homes for Scotland would contend, as suggested in the attached Schedule that the introduction of a more flexible approach would significantly benefit the Development industry in Scotland.

2. Sfs2 highlights in Clause 1.3.5 that the responsibility for the design and implementation of both water supply and sewerage infrastructure will lie with the developer. At present significant time and effort is taken by developers to ensure that Scottish water give Technical approval to development proposals. It is unreasonable for Scottish Water to expect Developers to accept unrestricted such responsibility, particularly where Scottish Water has reviewed proposals and granted Technical Approval.

3. The introduction of Developer Responsibility to secure Section 7 Agreements between Scottish Water and Local Authority Roads Departments in something that has not been identified to date. This has been introduced totally without comment from the Development Sector.

Homes for Scotland is extremely concerned at this development that places onerous conditions on housebuilders. We would seek assurance that local Councils have bought into this process and will not restrict promotion of development. Inevitably if developers cannot finalise such Agreements, there is an ultimate consequence that surface water sewerage systems will not be vested and remain private systems. This is totally against the principles in which we understand the 'The Construction Standards and Vesting Conditions for Sewerage Infrastructure (including SUDS)' and 'The Construction Standards and Vesting Conditions for Water Infrastructure' Regulations are being developed.

4. The introduction of prescriptive procedures, through issue of mandatory Section 3A Notices, is again something that Housebuilders were unaware of. While in certain circumstances the use of Section 3A Notices may benefit the securing of access to land, developers may require to undertake alternative routes to gain access for the construction of sewers and water mains.

Homes for Scotland would seek assurance that developers will not be limited to use of Section 3A Notices but be given the opportunity to seek alternative routes if this benefits them in taking development proposals forward in a timely manner.

5. Scottish Water has for some time adopted an approach requiring developers to undertake Development Impact Assessments in advance of securing connection to the public water supply and sewerage systems. While Homes for Scotland understands the need for such work to be undertaken, we have for some time questioned the approach to financing the work.

SfS 2 prescribes that in all cases the developer will have to undertake this work. It is our understanding that directive suggests that developers should only be asked to fund such assessment where Scottish Water has invested in detailed modelling work in the past. Where hydraulic models do not exist to allow such assessment to be undertaken Scottish Water will instigate the work necessary to allow development impact to be undertaken. SfS 2 does not reflect this requirement.

HfS would seek assurance that Scottish Water's approach to DIA implementation will not prejudice developers in delivering housing sites across Scotland.

6. The approach to the provision of SUDS facilities within housing sites is extremely restrictive. HfS understand that restricting vestable SUDs features to the levels indicated in SfS2 is contrary to existing and proposed procedures developed by CIRIA.

HfS believe that restricting developer approach to SUDS will have a significant impact on development, particularly for small to medium sized developments. Existing allocation of land through the Local Plan process assigns level of development identified for each allocation. Developers are already under considerable pressure to deliver planning gain requirements in affordable housing, transportation, education, public open space, circulation for access etc which already limits the delivery of allocations made under the planning process.

By demanding that the first line of SUDS provision should be via retention ponds, particularly as this is to be constructed in public open space, SfS2 is again reducing developer opportunity to deliver much needed housing development across Scotland.

It is crucial that developers are given sufficient opportunity to provide appropriate SUDS systems and not to be restricted to the limited choice offered in SFS2.

Particular concern has been raised within the Working Party relating to the stand off distance imposed for retention ponds and detention basins. In certain developments the existing land allocation for small developments could not reasonably be implemented. A reasoned approach to location of ponds and basins is required to take into account development layout, risk assessment and availability of land to construct works.

The attached Schedule details a significant number of concerns, which we would expect to be addressed in a revised version of SFS2.

7. HfS has significant concern regarding the introduction of a 36 month Defect Liability period. While our member companies make every effort to construct works to Scottish Water's specification, the links made to the payment of 'Reasonable Cost' contributions will place a significant financial and operational responsibility on Housebuilders. We would seek detailed justification of why Scottish Water has moved from the previous 12 month Defect liability Period to 36 months and why financial contribution from Scottish Water has been linked to the DLP.

The above is not an exhaustive Analysis of SFS2 but reflects the significant concerns raised through our internal consultation process.

Water for Scotland 2

The attached Schedule details a number of comments that we would seek to address. Detailed review of Water for Scotland has already been undertaken in the past and comment forwarded from our member organisations. HfS believe that WFS2 reflects general industry requirements but current assessment in the limited time available has suffered due to the need to consider the fundamental changes planned for the sister document SFS2.

Sewers for Scotland (SfS) 2	
Section	Homes for Scotland Comment
1.1.3	If the Developer wishes to provide private drainage then why does it need to be constructed to SfS2 even though it would be connected to the public sewerage system.
1.1.4	SW shall be entitled to refuse or defer payment of agreed contribution in whole or part if the Developer does not meet its requirements - "as SW shall in their sole discretion determine" HfS believe that it is unreasonable that SW shall have sole discretion and some recourse must be made available in the event of disagreement.
1.2.2	Presumably the comment on developer responsibility for Roads drainage is a financial consideration only. Clarification is required.
1.2.3	This conflicts with clause 1.1.3 where Scottish Water are saying they will not allow drainage to be connected that is not constructed to SfS2. According to this paragraph SfS2 is a guidance document only and is open to discussion.
1.3.4	This statement is generally in line with published guidance (e.g. SUDS Design Manual and National Planning Policy).
1.3.5	The Developer shall be wholly responsible for design and construction of sewerage including SUDS. A designer can only accept liability under his PI insurance for the design of the works, any liability on construction will lie with the developer and whoever constructed the works will be liable for the implementation of the work. As such 'design' should be inserted in line 4 before compliance. As Scottish Water is the vesting Authority and Assess through Technical Approval surely they have a responsibility to accept liability that the design is appropriate.
1.3.6	For sewers does SW really mean they will design and construct work. This is totally contrary to previous approaches. HfS would suggest that given SW have extreme difficulties coordinating their existing operations, to allow them to extend to designing and construction sewers for development would not be in the best interests of the development Sector. What are SW responsibilities if they do design and construction?
1.3.11	Restricting application for consideration of sewerage design till after preparation of a Drainage Impact Assessment is likely to delay the overall process for delivery of a development. HfS suggest that all procedures are done in parallel. SW could delay issue of "Technical Approval" until there is formal planning consent. This would be a more pragmatic approach.
1.3.12	This in HfS view is probably one of, if not the most onerous additions to SfS2. Making a Developer liable for the conclusion of a Section 7 agreement (not carried out extensively to date) puts the Developer in a position where if it cannot secure Roads Authority approval it will be in a position where sewers draining roads will not be vested and will remain private. Timescale to complete Section 7 Agreement will likely be lengthy and costly to the Developer. Some key questions: <ul style="list-style-type: none"> > Have Scotland's Road's Authorities bought into the process? > What are funding arrangements - will developers be liable for any Roads Authority costs as up front payments towards the Roads Authority liability on long term maintenance. > Will "The Construction Standards & Vesting Conditions for Sewerage Infrastructure" oblige Roads Authorities to enter into such Agreements?

1.3.14	<p>This is a new addition that places developers with an obligation to negotiate entry to land through section 3A of the Sewerage Scotland Act. The Developer will also be obliged to serve all Notices, deal with compensation etc.</p> <p>The Developer will need to prove through submission of relevant signed documentation that the landowner has received the notice.</p> <p>The last sentence in this clause is disturbing. If a Developer follows the identified approach, provides drainage to the content of Sfs2 and meets all other requirements then he should have drainage taken over by Scottish Water. This should not be discretionary as indicated.</p> <p>The use of section 3A powers for the benefit of the Developer may reduce the timescale for agreement to enter land outwith the control of the Developer and may also remove the possibility of ransom strips.</p> <p>It should be noted from previous experience that the right to entry under Section 3A does not restrict compensation to the levels that Scottish Water enjoy in similar circumstances. A Developer may have to pay the "market rate" for entry.</p>
1.3.15	<p>The intent in this clause needs to be redefined. Clauses 1.3.14 and 1.3.15 should be in the guidance to ensure that permission to enter third party land is obtained in the shortest timescale for the benefit of the Developer in order to avoid delay. The option must always be available for the Developer to negotiate a private wayleave agreement at its discretion if this is the preferred route for the Developer.</p> <p>There is a contradiction in wording in relation to vesting and completion between the final respective sentences of clauses 1.3.14 and 1.3.15. The wording of the latter clause is correct and should also be used in the former.</p>
1.3.16	<p>Item f) refers to the possible use of oil/petrol interceptors for control of pollution - is this on public sewers and, if so, will they be adopted? If interceptors are acceptable then other pollution control devices should be accepted - i.e. Downstream Defenders!</p>
1.3.17	<p>Again a new introduction.</p> <p>If Scottish Water are refusing to accept land drainage into their system then this is fundamentally an unsustainable approach to provision of drainage. This approach introduces two pipe surface water systems within the development area.</p> <p>However if a pragmatic approach were used, where the end of line treatment was provided by a pond or basin then it would only be the local sewerage system that would be upsized to accommodate local land drainage. This would be a beneficial and sustainable approach to the known problems that arise from lack of suitable outlets for land drainage.</p>
1.3.19	<p>Item e) requires confirmation of formal verification that development can be served - surely this comes from SW as part of development assessment processes.</p>
1.3.20 - 1.3.21	<p>For larger developments the date of issue of Completion certificate is crucial to the implementation of the defects Liability Period. The application by SW of a phased issue of Completion certificates should be permitted and reference incorporated in this clause. CCTV surveys require to be submitted as part of the "completion" process and also as part of the "adoption" process. The CCTV survey at completion stage is additional to the original process in Sfs. It is felt that that a requirement for two separate CCTV surveys is unreasonable and is not necessary at completion stage. If defects are present they will be caught at adoption stage.</p> <p>H+S File to be submitted. There needs to be a defined set of specific requirements on information required rather than a whole file that could contain unnecessary information.</p> <p>From previous experience the prospect of SW carrying out remedial works to repair defects to a sewer or any part thereof (pumping station?) and then recharging the Developer has to be questioned. A consequence of failure to meet specification is normally lack of vesting rather than action from SW.</p> <p>Allowing SW indiscriminate power to interfere with works that are the responsibility of the Developer is unreasonable and this clause should be removed.</p>
1.3.23	<p>This paragraph introduces an extension to the Defects Liability Period from the previous 12 months to 36 months. This adds to the burden for maintenance on the Developer and is contrary to the general contract law period of 12 months.</p> <p>The paragraph tends to suggest that the DLP applies to surface water only although the DLP for</p>

	foul sewers is not prescribed elsewhere.
1.3.24	As referred to under clauses 1.3.20 and 21 above in large scale development where phased implementation is likely, will Scottish Water vest sewers on the basis of the DLP for individual sewers or areas or will vesting take place at end on total development? This needs to be clarified.
1.3.25	This will require separate application for vesting of surface and foul sewers. Why is this necessary? See comments on 1.3.20 - 2 no CCTV required now!!
1.3.29	What is involved in "leakage testing" of a pond? This needs to be identified, or a reference made to specific document that details requirements. Notice period of 10 days to SW for inspection of test is unacceptable - notice period needs to be shorter - say 5 days max.
1.3.31	It is appropriate for Scottish Water to pass on Ministerial Guidance on Sustainable development to the Developer? What does this mean and what are the implications?
1.3.33	Specific guidance must be included on what information is required if the site is contaminated. Does SW wish to see the complete SI report and make judgement on what measures, if any, are required?
Table 1	SW indicates that the permission of the riparian owner is required for discharge. This is seen as introducing further uncertainty and unnecessary delay. This item should be removed from the list of requirements. Estimated value of sewerage work plus SUDS and Pumping Stations to be submitted - why?
Figure 1	Financial Contribution Phase By restricting financial contribution to the end of the Defects Liability Period, the SW contribution to the Developer of sewerage provision costs will be unreasonably delayed. A staged contribution should be introduced with a final payment at the end of the Defects Liability Period. In addition if connections are made to sewers in the period between completion and vesting, SW will receive an income through their charges. This process benefits SW at the expense of the Developer. Presumably the comment on developer responsibility for Roads drainage is a financial consideration only.
2 General	Pre DIA submission consultation is a positive and practical step to meet timescales but it is not always possible due to SW resources. How is SW going to resource this?
2.1	There is considerable concern over the vesting of surface water sewers where a non adoptable" SUDS feature is employed. Does this mean all surface sewers connected to the SUDS feature will become private? And if so, what is the impact on RCCs and adoption of roads where such sewers run below roads. These points are fundamental and need more detailed discussion with all affected parties.
2.1.1	This clause limits the provision of SUDS schemes to statutory surface water sewers, retention ponds, detention basins and underground storage. This is restrictive, especially where small sites have limited availability to allocate land for a pond or basin. SW encourages the use of all types of SUDS treatment/storage but limits the use on public sewerage systems. This leaves a considerable element of SUDS provision outwith the control of SW and consequently within the ownership of others for maintenance. This is clearly unsustainable as a significant portion of treatment lies with the individual or private maintenance company where control is limited on their activities to prolong the life of the private system.

