



## Belfast City Council

<b>Report to:</b>	Strategic Policy and Resources Committee.
<b>Subject:</b>	Consultation on the NIEA Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland.
<b>Date:</b>	18 <sup>th</sup> September 2009
<b>Reporting Officer:</b>	Mr. William Francey