2.1.2	This paragraph opens up the opportunity for a Developer to propose other types of SUDS provision. However in defining a sewer as a pipe, pond, basin, underground storage the last sentence in effect leaves out the opportunity to provide alternative sources of SUDS provision. Only one of the three SUDS promoted by SW is designed to provide water quality improvement (clause 2.8.28 states "Detention ponds should provide a minimum permanent pool volume equal to $1 \times Vt...$ "). There are no water quality criteria for detention basins (Note: 'Extended detention basins that are designed to provide water quality improvement are not covered or included in SFS2. Underground storage provides no water quality improvement
2.1.4	Restricting SUDS to be vested to passive public open space will reduce the availability of land for development and will be subject to planning authority approval. The implication is that additional land will need to be required to give the same development level, thus increasing cost to developer and infringing on land that may not have been allocated for development in the statutory planning process. In order to maintain levels of development additional land will have to be allocated under a land allocation system that is already overstretched.
2.1.5	This clause offers and extends SUDS to be vested to that part of the scheme that will serve flood protection. This clarifies a number of previous questions that suggested SW would only vest up to limits of their requirements (1-30yr event). The same comment as for clause 2.1.4 applies for location in passive public open space.
2.1.6	This clause is unacceptable. The need for the desilting of SUDS systems is questioned and needs to be clarified.
2.1.7	It is not understood how pollution from a development can be greater than from "normal" residential development. How will this be determined? This paragraph seems to be addressing SEPA concerns on discharges from industrial/commercial development where additional pollutant loading is envisaged and more than one level of treatment may be required. Does this mean that SW will vest swales and filter trenches etc within industrial areas. This needs to be clarified.
2.1.10	It is not thought that SEPA will issue consent for a surface water outfall. Outfalls will normally be controlled by a "GBR" under the new Controlled Activities (CAR) Regulations. This needs to be clarified.
2.2.2	The use of prescriptive "greenfield" runoff linked to Appendix XI may limit the Developer's opportunity to use the most suitable criteria for calculation. Preliminary calculations suggest that the SW approach is conservative compared to other calculation methods.
2.2.4	How does a Developer calculate Whole Life Cost (WLC)? Does SW propose a standard procedure? None indicated in the document. Will Developers be allowed to use their own choice of approach? UKWIR report/WW/06/6 recognises that there is limited data of WLC. This will be complex to calculate and difficult to justify. Clarification is required.
2.2.5	Types of public SUDS for consideration is very restrictive and will cause huge problems for small and medium size sites say less than 70 houses. Further consultation is required before the document is released.
2.2.6	SW suggest that private systems should use infiltration systems while they restrict systems for vesting. This is not taking a holistic approach as suggested in Section 2.1. The use of infiltration systems is recommended but they will not be vested - under present practises this would suggest the whole SW network will remain private which is unacceptable.
2.3.1	The comments relating to clauses 1.3.5 and 1.3.6 apply here as well. This clause contradicts itself by stating that the Developer is responsible for all aspects of the design but then advises that the Developer may negotiate with SW to carry out the design and/or construction on their behalf! The question of whether SW have sufficient resources is again relevant here.

2.3.6	It is considered that the provision of ponds in larger development areas should be targeted to controlling provision of SUDS schemes into sub catchments. This will reduce the provision of oversized pipes to allow collection to a main treatment pond(s). The approach being adopted by SW is unsustainable as it takes all flows to a single point and restricts developer choice. Why 3 ponds in series? This is not always possible due to topography/land take.
2.4.4	SW recommends (item g) taking account of future developments in the design. If this is the case SW should take this into account when calculating reimbursement sums.
2.4.6	The need for completed manhole cards to be submitted with record drawings as per example is totally excessive. This requirement is new and has never been submitted before. SW need to justify this requirement
2.6.5 - 2.6.6	These clauses state a need for a 10% allowance for increase in paved areas within a catchment and 10% for climate change. These figures seem excessive and may result in over design. Can SW substantiate these figures?
2.6.9	This paragraph deals with development on the flood plain. The Developer seems to be charged with pulling together comments of the Flood Prevention Officer and SW. Care will need to be exercised to ensure adequate communication between all parties takes place.
2.6.10	SW is suggesting that modelling of the surface water sewerage system may be required. It is understood that SW have been tasked with picking up the cost of all modelling, where an existing model does not exist. Processes will need to be put in place that demonstrate that Developers are not being asked to fund modelling that may be the responsibility of SW.
2.6.16	This clause suggests that design of surface water sewers should be implemented on the basis of failure of private SUDS systems. While this is a pragmatic approach it removes the responsibility from private owners to maintain their systems. This is not a sustainable approach to SUDS provision resulting in unnecessary additional capital cost of SUDS provision.
2.7.3	This clause suggests that 1Vt is adequate treatment volume, but opens up the position where SEPA may increase treated volume. This puts the Developer in a position where SW will ultimately vest system, but SEPA may have control of treatment volume and associated processes. Key questions: > Will SW vest if SEPA insist on higher treatment volume? > Is this increase in treatment volume likely to be limited to commercial/industrial development only or will residential be affected? > Careful consideration of cost implication will need to be addressed.
2.7.4	In mixed use development the suggestion is that SUDs systems are kept separate for residential and commercial/industrial areas. This may not be the most sustainable approach and will result in unnecessary additional cost. The most appropriate system should be identified specific to each development.
2.7.5	This clause recommends ponds in series - why? This approach is not possible for all sites.
2.8	The SUDS options are too restrictive and would appear to have been selected only on financial consideration. Section 8 in the UKWIR shows both permeable pavements and infiltration trenches to perform excellently in terms of Environmental Performance yet they have been totally discounted by SW. Therefore the whole selection of process needs to be explored further. Also, as we discussed earlier not all sites are suitable for ponds or detention basins - there is a complete lack of flexibility in SW options.

2.8.2	<p>The provision of a bypass sewer will significantly increase the cost of constructing ponds. This is provided to allow SW to divert flows during operation.</p> <p>Alternative approaches to maintenance should be discussed to give the most pragmatic approach to pond design.</p> <p>A 3m wide walkway all round is excessive - too much land take will be required to accommodate this requirement. Pond dimensions are sufficient for larger ponds but are likely to be over prescriptive for smaller ponds associated with smaller developments.</p> <p>A more pragmatic approach would be to allow pond sizes to vary according to development size and reduce such things as forebay length accordingly.</p> <p>Further discussion is needed.</p>
2.8.5	<p>The location of ponds etc should be development specific, rather than at a prescribed location.</p> <p>End of line ponds for the whole development area will gravitate all flows to one location rather than target treatment to sub catchments.</p> <p>This will significantly increase pond and sewer sizes and will result in increased capital cost.</p> <p>Again as already stated 2 or 3 ponds in series are not always possible.</p>
2.8.8 - 2.8.9	<p>SW suggests that all ponds should be a minimum of 30 metres from the nearest house boundary. This is extremely prescriptive and no justification is made for this distance. This needs further discussion/explanation.</p> <p>If a careful risk assessment is undertaken and appropriate consideration is given to safety etc then there is no apparent need to locate ponds remote from development.</p>
2.8.10	<p>Max water level 500mm above lowest FFL. Where does this freeboard come from and how was it determined? Is this technically correct?</p>
2.8.13	<p>Can inlet structure incorporate sump for silt build up?</p>
2.8.14 - 2.8.15 - 2.8.16	<p>Bypass arrangement has been discussed earlier.</p> <p>The use of bypasses as a standard is unacceptable. These should only be incorporated where careful thought to maintenance activities necessitate their use.</p> <p>Care will need to be exercised where the pond is constructed within areas of flat topography. This is relevant where SW suggest the inlet should be above the 1 year water level of the pond.</p>
2.8.20	<p>Forebay base in concrete - not normally done this way! Will the Developer be given the opportunity to use alternative arrangements, e.g. Reno Mattress?</p>
2.8.22 - 2.8.23	<p>Design volumes seem excessive being calculated on a 50 year storage volume. This seems to be to reduce SW maintenance and not to suit individual criteria for developments. This may result in oversized forebays.</p> <p>Not sufficient detail on what "throttle controls" will be acceptable to SW for adoption</p>
2.8.25	<p>1 in 30 year flooding to "any part of the site" not "dwelling" seems a very onerous condition. SW needs to justify the reasons for extending Developer obligation.</p> <p>The provision of a drain to draw the pond down is not always necessary. The pond could be pumped out for limited volumes to reduce excavation and upfill requirements. This is only introduced to reduce SW maintenance requirements.</p> <p>Some latitude is required on pond draw down where the pond is constructed in an area of flat topography. This will avoid excessive upfill to development and therefore high capital cost. Unless there is a prescriptive maintenance regime in operation there will be a significant liability of pollution in use.</p>
2.8.26	<p>Drawdown detail may be difficult depending on topography – it should not be insisted upon for every pond.</p>
2.8.31	<p>SW interest in infiltration and requirement for submitting plans ; "encourage infiltration" from ponds but won't factor in design/vesting; have taken infiltration away from detention basins contrary to SW information in March 2006. Clarification is required..</p>
2.8.32	<p>Permanent access for maintenance at 3m wide all round pond seems excessive</p>
2.8.37	<p>The provision of barrier fencing for the Defect Liability Period and longer will place all safety in the hands of the Developer. Care needs to be taken here to assess Developer liability with flexibility permitted in achieving compliance by risk assessment and inclusive of good landscape design.</p>
2.8.46	<p>1:10 gradient for 2m (each side water's edge) make pond larger - is this really required?</p>

2.9	<p>Similar comments apply as for ponds.</p> <p>The UKWIR Document on WLC suggests that detention ponds work best in areas of high infiltration.</p> <p>Careful consideration on the use of detention basins will have to be undertaken where the bulk of subsoil is either clays or glacial tills.</p>
2.9.10	This clause emphasises the need for care in earthworks design and flooding effect in the event of failure.
2.9.11	<p>An appropriate return period in respect to adjacent watercourse levels should be specified by the Flooding Authority for detention basins as it is with ponds.</p> <p>The requirement that the base of detention basins should be at a higher level than the top of the bank of the watercourse at the point of discharge may rule out this option at many sites.</p>
2.10.4	Clarification is required on the need for man entry requirements to underground storage facilities
2.10.5	Advises that "pre-fabricated structures" are acceptable for vesting - this is not being accepted at present as SW currently apply the draft guidelines!
2.10.19	No guidance is given on when and where ventilation will be required. Some further guidance is required here.
2.13.2	Table is confusing, does it relate to offset from edge of pipe or centreline?
2.13.3	Confusing, how does this relate to table? SW need to redefine
2.13.5	<p>It may be impossible to locate all sewers in roads or public open space and particularly if the existing available sewer for connection does not fit in with the best development layout.</p> <p>It is suggested that "where reasonably practical" should be included in the paragraph to reflect site specifics.</p>
2.13.12	<p>For flatted developments the location of kitchens and bathrooms needs to be considered. If these are to the rear, it would be beneficial to run drains round blocks rather than underslab drainage for future maintenance.</p> <p>It is suggested that "where practical" should be added before each block of flats in the first line</p>
2.14.1	<p>In certain circumstances it has proven necessary to construct a multi storey flatted development over a new sewer because of location of existing sewer and boundary of an adjacent property. Scottish Water has in the past taken a pragmatic view in these circumstances.</p> <p>It would be beneficial if "Where practical" to be introduced before "new sewers" in the first line.</p>
2.14.2	Is this paragraph necessary given the content of clause 2.14.1?
2.14.3	The table in clause 2.13.2 is confusing. Clarification required as discussed above.
2.14.5	The Protected Strip needs to be defined. Is this the normal area required by SW that remains undeveloped?
2.17	<p>Manhole details in Sfs2 still do not provide recommendations on diameter of manhole depending on size and depth - this could have been an ideal opportunity to include such details.</p> <p>No clarification is given on access - step irons/ladders - again ideal chance to include.</p> <p>Are manhole types C, D, E and F really needed - are they used?</p>
2.17.6	Covers to be bedded using polyester resin mortar in all road categories I, II and III - this is new - is it really required? No clarification given on access - step irons/ladders - again ideal chance to include.
2.17.8	It would be beneficial if the bar spacing or mesh size for this type of screen be prescribed.
2.18.1	1.5m min. cover to FL from top of pipe - increase from 1.2m - is this necessary? The Developer should be given the opportunity to propose alternative, eg concrete surround.
2.22.6	Introduces emergency storage and maintains the current provision of 160 litres/dwelling, which experience suggests is a reasonable requirement readily achieved. Acknowledging that this is an indicative design standard, it would be useful to identify the process / values for other types of development.

2.22.7	Identifies that phased developments may need to be discussed with SW. This is open ended and open to interpretation by the individual within the Authority - a previous source of frustration. More definition should be sought, particularly in relation to residential developments which may have long build-out programmes and invariably phased releases.
2.23 General Comment	The other problem that requires addressing is the time that it takes to get a waste water pumping station vested. The present delays experienced in the vesting of pumping stations are unreasonable and unacceptable. This may be even more onerous if a 36 month Defect Liability Period is imposed, SW accept water and drainage rates from the houses from the date of entry and therefore should be maintaining the station. If the station has been completed to the specification it is considered that the pumping station should be vested immediately. Any damage or chokes proven to be caused by the Developers should be repaired or cleared at the Developer's expense. In general the Developer does not have the expertise to maintain the station properly and often the station falls into disrepair or faults occur which eventually hold up the whole adoption process. Further consideration is required on the whole situation surrounding vesting and maintenance of pumping stations.
2.23.1	Access requirements and the vehicles to set the requirement are defined. This is welcome.
2.23.2	Alludes to suitable surfacing. Guidance to acceptable surfaces would be of use, or even reference to the waiver process which needs to be carried through to obtain approval to the likes of grasscrete finishes, which may be more sympathetic to residential development.
2.23.4	Sets out the proximity of pumping installations to property, but contains contradictory statements:- "The pumping station shall be located no closer than 15m to a property boundary... ..The distance is to be measured from the pumping station site boundary (excluding access driveway) to the nearest point on habitable buildings" - A "Property Boundary" is different from the "nearest point on habitable buildings" and the former more onerous.
2.24.1	Introduces into the main document the provisions of the April 2003 Addendum to the 1st Edition. Essentially, an emergency overflow is not to be provided. That this is linked to provision of adequate storage as identified elsewhere. SEPA will not issue consent - may be regulated using a licence under the new CAR regulations. Cannot see SEPA allowing overflow from PS under current regime!
2.25.7	It's clear from this and other references that only one inlet is the preferred arrangement. Some scope for multiple discharges to the wet well would be appreciated in design terms, if it could be proven that this would not prejudice the operation on the pumping station.
Pumping Station - Vesting	The vesting process for pumping stations is very onerous and detailed. It is highly unlikely that a Developer will have the resources or capabilities - whether external (ground worker or pump/M+E installer) or internal - to collate all the information required and pick his way through the minefield of the vesting process and provide all the details required. SW have appointed a consultant to carry out their activities in the process and there is no doubt Developers will require to do likewise - this is expensive and time consuming!! There needs to be guidance and workshops on this process. It has caused problems in the past and will in the future.
UKWIR Report 05/WW/03/6	From a reading of this report we are struggling to see how SW can use this study to justify its intended approach to SUDS adoption. The document is set at a very high level with little recourse to detail on justification of conclusions. There is little practical evidence to suggest that the use of swales or filter trenches in current practice are ineffective and the document uses data that is based on Jan 2003 data. The report does not evaluate detention basins or underground storage presumably because these facilities are not intended to provide improvement in water quality and thus are not recognised as SUDS techniques by definition. The report evaluates infiltration as a primary SUDS process and also as a secondary process in the water quality and hydraulic performance of retention ponds and other SUDS. It concludes that properly designed infiltration systems can be used effectively. Infiltration techniques have not been identified as a primary "public" SUDS option within SfS2 although the option of designing unlined ponds and basins is included. Similarly filter trenches (with and without filtration) will not be vested by SW although these were shown in the report to

be effective in terms of improving water quality and reducing peak flows where properly designed and managed.

Water For Scotland 2
Homes for Scotland Comments

Section	Homes for Scotland Comment
	DOMS documents are mentioned and are listed in Appendix A. Not in original WFS - are they critical to process and, if so, how does SLO or Developer get access to them?
1.8.3	Advises Developer to keep one copy of drawings on site for SW - why?
1.9.1	<p>Completion certificate - requires post tie-in water sample result to be provided. It has been my argument since WFS came out that, if SW do tie-in, they should carry out post tie-in flush and sample and provide certification to Developer that service connections can be done</p> <p>Is the retention of welding records and beads until the end of the DL Period really required?</p>
2.3.5	Table 6 gives typical main sizes but SW are now asking for intermediate sizes to be utilised in desin - can the table be extended to show all sizes?
2.4.6	Clause 9 refers to "dense asset information" - guidance needed on this clause!
Appendix G	Fire Authority Liaison - guidance needed on recovering costs of installed hydrants from Fire Authority and Scottish Water - shared terminal and inline.



04 December 2006

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Dear David

SEWERS FOR SCOTLAND 2 – CONSULTATION RESPONSE

Scottish Water (SW) would like to thank Homes for Scotland (HFS) for their comments on the draft version of our technical manual "Sewers for Scotland" (SfS2). This pre-public consultation exercise sought to provide HFS with an early opportunity to provide comments on the draft manual and to address and clarify key issues voiced by the developers' community.

SW understands that the content of HFS response is of a preliminary nature and is not intended to preclude further response from both individual developers and Homes for Scotland during the course of the public consultation exercise due to take place later in the year.

The section below seeks to address the key concerns raised in your response; detailed issues are addressed in the following table.

1. Production of Sewers for Scotland 2nd Edition and SUDS standards

The approach taken by SW in developing Sewers for Scotland 2nd (SfS2) edition mirrors the process and terminology used Sewer for Adoption 6th Edition, which was endorsed by the House Builders Federation. This was done to ensure consistency and to facilitate the work of developers operating across the whole of the UK.

SfS2 aim is to achieve the right balance between providing enough guidance to its users, safeguarding the integrity of the existing and future public drainage network by using best practice standards and facilitate the process of building new developments. SfS2 cannot cover all situations and does not preclude SW and developers from entering into dialogue in those occasions where the circumstances make it difficult to follow the procedures and requirements outlined in the manual. X

Scottish Water is absolutely committed to playing its part in supporting Scotland's approach to sustainable surface water management by ensuring public SUDS systems are robust and conform as closely as possible to a uniform standard across Scotland. X

During the development of our SUDS standards Scottish Water have analysed and considered the latest research in the field of sustainable urban drainage and best industry

practice in the UK. This research determined that the size of the pond can be reduced significantly from that proposed in early versions of SUDs Design Manual, while still providing appropriate levels of treatment. This allows developers to build smaller ponds and therefore reduces land take requirements.

2. Pre-vesting liabilities

Scottish Water carries out an auditing process and it is up to developers to ensure the designs comply with the standards. The developer carries the whole responsibility and needs to ensure designer, contractor and himself indemnify to SW standards.

3. Section 7 Agreements and responsibilities for road drainage

To incorporate the full SUDS concept local authorities must be encouraged to deal with the run-off from roads appropriately by providing attenuation and treatment before the water reaches the public sewer. X

Section 7 agreements are a requirement of the Sewerage Scotland Act 1968 (SSA) and the Roads Authority (like SW) cannot reasonably refuse. In England and Wales SFA6 (clause 1.12) requires a similar separate formal Agreement between the Roads and the Sewerage Undertaker, but prior to adoption the developer, as owner, is party to the agreement. The Developer will be dealing with the Council on the subject of roads and the roads drainage is an integral part of that process. X

4. Use of Section 3 notices

Section 12(2) SSA prevents an owner from connecting to the public sewer unless the intervening land is land through which the owner is entitled to construct a drain or sewer. There are only two routes by which this can be achieved, one is the service of a Notice under Section 3 of SSA following on a Section 3A Authorisation; the other is by way of a Deed of Servitude. Section 3A was designed for that purpose. A Deed of Servitude, as required in terms of the Title Conditions (Scotland) Act 2003 is not designed for this purpose. It is a fall back position and will not provide Scottish Water with a heritable right.

In terms of the Titles Conditions Act, Deeds of Servitude must show both a burdened property and a benefited property. The benefited property will normally be the development site owned by the Developer. The right to enforce the real burden lies with the person who has title and interest which will remain with the Developer and be inherited by his successors in title to the benefited property. That will often happen before Scottish Water has adopted the sewer. There is potential for conflict which is avoided by using Section 3A. X

Both the Title Conditions Act and the WEWS Act were passed in 2003. The WEWS Act is intended to apply for water and sewerage situations whereas the Title Conditions Act is not designed for that purpose. Section 3A is therefore the preferred route.

There is no statutory provision for payment of a consideration for pipe laid by way of Notice. Scottish Water will not reimburse any cost or part of a cost of this except where in land to which SSA does not apply.

5. Funding of Development Impact Assessments

All costs for speculative developments need to be paid up front by the developer.

A development is deemed speculative if the developer cannot demonstrate the following key points:

1. The development must be identified in the Local Plan,
2. The developer must have ownership / control of the land,
3. The developer must have some form of planning permission,
4. The developer must confirm the current status of his planning permission.

Once his development meets the non-speculative criteria, he can have these costs included in the Reasonable Cost calculation for Parts 2 & 3 assets for refund.

SW is only required to fund the building and runs of new models where the development meets the above criteria.

6. Adoptable SUD systems

Scottish Water is currently looking at the use of proprietary products (such as Aquacells, Stormcells and Downstream Defenders) and whether these should be used in developments. Any decision will be communicated to development sector and other interested parties.

7. Defects liability period

The 36 months defects liability period refers to SUD systems only. At the time of drafting this period was considered appropriate to allow vegetation to be established and ensure the efficiency of the system before vesting.

Scottish Water is currently reviewing this clause in view of the forthcoming SUDS manual produced by CIRIA.

I hope this response will help to clarify our position and form the basis for continuing dialogue between developers and Scottish water.

Yours sincerely



Keith Phillips
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Sewers for Scotland (SfS) 2		
Section	Homes for Scotland Comment	SW response
1.1.3	<p>if the Developer wishes to provide private drainage then why does it need to be constructed to SfS2 even though it would be connected to the public sewerage system.</p>	<p>Once connected and taken over by Scottish Water the system becomes part of the public system and should be of a consistently good standard, known to those who will work on it in future. It is a reasonable condition within Section 12(3) of the SSA Act. Even if that part of the drainage remains private the integrity of the public system must be maintained. A badly designed system connected to the public drainage could damage the receiving sewers for example by conveying too much silt or causing blockages downstream.</p>
1.1.4	<p>SW shall be entitled to refuse or defer payment of agreed contribution in whole or part if the Developer does not meet its requirements - "as SW shall in their sole discretion determine" HfS believes that it is unreasonable that SW shall have sole discretion and some recourse must be made available in the event of disagreement.</p>	<p>Section 30(3) of the WEWS Act does not allow connection unless the owner has provided such security as Scottish Water may reasonably require for performance of the owner's obligations. Section 6(1)(b) of the Reasonable Cost Regulations includes in the calculation "such other costs as Scottish Water considers reasonable and necessary in consequence of the connection".</p>
1.2.2	<p>Presumably the comment on developer responsibility for Roads drainage is a financial consideration only. Clarification is required.</p>	<p>This clause provides the developer with a clear statement on what SW has responsibility to drain and what we do not have responsibility for. Highlighting what we do not have responsibility for acts as a reminder to developers that the drainage of land, groundwater etc must be considered separately and there is no expectation that this can be included in the public surface water system. SW is not responsible for road drainage and it is up to the developer to ensure the appropriate routes are perused for a body to be responsible - either the LA or SW (via a section 7 agreement) or for it to remain with the developer.</p>

1.2.3	<p>This conflicts with clause 1.1.3 where Scottish Water are saying they will not allow drainage to be connected that is not constructed to SFS2. According to this paragraph SFS2 is a guidance document only and is open to discussion.</p>	<p>The Regulations on construction standards and Vesting etc will become part of Scots Law and developers will have a legal obligation to comply. Sewers for Scotland 2 are not part of the legal obligations, but if they are not adhered to then SW has no obligations for the systems to vest in us. Section 12 of the SSA allows us to set requirements for vesting. Sewers for Scotland 2 will assist developers in complying with the Regulations on construction standards and Vesting etc. by ensuring consistency throughout.</p>
1.3.4	<p>This statement is generally in line with published guidance (e.g. SUDS Design Manual and National Planning Policy).</p>	
1.3.5	<p>The Developer shall be wholly responsible for design and construction of sewerage including SUDS. A designer can only accept liability under his PI insurance for the design of the works, any liability on construction will lie with the developer and whoever constructed the works will be liable for the implementation of the work. As such 'design' should be inserted in line 4 before compliance. As Scottish Water is the vesting Authority and Assess through Technical Approval surely they have a responsibility to accept liability that the design is appropriate.</p>	<p>SW carries out an auditing process and it is up to developers to ensure the designs comply with the standards. The developer carries the whole responsibility and needs to ensure designer, contractor and himself indemnify to our standards</p>
1.3.6	<p>For sewers does SW really mean they will design and construct work? This is totally contrary to previous approaches. HFS would suggest that given SW have extreme difficulties coordinating their existing operations, to allow them to extend to designing and construction sewers for development would not be in the best interests of the development Sector. What are SW responsibilities if they do design and construction? Restricting application for consideration of sewerage design till after preparation of a Drainage Impact Assessment is likely to delay the overall process for delivery of a development. HFS suggests that all procedures are done in parallel. SW could delay issue of "Technical Approval" until there is formal planning consent. This would be a more pragmatic approach.</p>	<p>This is a choice open to the Developer. SW is likely to engage one of our Framework Consultants / Contractors to undertake design and / or construction at tendered rates and in accordance with our Procurement procedures.</p>
1.3.11		<p>All development prior to planning permission is deemed speculative. This clause actually refers to Drainage Assessment (SUDSWP) which should be compiled for planning purposes and not SW's Development Impact Assessment used to establish feasibility of serving the development</p>

1.3.12	<p>This in HFS view is probably one of, if not the most onerous additions to SFS2. Making a Developer liable for the conclusion of a Section 7 agreement (not carried out extensively to date) puts the Developer in a position where if it cannot secure Roads Authority approval it will be in a position where sewers draining roads will not be vested and will remain private. Timescale to complete Section 7 Agreement will likely be lengthy and costly to the Developer. Some key questions:</p> <ul style="list-style-type: none"> > Have Scotland's Road's Authorities bought into the process? > What are funding arrangements - will developers be liable for any Roads Authority costs as up front payments towards the Roads Authority liability on long term maintenance. > Will "The Construction Standards & Vesting Conditions for Sewerage Infrastructure" oblige Roads Authorities to enter into such Agreements? 	<p>This is a requirement of SSA and the Roads Authority (like SW) cannot reasonably refuse. In England and Wales SFA6 (clause 1.12) requires a similar separate formal Agreement between the Roads and the Sewerage Undertaker, but prior to adoption the developer, as owner, is party to the agreement. The Developer will be dealing with the Council on the subject of roads and the roads drainage is a part of that. Financial obligations need to be clarified. All this is best instigated by the Developer when dealing with roads.</p>
1.3.14	<p>This is a new addition that places developers with an obligation to negotiate entry to land through section 3A of the Sewerage Scotland Act. The Developer will also be obliged to serve all Notices, deal with compensation etc.</p> <p>The Developer will need to prove through submission of relevant signed documentation that the landowner has received the notice.</p> <p>The last sentence in this clause is disturbing. If a Developer follows the identified approach, provides drainage to the content of SFS2 and meets all other requirements then he should have drainage taken over by Scottish Water. This should not be discretionary as indicated.</p> <p>The use of section 3A powers for the benefit of the Developer may reduce the timescale for agreement to enter land outwith the control of the Developer and may also remove the possibility of ransom strips. It should be noted from previous experience that the right to entry under Section 3A does not restrict compensation to the levels that Scottish Water enjoy in similar circumstances. A Developer may have to pay the "market rate" for entry.</p>	<p>Section 12(2) SSA prevents an owner from connecting to the public sewer unless the intervening land is land through which the owner is entitled to construct a drain or sewer. There are only two routes by which this can be achieved. One is the service of a Notice under Section 3 of SSA following on a Section 3A Authorisation; the other is by way of a Deed of Servitude. Section 3A was designed for that purpose. A Deed of Servitude, as required in terms of the Title Conditions (Scotland) Act 2003 is not designed for this purpose. It is a fall back position and will not provide Scottish Water with a heritable right.</p> <p>In terms of the Titles Conditions Act, Deeds of Servitude must show both a burdened property and a benefited property. The benefited property will normally be the development site owned by the Developer. The right to enforce the real burden lies with the person who has title and interest which will remain with the Developer and be inherited by his successors in title to the benefited property. That will often happen before Scottish Water has adopted the sewer. There is potential for conflict which is avoided by using Section 3A.</p>
1.3.15	<p>The intent in this clause needs to be redefined. Clauses 1.3.14 and 1.3.15 should be in the guidance to ensure that permission to enter third party land is obtained in the shortest timescale for the benefit of the Developer in order to avoid delay. The option must always be available for the Developer to negotiate a private way/leave agreement at its</p>	

<p>discretion if this is the preferred route for the Developer. There is a contradiction in wording in relation to vesting and completion between the final respective sentences of clauses 1.3.14 and 1.3.15. The wording of the latter clause is correct and should also be used in the former.</p>	<p>Both the Title Conditions Act and the WEWS Act were passed in 2003. The WEWS Act is intended to apply for water and sewerage situations whereas the Title Conditions Act is not designed for that purpose. Section 3A is therefore the preferred route. There is no statutory provision for payment of a consideration for pipe laid by way of Notice. Scottish Water will not reimburse any cost or part of a cost of this except where in land to which SSA does not apply.</p>
<p>1.3.16</p> <p>Item f) refers to the possible use of oil/petrol interceptors for control of pollution - is this on public sewers and, if so, will they be adopted? If interceptors are acceptable then other pollution control devices should be accepted - i.e. Downstream Defenders!</p>	<p>The oil interceptors will be within the building's curtilage and remain the responsibility of the owner.</p>
<p>1.3.17</p> <p>Again a new introduction. If Scottish Water are refusing to accept land drainage into their system then this is fundamentally an unsustainable approach to provision of drainage. This approach introduces two pipe surface water systems within the development area. However if a pragmatic approach were used, where the end of line treatment was provided by a pond or basin then it would only be the local sewerage system that would be upsized to accommodate local land drainage. This would be a beneficial and sustainable approach to the known problems that arise from lack of suitable outlets for land drainage.</p>	<p>Section 1(1) of SSA requires Scottish Water to drain domestic sewerage, surface water and trade effluent only therefore SW has no statutory duty to drain land drainage within SSA and this is already clearly stated in SFS (and SFA6). Land drainage presents different water quality issues and may require additional treatment before discharge (E.g. if it is run-off from a nutrient rich area), therefore SW has to control access to system, quality of water, right sizing of pipes / SUDS</p>
<p>1.3.19</p> <p>Item e) requires confirmation of formal verification that development can be served - surely this comes from SW as part of development assessment processes.</p>	<p>At the end of initial feasibility contact with SW an approval in principle to the Developer to connect is issued. This requirement ensures that contact is made on all developments at the earliest stage. (See "Guide to Obtaining New Water and wastewater Services") Ensuring all the information is available to the SW staff for assessment will ensure the process is efficient as possible.</p>

<p>1.3.20 - 1.3.21</p>	<p>For larger developments the date of Completion certificate is crucial to the implementation of the defects Liability Period. The application by SW of a phased issue of Completion certificates should be permitted and reference incorporated in this clause. CCTV surveys require to be submitted as part of the "completion" process and also as part of the "adoption" process. The CCTV survey at completion stage is additional to the original process in Sfs. It is felt that a requirement for two separate CCTV surveys is unreasonable and is not necessary at completion stage. If defects are present they will be caught at adoption stage.</p>	<p>Large scale developments will require site specific negotiations / agreements. CCTV on completion will aid the developer in identifying poor workmanship by their contractor and ensure that remedial work / potential future problems are dealt with cost effectively prior to road construction and do not cause disruption to future customers. CCTV at vesting ensures that construction / vesting standards are met.</p>
<p>H+S File to be submitted. There needs to be a defined set of specific requirements on information required rather than a whole file that could contain unnecessary information.</p> <p>From previous experience the prospect of SW carrying out remedial works to repair defects to a sewer or any part thereof (pumping station?) and then recharging the Developer has to be questioned. A consequence of failure to meet specification is normally lack of vesting rather than action from SW.</p> <p>Allowing SW indiscriminate power to interfere with works that are the responsibility of the Developer is unreasonable and this clause should be removed.</p>	<p>The Health and Safety files are H & S requirement and developers should refer to HSE publications giving advice. They will be site specific for sewers, SUDS & WWPS and include ground conditions, adjacent utility locations, construction methods / materials, etc</p> <p>If the developer disagrees with SW carrying out the repairs and recharging than he/she will have to address the problem in the agreed time limit. If the developer intends for the asset to be ultimately adopted by SW, then SW must ensure that it is in good working order and built to provide the best service at the lowest cost.</p>	<p>The 36 months liability period refers to the SUDS system, at the time of drafting this period was considered appropriate to allow vegetation to be established. SW is viewing this clause in view of the forthcoming CIRIA manual. Further information on the Defects Liability Period is held within the developers guide</p>
<p>1.3.23</p>	<p>This paragraph introduces an extension to the Defects Liability Period from the previous 12 months to 36 months. This adds to the burden for maintenance on the Developer and is contrary to the general contract law period of 12 months.</p> <p>The paragraph tends to suggest that the DLP applies to surface water only although the DLP for foul sewers is not prescribed elsewhere.</p>	<p>Large scale developments will require site specific negotiations / agreements</p>
<p>1.3.24</p>	<p>As referred to under clauses 1.3.20 and 21 above in large scale development where phased implementation is likely, will Scottish Water vest sewers on the basis of the DLP for individual sewers or areas or will vesting take place at end on total development? This needs to be clarified.</p>	<p>Large scale developments will require site specific negotiations / agreements</p>

1.3.25	This will require separate application for vesting of surface and foul sewers. Why is this necessary? See comments on 1.3.20 - 2 no CCTV required now!!	Different DLPs will require to be closely managed by both parties
1.3.29	What is involved in "leakage testing" of a pond? This needs to be identified, or a reference made to specific document that details requirements. Notice period of 10 days to SW for inspection of test is unacceptable - notice period needs to be shorter - say 5 days max.	A typical test is called a drop test and involves carrying out a water balance for the pond - measuring all flow components and checking they add up. See Clause 5.7.12 in SFS2 taken from CESWI 6 clause 7.19 Five working days is acceptable and the manual will be amended accordingly
1.3.31	It is appropriate for Scottish Water to pass on Ministerial Guidance on Sustainable development to the Developer? What does this mean and what are the implications?	Scottish Water has a statutory duty in terms of Section 51 of the Water Industry (Scotland) Act 2002 to act in the way best calculated to contribute to the achievement of sustainable development. It must have regard to the statutory guidance. It is therefore mandatory for this to be passed on to the Developer. A similar clause has been included within the contract which SW holds with Scottish Water Solutions
1.3.33	Specific guidance must be included on what information is required if the site is contaminated. Does SW wish to see the complete SI report and make judgement on what measures, if any, are required?	SW requires similar information in similar format for drinking water infrastructures as stated in WFS. This clause has been included to ensure developers make us aware if there is any contamination in the area to be drained. A dialogue will be opened and the process and solutions to be followed will be by site by site basis.
Table 1	SW indicates that the permission of the riparian owner is required for discharge. This is seen as introducing further uncertainty and unnecessary delay. This item should be removed from the list of requirements. Estimated value of sewerage work plus SUDS and Pumping Stations to be submitted - why?	The Riparian owner will, in the absence of any agreement to the contrary, own to the middle of a river or to low tide. An agreement to a discharge is therefore needed. The estimation of value of the system is a WIC reporting requirement.

<p>Figure 1</p>	<p>Financial Contribution Phase</p>	<p>By restricting financial contribution to the end of the Defects Liability Period, the SW contribution to the Developer of sewerage provision costs will be unreasonably delayed. A staged contribution should be introduced with a final payment at the end of the Defects Liability Period. In addition if connections are made to sewers in the period between completion and vesting, SW will receive an income through their charges. This process benefits SW at the expense of the Developer. Presumably the comment on developer responsibility for Roads drainage is a financial consideration only.</p>	<p>Contribution payment will be in accordance with "Guide to Obtaining New Water and Wastewater Services"</p> <p>SW does not have a duty to drain roads</p>
<p>2 General</p>	<p>pre DIA submission consultation is a positive and practical step to meet timescales but it is not always possible due to SW resources. How is SW going to resource this?</p>	<p>Where SW is committed to implementing a suitable policy. Resources will be made available and put in place.</p>	<p>Where SW is committed to implementing a suitable policy. Resources will be made available and put in place.</p>
<p>2.1</p>	<p>There is considerable concern over the vesting of surface water sewers where a non adoptable" SUDS feature is employed. Does this mean all surface sewers connected to the SUDS feature will become private? And if so, what is the impact on RCCs and adoption of roads where such sewers run below roads. These points are fundamental and need more detailed discussion with all affected parties.</p>	<p>SW will not be adopting parts of a sewers connected to other parts which are not built to the appropriate standard as this could impact on the operation and integrity of the rest of the system.</p> <p>Scottish Water is currently examining the details of adopting existing and legacy SUDS systems through an independent review which will assess their compliance with the Sewers for Scotland 2 and their operational effectiveness. This process will help existing systems move towards public ownership.</p>	<p>SW will not be adopting parts of a sewers connected to other parts which are not built to the appropriate standard as this could impact on the operation and integrity of the rest of the system.</p> <p>Scottish Water is currently examining the details of adopting existing and legacy SUDS systems through an independent review which will assess their compliance with the Sewers for Scotland 2 and their operational effectiveness. This process will help existing systems move towards public ownership.</p>
<p>2.1.1</p>	<p>This clause limits the provision of SUDS schemes to statutory surface water sewers, retention ponds, detention basins and underground storage. This is restrictive, especially where small sites have limited availability to allocate land for a pond or basin. SW encourages the use of all types of SUDS treatment/storage but limits the use on public sewerage systems. This leaves a considerable element of SUDS provision outwith the control of SW and consequently within the ownership of others for maintenance. This is clearly unsustainable as a significant portion of treatment lies with the individual or private maintenance company where</p>	<p>This is a matter for the regulations and not within the scope of the technical manual.</p> <p>Scottish Water is the drainage authority and has responsibilities for only part of the whole SUDS concept. The surface water flow from developments and how it is treated is a responsibility for all stakeholders including developers, landowners, local authorities and SEPA</p> <p>To incorporate the full SUDS concept local authorities must</p>	<p>This is a matter for the regulations and not within the scope of the technical manual.</p> <p>Scottish Water is the drainage authority and has responsibilities for only part of the whole SUDS concept. The surface water flow from developments and how it is treated is a responsibility for all stakeholders including developers, landowners, local authorities and SEPA</p> <p>To incorporate the full SUDS concept local authorities must</p>

<p>control is limited on their activities to prolong the life of the private system.</p>	<p>be encouraged to deal with the run-off from roads appropriately by providing attenuation and treatment before the water reaches the public sewer.</p> <p>Developers too must also consider ways to reduce surface water run-off at source and integrate sustainable features throughout their schemes.</p> <p>As the drainage authority Scottish Water has responsibilities for only part of the whole SUDS concept.</p> <p>The surface water flow from developments and how it is treated is a responsibility for all stakeholders</p> <p>The option for SW to enter into site specific agreements for systems not meeting our standards exists but we will reserve the right to set what we deem to be the most appropriate conditions.</p>
<p>2.1.2</p> <p>This paragraph opens up the opportunity for a Developer to propose other types of SUDS provision. However in defining a sewer as a pipe, pond, basin, underground storage the last sentence in effect leaves out the opportunity to provide alternative sources of SUDS provision. Only one of the three SUDS promoted by SW is designed to provide water quality improvement (clause 2.8.28 states "Detention ponds should provide a minimum permanent pool volume equal to 1 x Vt..."). There are no water quality criteria for detention basins (Note: "Extended detention basins that are designed to provide water quality improvement are not covered or included in Sfs2. Underground storage provides no water quality improvement</p>	<p>Scottish Water must have access to the public SUDS at all times for both planned and unplanned maintenance. This also applies to public sewers and drinking water pipes which cannot be built on/under private land</p>
<p>2.1.4</p> <p>Restricting SUDS to be vested to passive public open space will reduce the availability of land for development and will be subject to planning authority approval.</p> <p>The implication is that additional land will need to be required to give the same development level, thus increasing cost to developer and infringing on land that may not have been allocated for development in the statutory planning process.</p> <p>In order to maintain levels of development additional land will have to be allocated under a land allocation system that is already overstretched.</p>	<p>During the construction phase of a development a large amount of sediments will enter the system and impact on its effectiveness. Prior to SW accepting any assets they</p>
<p>2.1.5</p> <p>This clause offers and extends SUDS to be vested to that part of the scheme that will serve flood protection. This clarifies a number of previous questions that suggested SW would only vest up to limits of their requirements (1-30yr event).</p> <p>The same comment as for clause 2.1.4 applies for location in passive public open space.</p>	<p>2.1.6</p> <p>This clause is unacceptable. The need for the desiting of SUDS systems is questioned and needs to be clarified.</p>

		require the systems to be in a fit state for adoption and fully operational. The desilting of a SUDS system before adoption is equivalent to ensure a pipe system is free of debris before adoption. This is part of the reinstatement process as recommended on the forthcoming SUDS manual developed by CIRIA
2.1.7	It is not understood how pollution from a development can be greater than form "normal" residential development. How will this be determined? This paragraph seems to be addressing SEPA concerns on discharges from industrial/commercial development where additional pollutant loading is envisaged and more than one level of treatment may be required. Does this mean that SW will vest swales and filter trenches etc within industrial areas. This needs to be clarified.	This paragraph addresses SEPA concerns on discharges from industrial/commercial development where additional pollutant loading is envisaged and more than one level of treatment may be required. In these situations and where the standard components are not acceptable, the design of the public SUDS will be agreed on a case by case situation.
2.1.10	It is not thought that SEPA will issue consent for a surface water outfall. Outfalls will normally be controlled by a "GBR" under the new Controlled Activities (CAR) Regulations. This needs to be clarified.	According to CAR Surface water discharges from >1,000 residential houses, >1,000 car park spaces, all industrial estates, drainage from major roads/motorways will have to be consented under a simple licence. SEPA can provide you with further details
2.2.2	The use of prescriptive "greenfield" runoff linked to Appendix XI may limit the Developer's opportunity to use the most suitable criteria for calculation. Preliminary calculations suggest that the SW approach is conservative compared to other calculation methods.	The general principles of river basin management are aimed at reverting to the natural flow and this principle is therefore appropriate and follows general CIRIA guidance on calculating runoff. We have utilised a recognised simplified method which can be used as a rule of thumb but is a maximum run-off rate. Other more detailed methods may be used to reduce the run-off rate.
2.2.4	How does a Developer calculate Whole Life Cost (WLC)? Does SW propose a standard procedure? None indicated in the document. Will Developers be allowed to use their own choice of approach? UKWIR report/WW/06/6 recognises that there is limited data of WLC. This will be complex to calculate and difficult to justify. Clarification is required.	The water industry developed a Whole Life Costing tool and the research report provides both an overview of WLC of SUDS and a framework to use. The wider this is used and figures added into the framework, the more accurate Scotland's data will be on the true cost and effectiveness of these systems. Guidance on the WLC concept is also provided in the forthcoming CIRIA SUDS manual. SW is considering clarifying this clause further.

2.2.5	Types of public SUDS for consideration is very restrictive and will cause huge problems for small and medium size sites say less than 70 houses. Further consultation is required before the document is released.	This is a matter for the regulations and not within the scope of the technical manual. However Scottish Water is looking at the use of proprietary products (such as Aquacells, Stormcells and Downstream Defenders). Any decision will be communicated to development sector and other interested parties.
2.2.6	SW suggest that private systems should use infiltration systems while they restrict systems for vesting. This is not taking a holistic approach as suggested in Section 2.1. The use of infiltration systems is recommended but they will not be vested - under present practises this would suggest the whole SW network will remain private which is unacceptable.	As stated previously the amendment to SSA to include SUDS was not intended to make SW responsible for all elements of the SUDS treatment train. Scottish Water is the drainage authority and has responsibilities for only part of the whole SUDS concept. The surface water flow from developments and how it is treated is a responsibility for all stakeholders. To incorporate the full SUDS concept local authorities must be encouraged to deal with the run-off from roads appropriately by providing attenuation and treatment before the water reaches the public sewer. Developers too must also consider ways to reduce surface water run-off and integrate sustainable features throughout their schemes.
2.3.1	The comments relating to clauses 1.3.5 and 1.3.6 apply here as well. This clause contradicts itself by stating that the Developer is responsible for all aspects of the design but then advises that the Developer may negotiate with SW to carry out the design and/or construction on their behalf! The question of whether SW have sufficient resources is again relevant here.	The same comment applies made for clause 1.3.5 and 1.3.6 We are required by our Regulator to offer an in-house service. How we decide to provide this service and the internal processes to support this function are entirely for SW to decide and is not part of this consultation.
2.3.6	It is considered that the provision of ponds in larger development areas should be targeted to controlling provision of SUDS schemes into sub catchments. This will reduce the provision of oversized pipes to allow collection to a main treatment pond(s). The approach being adopted by SW is unsustainable as it takes all flows to a single point and restricts developer choice. Why 3 ponds in series? This is not always possible due to topography/land take.	Several ponds in series compared to a single large pond, provides hydraulic, water quality and ecological benefits. The wording is such that it is a preference rather than a requirement due to the fact that the topography or land take may not allow this in every case.

2.4.4	SW recommends (item g) taking account of future developments in the design. If this is the case SW should take this into account when calculating reimbursement sums.	SW understands the need to reimburse these costs and are reviewing this anomaly with our regulator
2.4.6	The need for completed manhole cards to be submitted with record drawings as per example is totally excessive. This requirement is new and has never been submitted before. SW need to justify this requirement	This is a requirements for our data capture / management team and aid improvements in our asset register
2.6.5 - 2.6.6	These clauses state a need for a 10% allowance for increase in paved areas within a catchment and 10% for climate change. These figures seem excessive and may result in over design. Can SW substantiate these figures?	These recommendations have come from HR Wallingford, the industry experts in terms of hydraulic requirements of sewerage systems. Compared to the UK Climate Change Impact Programme model 10% is probably a very conservative estimate.
2.6.9	This paragraph deals with development on the flood plain. The Developer seems to be charged with pulling together comments of the Flood Prevention Officer and SW. Care will need to be exercised to ensure adequate communication between all parties takes place.	SW agrees with HFS view
2.6.10	SW is suggesting that modelling of the surface water sewerage system may be required. It is understood that SW have been tasked with picking up the cost of all modelling, where an existing model does not exist. Processes will need to be put in place that demonstrate that Developers are not being asked to fund modelling that may be the responsibility of SW.	Developers are required to cover the costs of building and running models for speculative developments. Once a development meets the non-speculative criteria, the developer can have the costs included in the Reasonable Cost calculation for Parts 2 & 3 assets for refund.
2.6.16	This clause suggests that design of surface water sewers should be implemented on the basis of failure of private SUDS systems. While this is a pragmatic approach it removes the responsibility from private owners to maintain their systems. This is not a sustainable approach to SUDs provision resulting in unnecessary additional capital cost of SUDS provision.	SW is seeking to ensure the safety of the drainage system for the general public. This clause does not remove the responsibility of the private owner to look after their system.

<p>2.7.3</p> <p>This clause suggests that 1Vt is adequate treatment volume, but opens up the position where SEPA may increase treated volume. This puts the Developer in a position where SW will ultimately vest system, but SEPA may have control of treatment volume and associated processes.</p> <p>Key questions:</p> <ul style="list-style-type: none"> > Will SW vest if SEPA insist on higher treatment volume? > Is this increase in treatment volume likely to be limited to commercial/industrial development only or will residential be affected? > Careful consideration of cost implication will need to be addressed. <p>In mixed use development the suggestion is that SUDs systems are kept separate for residential and commercial/industrial areas. This may not be the most sustainable approach and will result in unnecessary additional cost.</p> <p>The most appropriate system should be identified specific to each development.</p>	<p>The design must have agreement from all parties prior to construction. Where higher treatment volumes are required SW will enter into discussions with both SEPA and the developer to reach appropriate agreement. The increase in treatment volume is likely to be limited to commercial/industrial development (classified by SEPA as medium/high risk).</p>
<p>2.7.4</p>	<p>SUDS systems serving industrial sites will have to be built to different standards because of the high likelihood of runoff contamination. This is also a preference and not applicable to all cases, discussion will take place between SEPA, SW and the developer to ensure the most appropriate solution is employed.</p>
<p>2.7.5</p>	<p>Ponds in series maximise water quality and other benefits, SW is aware that this will not be possible at all sites that is why this clause is expressed in terms of a preference a rather than a rule.</p>
<p>2.8</p>	<p>This is a matter for the regulations and not within the scope of the technical manual.</p> <p>It is important to remember Scottish Water is the drainage authority and has responsibilities for only part of the whole SUDS concept. The surface water flow from developments and how it is treated is a responsibility for stakeholders.</p> <p>To incorporate the full SUDS concept local authorities must be encouraged to deal with the run-off from roads appropriately by providing attenuation and treatment before the water reaches the public sewer.</p> <p>Developers too must also consider ways to reduce surface</p>

		<p>water run-off and integrate sustainable features throughout their schemes.</p> <p>With particular regard to end of pipe infiltration trenches all evidence to date indicates that these have a high failure rate compared to detention basins and ponds.</p> <p>The development of our SUDS standard was based on results of latest research in the field of sustainable urban drainage and best industry practice in the UK and ensures the systems will be operate efficiently and appropriately.</p> <p>The 3m route will allow our maintenance vehicles to gain access to all areas. The forthcoming CIRIA manual suggests a 3.5 m walkway therefore this figure may have to be reviewed further in light of industry best practice.</p>
2.8.2	<p>The provision of a bypass sewer will significantly increase the cost of constructing ponds. This is provided to allow SW to divert flows during operation.</p> <p>Alternative approaches to maintenance should be discussed to give the most pragmatic approach to pond design.</p> <p>A 3m wide walkway all round is excessive - too much land take will be required to accommodate this requirement. Pond dimensions are sufficient for larger ponds but are likely to be over prescriptive for smaller ponds associated with smaller developments.</p> <p>A more pragmatic approach would be to allow pond sizes to vary according to development size and reduce such things as forebay length accordingly.</p> <p>Further discussion is needed.</p>	
2.8.5	<p>The location of ponds etc should be development specific, rather than at a prescribed location. End of line ponds for the whole development area will gravitate all flows to one location rather than target treatment to sub catchments.</p> <p>This will significantly increase pond and sewer sizes and will result in increased capital cost. Again as already stated 2 or 3 ponds in series are not always possible.</p>	<p>SW agrees that the location of ponds should be development specific and does not believe the standards are forcing developers to deal with the total flow at the end of the sewerage network prior to discharge.</p> <p>The statement regarding avoiding the proliferation of ponds does not refer to their position but to their number.</p>
2.8.8 - 2.8.9	<p>SW suggests that all ponds should be a minimum of 30 metres from the nearest house boundary. This is extremely prescriptive and no justification is made for this distance. This needs further discussion/explanation.</p> <p>If a careful risk assessment is undertaken and appropriate consideration is given to safety etc then there is no apparent need to locate ponds remote from development.</p>	<p>SW has taken the concerns of developers firmly on board, the current 30-metre rule has been reassessed and will be relaxed in view of the requirement for the provision of fencing. Additional health and safety provisions will include an access route around the pond separating properties from the asset and the completion of an appropriate risk assessment.</p>
2.8.10	<p>Max water level 500mm above lowest FFL. Where does this freeboard come from and how was it determined? Is this technically correct?</p>	<p>This standard is based on the assessment of the flooding risk for new properties should the pond overflow and is</p>

2.8.13	Can inlet structure incorporate sump for silt build up?	<p>meant to safeguard the interest of new householders. 500 mm is a commonly used figure with regards to this criteria and follows industry best practice.</p> <p>No. This would cause problems for draining down and incur high maintenance costs in terms of regular monitoring / emptying. The sedimentation forebay is where silt should be retained and removed.</p> <p>See comments above</p> <p>SW determine that their anticipated maintenance activities necessitate the need for a bypass which is considered best design practice and fulfils CDM requirements</p>
2.8.14 - 2.8.15 - 2.8.16	Bypass arrangement has been discussed earlier. The use of bypasses as a standard is unacceptable. These should only be incorporated where careful thought to maintenance activities necessitate their use. Care will need to be exercised where the pond is constructed within areas of flat topography. This is relevant where SW suggest the inlet should be above the 1 year water level of the pond. Forebay base in concrete - not normally done this way! Will the Developer be given the opportunity to use alternative arrangements, e.g. Reno Mattress?	<p>Concrete is required to provide a firm base for the access of sediment removal equipment e.g. mini excavator, dumper truck. Concrete base will provide safe access and minimise risk of damage. Alternative arrangements in exceptional circumstances may be discussed on a site by site basis.</p>
2.8.22 - 2.8.23	Design volumes seem excessive being calculated on a 50 year storage volume. This seems to be to reduce SW maintenance and not to suit individual criteria for developments. This may result in oversized forebays. Not sufficient detail on what "throttle controls" will be acceptable to SW for adoption	<p>The sizing of the forebay is currently being reconsidered in view of the forthcoming CIRIA manual</p> <p>Throttle controls types acceptable to Scottish Water are outlined in clauses 2.10.11, 2.10.12 and 2.10.13</p>
2.8.25	1 in 30 year flooding to "any part of the site" not "dwelling" seems a very onerous condition. SW needs to justify the reasons for extending Developer obligation. The provision of a drain to draw the pond down is not always necessary. The pond could be pumped out for limited volumes to reduce excavation and upfill requirements. This is only introduced to reduce SW maintenance requirements. Some latitude is required on pond draw down where the pond is constructed in an area of flat topography. This will avoid excessive upfill	<p>SW must ensure all our assets perform to the industry minimum standard which in this case 1 in 30 year storm. Therefore the system must be able to contain a 1 in 30 storm event.</p> <p>The provision of a drain down facility is in line with industry best practice as outlined in the forthcoming CIRIA manual.</p>

	<p>to development and therefore high capital cost. Unless there is a prescriptive maintenance regime in operation there will be a significant liability of pollution in use.</p>	
2.8.26	<p>Drawdown detail may be difficult depending on topography – it should not be insisted upon for every pond.</p>	<p>The alternative of pumping will impose additional expense in terms of the operation and management of the asset. In exceptional circumstances alternatives may be discussed. This clause is intended to encourage infiltration at low flow where achievable.</p>
2.8.31	<p>SW interest in infiltration and requirement for submitting plans ; "encourage infiltration" from ponds but won't factor in design/vesting; have taken infiltration away from detention basins contrary to SW information in March 2006. Clarification is required.</p>	
2.8.32	<p>Permanent access for maintenance at 3m wide all round pond seems excessive</p>	<p>This is a requirement to allow SW staff and machinery to maintain these assets in a safe and effective working environment. The forthcoming CJRIA manual suggests a 3.5 m walkway therefore this figure may have to be reviewed further in light of industry best practice.</p>
2.8.37	<p>The provision of barrier fencing for the Defect Liability Period and longer will place all safety in the hands of the Developer. Care needs to be taken here to assess Developer liability with flexibility permitted in achieving compliance by risk assessment and inclusive of good landscape design.</p>	<p>Until an asset vests in SW all liabilities associated with the asset will remain with the current owner until the vesting stage.</p>
2.8.46	<p>1:10 gradient for 2m (each side water's edge) make pond larger - is this really required?</p>	<p>The UKWIR research recommends that to increase the level of safety ponds should be designed with a shallow slide slope both above and below the water level for some distance into the pond. This will ensure that the boggy margins created will dissuade people from entering</p>

2.9	<p>Similar comments apply as for ponds.</p> <p>The UKWIR Document on WLC suggests that detention ponds work best in areas of high infiltration.</p> <p>Careful consideration on the use of detention basins will have to be undertaken where the bulk of subsoil is either clays or glacial tills.</p> <p>This clause emphasises the need for care in earthworks design and flooding effect in the event of failure.</p> <p>An appropriate return period in respect to adjacent watercourse levels should be specified by the Flooding Authority for detention basins as it is with ponds.</p> <p>The requirement that the base of detention basins should be at a higher level than the top of the bank of the watercourse at the point of discharge may rule out this option at many sites.</p>	<p>To decrease the risk of groundwater contamination adoptable detention ponds are required to be lined therefore the level of infiltration is not as relevant.</p> <p>agreed</p> <p>This is Scottish Water requirement referring to the basin's design in terms of its operation rather than a requirement linked to flood prevention.</p> <p>This design standard ensures that backing up from a watercourse is avoided as this would prevent effective drainage of sewer system</p> <p>Man entry is required to enable safe construction, inspection and maintenance activities to be carried out within the storage chamber.</p> <p>At the time of production of this draft (6) this clause only applied to pre fabricated underground storage structures such as storage tanks.</p> <p>Scottish Water is currently looking at the use of proprietary products (such as Aquacells, Stormcells and Downstream Defenders). Any decision will be communicated to development sector and other interested parties.</p>
2.9.10		
2.9.11		
2.10.4	<p>Clarification is required on the need for man entry requirements to underground storage facilities</p>	
2.10.5	<p>Advises that "pre-fabricated structures" are acceptable for vesting - this is not being accepted at present as SW currently apply the draft guidelines!</p>	
2.10.19	<p>No guidance is given on when and where ventilation will be required. Some further guidance is required here.</p>	<p>All detention tanks must be vented to prevent covers being blown off during filling. In a public area the vent should be well above ground level and consideration should be given to avoiding odour problems. Vents are not huge structures and careful design e.g. dummy street lights have been used in some places.</p>

2.13.2	Table is confusing, does it relate to offset from edge of pipe or centreline?	Clause 2.14.3 states that "The Stand-off Distance is the minimum clearance required in every direction of the horizontal plane." Therefore the standards in the table relate to either side of the pipe. This is also in line with the standards in SFA6
2.13.3	Confusing, how does this relate to table? SW need to redefine	Same clause as in Sfs1 (2.4.3)
2.13.5	It may be impossible to locate all sewers in roads or public open space and particularly if the existing available sewer for connection does not fit in with the best development layout. It is suggested that "where reasonably practical" should be included in the paragraph to reflect site specifics.	SW cannot have public sewers in private gardens as this would increase liability and restrict maintenance activities. The design of development layout should take cognisance of this requirement.
2.13.12	For flatted developments the location of kitchens and bathrooms needs to be considered. If these are to the rear, it would be beneficial to run drains round blocks rather than underslab drainage for future maintenance. It is suggested that "where practical" should be added before each block of flats in the first line	The current clause in the first edition of Sfs is being successfully complied with in most flatted developments. All exceptions will be dealt with on a case by case basis.
2.14.1	In certain circumstances it has proven necessary to construct a multi storey flatted development over a new sewer because of location of existing sewer and boundary of an adjacent property. Scottish Water has in the past taken a pragmatic view in these circumstances. It would be beneficial if "Where practical" to be introduced before "new sewers" in the first line.	The clause already states that when it is not practicable to avoid building a new development over a sewer SW is willing to enter into an agreement.
2.14.2	Is this paragraph necessary given the content of clause 2.14.1?	SW is reviewing this clause.
2.14.3	The table in clause 2.13.2 is confusing. Clarification required as discussed above.	Clause 2.14.3 states that "The Stand-off Distance is the minimum clearance required in every direction of the horizontal plane." Therefore the standards in the table relate to either side of the pipe. This is also in line with the standards in SFA6
2.14.5	The Protected Strip needs to be defined. Is this the normal area required by SW that remains undeveloped?	Yes. This area will also require restricted planting
2.17	Manhole details in Sfs2 still do not provide recommendations on diameter of manhole depending on size and depth - this could have been an ideal opportunity to include such details. No clarification is given on access - step irons/ladders - again ideal	SW will review this section of the manual in light of HFS comments

	chance to include. Are manhole types C, D, E and F really needed - are they used?	
2.17.6	Covers to be bedded using polyester resin mortar in all road categories I, II and III - this is new - is it really required? No clarification given on access - step irons/ladders - again ideal chance to include. It would be beneficial if the bar spacing or mesh size for this type of screen be prescribed.	This clause is equivalent to clause 2.9.8 of Sewers for Adoption 6 th edition and is considered best practice. SW will consider providing further clarification on the access. SW is considering HFS comments
2.17.8	1.5m min. cover to FL from top of pipe - increase form 1.2m - is this necessary? The Developer should be given the opportunity to propose alternative, eg concrete surround.	There have been numerous occasions where sewer tails conflicting with other utilities (i.e. water main) - this specification reduces the likelihood of this issue reoccurring.
2.22.6	introduces emergency storage and maintains the current provision of 160 litres/dwelling, which experience suggests, is a reasonable requirement readily achieved. Acknowledging that this is an indicative design standard, it would be useful to identify the process / values for other types of development.	This standard will be determined by SW with regard remoteness, our response times, availability of plant, etc. This can only be assessed on an ad hoc basis
2.22.7	Identifies that phased developments may need to be discussed with SW. This is open ended and open to interpretation by the individual within the Authority - a previous source of frustration. More definition should be sought, particularly in relation to residential developments which may have long build-out programmes and invariably phased releases.	SW is trying not to be too prescriptive as larger developments will have different requirements depending on a multitude of factors. For large scale developments - site specific legal agreements may be required
2.23 General Comment	The other problem that requires addressing is the time that it takes to get a waste water pumping station vested. The present delays experienced in the vesting of pumping stations are unreasonable and unacceptable. This may be even more onerous if a 36 month Defect Liability Period is imposed. SW accepts water and drainage rates form the houses from the date of entry and therefore should be maintaining the station. If the station has been completed to the specification it is considered that the pumping station should be vested immediately. Any damage or chokes proven to be caused by the Developers should be repaired or cleared at the Developer's expense. In general the Developer does not have the expertise to maintain the	SW is working to address this concern by exploring the possibility of setting up agreements with developers to ensure a quick response in emergency situations and appropriate maintenance between commissioning and vesting. The 36 months Defect liability period refer to surface water system only (see comment to clause 1.3.23)

	station properly and often the station falls into disrepair or faults occur which eventually hold up the whole adoption process. Further consideration is required on the whole situation surrounding vesting and maintenance of pumping stations.	
2.23.1	Access requirements and the vehicles to set the requirement are defined. This is welcome.	
2.23.2	Alludes to suitable surfacing. Guidance to acceptable surfaces would be of use, or even reference to the waiver process which needs to be carried through to obtain approval to the likes of grasscrete finishes, which may be more sympathetic to residential development.	SW will take this comment on board. Guidance may be provided in the future and/or on a case by case basis
2.23.4	Sets out the proximity of pumping installations to property, but contains contradictory statements:- "The pumping station shall be located no closer than 15m to a property boundary... The distance is to be measured from the pumping station site boundary (excluding access driveway) to the nearest point on habitable buildings" - A "Property Boundary" is different from the "nearest point on habitable buildings" and the former more onerous.	The clause refers to the nearest property boundary point and is the same as clause 2.18.3 in SFA 6 th .
2.24.1	Introduces into the main document the provisions of the April 2003 Addendum to the 1st Edition. Essentially, an emergency overflow is not to be provided. That this is linked to provision of adequate storage as identified elsewhere. SEPA will not issue consent - may be regulated using a licence under the new CAR regulations. Cannot see SEPA allowing overflow from PS under current regime!	Indeed, in addition any consent would be in the form of a complex licence attracting an annual fee
2.25.7	It's clear from this and other references that only one inlet is the preferred arrangement. Some scope for multiple discharges to the wet well would be appreciated in design terms, if it could be proven that this would not prejudice the operation on the pumping station.	SW considers these standards normally easy to achieve, however we may consider a different approach in exceptional circumstances.

<p>Pumping Station - Vesting</p>	<p>The vesting process for pumping stations is very onerous and detailed. It is highly unlikely that a Developer will have the resources or capabilities to undertake their work. Whether external (ground worker or pump/M+E installer) or internal - to collate all the information required and pick his way through the minefield of the vesting process and provide all the details required.</p> <p>SW has appointed a consultant to carry out their activities in the process and there is no doubt Developers will require to do likewise - this is expensive and time consuming!</p> <p>There needs to be guidance and workshops on this process. It has caused problems in the past and will in the future.</p>	<p>Developers have the option to employ SW's contractor to</p>
<p>UKWIR Report 05/MW/03/6</p>	<p>From a reading of this report we are struggling to see how SW can use this study to justify its intended approach to SUDS adoption.</p> <p>The document is set at a very high level with little recourse to detail on justification of conclusions. There is little practical evidence to suggest that the use of swales or filter trenches in current practice are ineffective and the document uses data that is based on Jan 2003 data.</p> <p>The report does not evaluate detention basins or underground storage presumably because these facilities are not intended to provide improvement in water quality and thus are not recognised as SUDS techniques by definition.</p> <p>The report evaluates infiltration as a primary SUDS process and also as a secondary process in the water quality and hydraulic performance of retention ponds and other SUDS. It concludes that properly designed infiltration systems can be used effectively.</p> <p>Infiltration techniques have not been identified as a primary "public" SUDS option within SFS2 although the option of designing unlined ponds and basins is included. Similarly filter trenches (with and without filtration) will not be vested by SW although these were shown in the report to be effective in terms of improving water quality and reducing peak flows where properly designed and managed.</p>	<p>Discussions during the scoping of the sewers of the Scotland document very clearly came to the conclusion that Swales were excluded on the basis that they were largely provisions for roads drainage and not for domestic stormwater run-off. In fact it was pointed out that the normal depths of a Swale at around 400 mm was insufficient to enable domestic stormwater run-off to be piped into it.</p> <p>With regards to filter trenches all the evidence to date indicates that these are relatively high risk suds features compared to detention basins and ponds.</p>

improving living in scotland



DL/LS

12 December 2006

Keith Phillips Esq.
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Dear Keith

Sewers for Scotland 2 – Consultation Response

Thank you for your letter and enclosed response schedule of 4 December 2006 which we received yesterday in reply to our submission made to Scottish Water on 12 September.

You have responded in some detail for which we are grateful. We shall no doubt wish to consider a more detailed reply to the Scottish Water comments in due course once our working group members have had the opportunity of studying your letter and accompanying schedule.

I will write to you again.

Yours sincerely

A handwritten signature in black ink, appearing to read "David Little".

David Little
Head of Technical Services



6 March 2007

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Dear Keith

Sewers for Scotland 2 – Consultation Response

Following your SW response letter and schedule of 4 December 2006 and subsequent to my letter of acknowledgement of 12 December I can confirm that HfS is now in a position to make further comment as outlined in detail on the attached schedule.

In making further comment advantage has been taken of the continuing dialogue between SW and HfS, and other stakeholders at the various meetings held subsequent to your letter.

Your letter referred to key concerns raised in our original consultation response submitted in September 2006 and I comment further, on the contents of your letter, as follows:-

1. Production of Sewers for Scotland 2nd Edition and SUDS standards

Para 1 – It is not correct to state that Sewers for Adoption 6th Edition was endorsed by the Home Builders Federation (HBF). This document states that HBF were represented at joint discussions on the guide. The section on SUDS in this document is quite limited in scope no doubt due to failure to agree on much of the detail necessary in SUDS provision and as a consequence of lagging SUDS legislation in England and Wales.

2. Pre-vesting liabilities

Noted, but the spelling out of responsibility has caused some confusion and may require further clarification.

3. Section 7 Agreements and responsibilities for road drainage

Not many of these agreements appear to have been concluded under SSA in past ad hoc arrangements within the public sector.

Notwithstanding the foreseen difficulty that was expressed on both sides at our meeting on legal issues at Castle House on 12 February it does seem that SE sees a clear need for these agreements in future. Since developers can only be expected to play a passive role in this process clear guidance from SE will be required for all stakeholders.

4. Use of Section 3 notices

It was agreed at the above meeting at Castle House that provision for both the Deed of Servitude and the notice route could be accommodated to satisfy both HfS and SW subject to appropriate wording. Further advice is necessary from SW legal services on appropriate wording.

5. Funding of Development Impact Assessments

Noted.

6. Adoptable SUD systems

Noted.

7. Defects liability period

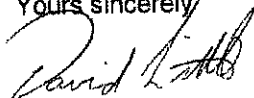
Noted.

One other key issue which was not listed in your letter is the question of an all or nothing approach to SUDS adoption and the prospect of private sw sewers. We would point to recent developments in England and Wales regarding the widespread public and government rejection of private sewers and the need to bring these within water authority responsibility for future management and maintenance.

A pragmatic and flexible attitude by all stakeholders is key to successful SUDS implementation and we support continuing dialogue between us and others in achieving this goal.

We understand that the long awaited public consultation is now imminent (end of March?) and that the next SW/HfS meeting is scheduled for Castle House on 23 March at 10.00am.

Yours sincerely

A handwritten signature in black ink, appearing to read 'David Little', written in a cursive style.

David Little
Head of Technical Services

HOMES FOR SCOTLAND

SW/HfS Consultation on Sewers for Scotland 2 (SFS2) and Water for Scotland 2 (WFS2)

HfS Comments on SW (Keith Phillips) Response Schedule of 4th December 2006

No	Section	Comment
1.	1.1.3	<p>The implications of reference to "the private sewer system" remain unclear and subject to debate under the SW contention, that has been recently challenged, that either the whole surface water system will be adopted or none of it will be in the event of private SUDS.</p> <p>Developers will, as a general rule, wish to minimise private sewers and maximise sewers for vesting.</p> <p>In the event that there is a private system does this mean it has to be designed and constructed properly but not necessarily to SFS2? The concerns about silt entering the system could easily be addressed by introduction of a silt trap or disconnecting chamber as presently applies to in curtilage private drainage.</p>
2.	1.1.4	<p>Mere SW reference to legal clauses is not helpful to explanation and therefore adds to confusion.</p> <p>This clause refers to SW payment of sewer contribution. In any event under SSA is the sewerage not in effect provided by the developer under contract to SW, in Which case SW is the owner.</p> <p>There is no SW entitlement to use terminology such as "Scottish Water shall in their sole discretion determine" and it is certainly not helpful, since the developer has recourse to independent arbitration in the event of dispute.</p>
3.	1.2.2	<p>In view of past ad hoc arrangements within and between authorities regarding use of Section 7 agreements this will need careful thought regarding implementation, cannot be left solely as developer responsibility and will need appropriate SE guidance and instruction to all parties involved.</p>
4.	1.2.3	<p>As long as standards are reasonable. Standards for public SUDS are new and need to be set accordingly, not overburdening and restrictive, especially for small/mid sized developments</p>
5.	1.3.6	<p>Noted as an option but in most cases design by SW will not be favoured due to developers needs and timescales and SW ability/commitment to meet.</p>
6.	1.3.11	<p>Deeming all development speculative prior to planning consent is an example of SW inflexibility.</p> <p>Differentiation between types of assessment is noted but confusion is understandable.</p>

7.	1.3.12	<p>HfS has made clear from the outset the difficulties which will arise in concluding Section 7 agreements, without proper direction to all parties. It is understood that these agreements, referred to previously in clause 1.2.2 above, were only ever implemented formally in the former NOSWA area of Northern Scotland.</p> <p>HfS do not need to remind SW of the total breakdown of earlier planned arrangements for SUDS adoption resulting in the opt out of local authorities in Scotland from the Section 7 process.</p>
8.	1.3.14 1.3.15	The question of deeds of servitude and Section 3A notices was discussed at the SW/HfS legal issues meeting held 12.02.07 and it is understood that a solution was agreed whereby provision could be made for both arrangements for the mutual benefit of SW and HfS.
9.	1.3.16	<p>It is understood that SW has made clear that these comments do not apply to residential development.</p> <p>No SW comment has been made on downstream defenders and this is a facility which HfS continues to believe should be part of the SUDS treatment train needing further clarification with SEPA. Does SW agree?.</p>
10.	1.3.17	HfS continue to take the view, notwithstanding statutory interpretation and responsibility, that exclusion of land drainage in sewerage systems is unsustainable, full of practical difficulty and will increase localised flood risk particularly when increasing emphasis is to be placed on source control.
11.	1.3.20 1.3.21	<p>HfS accept that CCTV prior to vesting is necessary but that CCTV at completion should be at the discretion of the developer.</p> <p>Requirements for the H&S file for sewerage should be in line with the new CDM regulations which place an emphasis on the management of H&S and the minimisation of unnecessary documentation.</p> <p>SW require to define "agreed time limit" in relation to carrying out repairs to defects prior to vesting. SW should declare agreed response times in relation to submissions of CCTV surveys, adoption requests etc.</p>
12.	1.3.23	SW need to confirm that confirmation is issued on staged adoption of systems: foul and sw pipework at 12 months and SUDS at 36 months. An exclusion from the original HfS response was that de-silting of ponds and basins prior to adoption should only be deemed necessary where silt build up has been deemed unsatisfactory.
13.	1.3.24	If large scale developments require site specific negotiations and agreements then surely this should be referenced in Sfs2.
14.	1.3.25	The original HfS question has not been answered in the SW response. The impracticality of this proposed procedure of separate application will make the whole process unnecessarily complicated.
15.	1.3.29	Accepted.
16.	1.3.31	There is still no satisfactory SW explanation for this clause. If reference

		<p>to Ministerial Guidance is to be maintained in SFS2 there should be clear reference as to where this may be found on the SW website together with an explanatory note on the implications for developers.</p> <p>Where do 3 pipe systems sit in the context of this Guidance?</p>
17.	1.3.33	Accepted.
18.	Table 1	<p>This table has been copied from Sewers for Adoption 6th Edition, applicable to England and Wales.</p> <p>Permission of riparian owner for discharge – surely the intent of this requirement is that it will be applicable only where the ownership of the bank of a watercourse at the point of discharge is not within the ownership of the developer and therefore requires a third party, or riparian owner, consent.</p> <p>Can the figures used in calculating the RCA not be sufficient for the WIC reporting requirement?</p>
19.	Figure 1	<p>Will SW contribution payments be the same as SFS – up to 90% prior to adoption with the remainder on vesting?</p> <p>Presumably only when SUDS are included within SW contribution payments will payment for that element be delayed until the end of the 36 months DLP.</p>
20.	2 General	Noted, but SW should be aware that this has not been the case to date with pre and post DIA consultations reported as lasting over 12 months or longer.
21	2.1	<p>This is a key issue and concern and one which requires buy in from all parties. SW must be persuaded that the prospect of private sewers is a retrograde step and not an option for Scotland. Private sewer systems maintained by or on behalf of residents would not be practicable and, we understand, unacceptable to SEPA.</p> <p>Requiring SUDS systems to be generally compliant with the new CIRIA requirements may be a way forward in SW in continuing their commitment to adoption of all surface water piped sewerage regardless of whether SUDS systems are adopted.</p>
22.	2.1.1	<p>Another key issue and one which requires flexibility from SW, the councils and SEPA, especially for small to medium size and city centre developments where sufficient land is not always available for ponds/basins and the housing layout does not always lend itself to the squeezing in of source control measures.</p> <p>With regard to the SW comments we fail to see how the limitations on adoptable SUDS should be part of the regulations and not SFS2. The comment that local authorities should be encouraged to provide treatment and attenuation prior to connection to a public sewer is promoting a 3 pipe system with a separate SUDS system for roads only.</p>

23.	2.1.2	Noted – see comments above on 2.1.1
24.	2.1.4 2.1.5	It is not always possible to construct SUDS in what is deemed to be "public open space". It may be that the land could be transferred to SW, as is the case with a WWPS and a right of access given. Further discussion is needed to ensure flexibility.
25.	2.1.6	If it was demonstrated that protection measures were in place during construction (in line with forthcoming guidance) and supervised/inspected during construction this should be sufficient. Desilting should not be a pre-requirement for adoption. It should only be necessary where excessive silt build up has occurred. It is possible that temporary SUDS will be employed during the construction phase and this should be acknowledged.
26.	2.1.7	Noted. Does the SW response accept that one level of treatment is sufficient for normal residential development? In view of the SW response this clause needs to be reworded for clarity.
27.	2.1.10	Noted, but there does seem to be continuing dubiety here. Does this mean that SW will not adopt an outfall serving more than 1000 houses?
28.	2.2.2	Noted and accepted.
29.	2.2.4	Noted. However, the HfS original comment on WLC is still valid. SW concerns on the level of future maintenance cost may be ill founded.
30.	2.2.6	See comments above under 2.1.1 It is not thought this was the intent of the primary legislation.
31.	2.3.1	What does this mean? Will it be meaningful service or a "token effort" to comply with the rules of the Regulator?
32.	2.3.6	Noted. This will depend on the size/specifics.
33.	2.4.4	Noted. Can SW confirm that the cost of provision of the SUDS system will be included in the contribution calculation and is so this will encompass all of their requirements.
34.	2.4.6	This SW response is not acceptable. This was not required in SFS so why now? Has SW changed its data capture/asset register requirements?
35.	2.6.5 2.6.6	If this increase is required for climate change why not increase it further to allow run-off from soft areas as being suggested/requested by some councils.
36.	2.6.9	Noted.
37.	2.6.10	Noted.

		Does SW accept the cost of producing the model where none exists (for non speculative development)?
38.	2.7.3	Noted. Indications are that SEPA will ask for increased treatment volume if the receiving watercourse is classed as sensitive. Clearly SW need to discuss this with SEPA.
39.	2.7.4	Noted. Several different use areas in DEX drain to the same ponds. Does SFS2 not cover industrial sites as well?
40.	2.7.5	See comments above in clause 2.3.6.
41.	2.8	The HfS response is the same as for previous responses on this key issue!!
42.	2.8.1	A natural pond does not normally have a 3.5m wide (increased) accessway all round and a prohibitive fence specification.
43.	2.8.2	Noted. More flexibility is required on design and construction depending on site size/topography along with maintenance issues (refer to CIRIA guidance).
44.	2.8.5	Noted. Details will require to be site specific.
45.	2.8.8 2.8.9	Noted. SW reasoning however is questioned.
46.	2.8.10	A freeboard has been used previously. Can SW provide details on best practice where 500mm has been used. The requirement at DEX was 300mm. Has this been reassessed since?
47.	2.8.13	Is it easier to de-silt the forebay???
48.	2.8.14 2.8.15 2.8.16	Noted. See previous comments above.
49.	2.8.20	Noted.
50.	2.8.22 2.8.23	Noted. Throttle controls only outlined – no detail on type!
51.	2.8.25	Noted. Provision of a "drain down" facility will further restrict pond locations as the drain down invert will obviously be significantly lower than the inlet invert by at least the depth of the pond.
52.	2.8.26	Noted. SW should allow flexibility in special circumstances.
53.	2.8.31	SW response is not clear.

54.	2.8.32	Noted. See previous comments above. Will SW allow a degree of flexibility in special circumstances?
55.	2.8.36	Dense vegetation has proven an effective deterrent against access by unauthorised persons. (Barrier planting)
56.	2.8.37	The SW response does not answer the comment. Will barrier landscaping be allowed in lieu of fencing if a risk assessment shows it is sufficient?
57.	2.8.46	Why is there a need to reduce the gradient here when ponds have been designed safely in the past with 1:4 side slopes?
58.	2.9	The SW reasoning for the need for lining of detention basins in relation to soil infiltration is not clear.
59.	2.9.10	Noted.
60.	2.10.4	HfS does not agree. What maintenance and inspection activities require to be carried out to an attenuation structure?
61.	2.10.5	Noted.
62.	2.10.19	Noted.
63.	2.13.12	Noted.
64.	2.14.1	Noted.
65.	2.14.2	Noted.
66.	2.14.5	Noted.
67.	2.17	Noted and accepted.
68.	2.17.6	Noted.
69.	2.17.8	Noted.
70.	2.18.1	Noted. Is it still an increase in specification?
71.	2.22.7	Noted. SW must be prepared to enter into site specific arrangements/agreements.
72.	2.23	Noted. An improvement in vesting procedures generally by SW is urgently needed and needs to be adequately resourced by SW.
73.	2.23.2	Noted.
74.	2.23.4	Noted. Please clarify in relation to SFA6. (boundary to boundary?)

75.	2.24.1	Noted. Storage required rather than an emergency overflow – any exceptions?
76.	2.25.7	Noted.
77.	PS Vesting	Noted. This will be expensive. Will SW consider arranging workshops on WWPS design approval/adoption procedures to assist developers in this process or in utilising consultancy services?
78.	UKWIR Report	The SW response does not fully answer detailed comment on the use of the report for deciding types of adoptable SUDS. It refers to other evidence and conclusions which are effectively, only SW opinion.

SCOTTISH

10 May 2007



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Dear David

Sewers for Scotland 2 - Consultation Response

Thank you for your letter of the 6th of March 2007 providing further comments to the draft 2nd edition of the Sewers for Scotland manual in response to Scottish Water letter of the 4th of December 2006.

After careful consideration of the issues raised in your response, further discussions with SEPA and internal reviews, SW has, where possible, made amendments to the draft manual. These include the reduction of the liability period for SUDS to 12 months and allowing developers to apply for adoption of both foul and surface water at the same time.

Legal framework – SW duties

The Environment in which SW operates is governed by the existing legislative framework. These include the Sewerage Scotland Act 1868, defining Scottish Water duties and responsibilities, and the Provision of Water and Waste Water services (Reasonable Cost) (Scotland) Regulations 2006, which set the level of contributions to developers and the mechanisms by which these are settled are set in the and outlined in the "Guide for Obtaining New Water and Waste Water Services" obtainable from Scottish Water's website.

Any changes to the legislative environment in which Scottish Water operates can only take place through the intervention of the Scottish Executive and the amendment of the existing regulations.

SE consultation

The SE consultation "Implementing the Water Environment and Water Services (Scotland) Act 2003: Water, Sewerage and Drainage Infrastructure: Construction Standards and Vesting Conditions" addresses some of the issues outlined in your comments and discussed at our recent meetings. These include the adoption of those parts of the drainage system which do not comply with the standards set in the manual, the exclusion of some SUDS systems and the necessity to set standards for the public system which

are consistent throughout Scotland and stakeholder involvement in the implementation of SUDS in Scotland.

While SW's position on these issues remains unchanged the consultation provides a forum where this can be further discussed and the results of the consultation will shape Scottish Water future policy.

Stakeholders' involvement

Scottish Water believes that the treatment train approach to the management of surface water is the most effective way of addressing drainage issues and is central to the SUDS philosophy. Therefore the implementation of an effective SUDS strategy in Scotland requires the involvement of all stakeholders. These include developers and home owners, responsible for the source control aspect, the Local Authorities, responsible for roads drainage, amenity and flooding, and SEPA, responsible for all water quality related issues.

As you are aware Scottish Water, through the SE and SUDWP, have been pursuing this issue and we are now hopeful that talks with the Local Authorities involving HfS will start soon and will include the development of section 7 agreements., which are particularly important in ensuring that 3 pipes systems are avoided.

The SE is aware and supportive of the view that SUDS implementation should be an integral part of the planning process. The review of planning guidance is expected to address the issue of implementing public SUDS in public open spaces.

Small developments and large phased developments

SW fully understands the issue of providing appropriate SUDS for small developments where conventional standards cannot be applied. We have been in talks with SEPA to address this issue and we are hoping further meetings involving HfS can take place in the near future, which will allow us to take this issue further and reach a solution acceptable to all parties.

Health and safety considerations

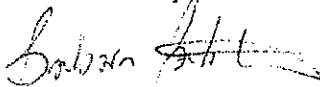
Health and safety requirements within the manual were the result of in depth discussions with the Health and Safety Executive (HSE). As part of the drainage system SUDS must be viewed as any other asset and must comply with the Health and Safety at Work Act. The requirement for the provision of fencing in addition to barrier landscaping is supported by the HSE therefore remains a requirement in the manual.

The attached schedule provides further clarification to some of the points raised by your response.

Scottish Water has found the continuing dialogue with Homes for Scotland very valuable and we hope this will continue in the future.

We are looking forward to HfS formal repose to the public consultation exercise

Yours sincerely



AP: Keith Phillips

No	Section	Comment	SW Comment
8.	1.3.14 1.3.15	The question of deeds of servitude and Section 3A notices was discussed at the SW/HFS legal issues meeting held 12.02.07 and it is understood that a solution was agreed whereby provision could be made for both arrangements for the mutual benefit of SW and HFS.	This issue was further discussed at a following meeting. Helen Day will provide HFS with further guidance on this matter
11.	1.3.20 1.3.21	HFS accepts that CCTV prior to vesting is necessary but that CCTV at completion should be at the discretion of the developer. Requirements for the H&S file for sewerage should be in line with the new CDM regulations which place an emphasis on the management of H&S and the minimisation of unnecessary documentation. SW requires to define "agreed time limit" in relation to carrying out repairs to defects prior to vesting. SW should declare agreed response times in relation to submissions of CCTV surveys, adoption requests etc.	SW has reconsidered and re drafted this clause to specify that while CCTV at completion should be at the discretion of the developer where the CCTV carried out at vesting shows defect/debris no vesting will take place until these are rectified. Noted It will be dictated on a development by development basis.
13.	1.3.24	if large scale developments require site specific negotiations and agreements then surely this should be referenced in SFS2.	While the manual seeks to give guidance for the majority of circumstances SW understands that large, phased developments will require case by case discussions. This is referenced in the new draft of the manual (1.3.37)
18.	Table 1	This table has been copied from Sewers for Adoption 6 th Edition, applicable to England and Wales. Permission of riparian owner for discharge – surely the intent of this requirement is that it will be applicable only where the ownership of the bank of a watercourse at the point of discharge is not within the ownership of the developer and	This is correct

No	Section	Comment	SW Comment
		therefore requires a third party, or riparian owner, consent. Can the figures used in calculating the RCA not be sufficient for the WIC reporting requirement?	Provision of the figures will aid SW in allocating the correct RCC level to the developer. SW is considering making these a voluntary requirement
25.	2.1.6	If it was demonstrated that protection measures were in place during construction (in line with forthcoming guidance) and supervised/inspected during construction this should be sufficient. Desilting should not be a pre-requirement for adoption. It should only be necessary where excessive silt build up has occurred. It is possible that temporary SUDS will be employed during the construction phase and this should be acknowledged.	SW and the CIRIA manual considers de-silting as necessary where <u>any</u> silt build up has occurred. Where it can be proved that sacrificial SUDS have been used this will not be necessary as no silt will have entered the system.
26.	2.1.7	Noted. Does the SW response accept that one level of treatment is sufficient for normal residential development? In view of the SW response this clause needs to be reworded for clarity.	Water quality issues and levels of treatment are to be agreed with SEPA. SW would encourage the use of the treatment train including treatment at source in all circumstances. SW will accept one level of treatment where SEPA considers this to be sufficient.
31.	2.3.1	What does this mean? Will it be meaningful service or a "token effort" to comply with the rules of the Regulator?	No.
33.	2.4.4	Noted. Can SW confirm that the cost of provision of the SUDS system will be included in the contribution calculation and is so this will encompass all of their requirements.	Yes
34.	2.4.6	This SW response is not acceptable. This was not required in SFS so why now? Has SW changed its data capture/asset register requirements?	Scottish Water has improved its data capture/register requirement to improve our asset register.
37.	2.6.10	Noted. Does SW accept the cost of producing the model where none exists (for non speculative development)?	SW will accept the cost of building the model (but not for running it)

No	Section	Comment	SW Comment
39.	2.7.4	Noted. Several different use areas in DEX drain to the same ponds. Does SF-S2 not cover industrial sites as well?	The DEX development is not a new development and SUDS guidance has now changed. While SF-S2 intends to cover industrial sites as well there may be difference in the level of treatment (t or employment of the treatment train) required by SEPA. This can only be agreed with SEPA on a site by site basis. The "natural appearance" comment refers to the shapes and vegetation.
42.	2.8.1	A natural pond does not normally have a 3.5m wide (increased) accessway all round and a prohibitive fence specification.	
46.	2.8.10	A freeboard has been used previously. Can SW provide details on best practice where 500mm has been used? The requirement at DEX was 300mm. Has this been reassessed since?	To ensure consistency with the CIRIA manual this clause will be amended to require 300 mm freeboard
47.	2.8.13	Is it easier to de-silt the forebay???	Yes, compared to pond.
50.	2.8.22 2.8.23	Noted. Throttle controls only outlined -- no detail on type!	SW will consider reviewing this section further
53.	2.8.31	SW response is not clear.	Small rainfall events will cause a minimal raise in the water level of the pond (below the outlet). This, being small, can be dealt with through infiltration rather than via discharge into the receiving waters. No. This clause is designed to address Health and safety as well as practical issues
54.	2.8.32	Noted. See previous comments above. Will SW allow a degree of flexibility in special circumstances? Clause 2.8.32 :	
58.	2.9	The SW reasoning for the need for lining of detention basins in relation to soil infiltration is not clear.	Clauses referring to lining of basins have been amended Lining is now only required when the systems are located on brownfield sites (clause 2.9.22) or contaminated land unless it can be proven that there is no risk of groundwater contamination. This will avoid

No	Section	Comment	SW Comment
60.	2.10.4	HFS does not agree. What maintenance and inspection activities require to be carried out to an attenuation structure?	the transport of pollutant to the ground water reservoir via infiltration. Further information on the use of SUDS in brownfield sites can be found on SEPA's website SW must have access to inspect for debris and structural integrity therefore this clause will not be amended
70.	2.18.1	Noted. Is it still an increase in specification?	While the minimum depth for sewer has been increased to 1.5 m full concrete surround will only be required where pipes are at a depth of less than 1.2 m. SW will clarify this clause further
74.	2.23.4	Noted. Please clarify in relation to SFA6. (boundary to boundary?)	This was an oversight as SFA 6 asks for the distance to be measured from boundary to nearest point of habitable building. SFS requirement (from boundary to boundary) remains unchanged.
75.	2.24.1	Noted. Storage required rather than an emergency overflow – any exceptions?	Exceptions will be made on a case by case basis and in agreement with SEPA
77.	PS Vesting	Noted. This will be expensive. Will SW consider arranging workshops on WWPS design approval/adoption procedures to assist developers in this process or in utilising consultancy services?	SW will review this issue as part of their liaison with developers through the Developers Forum.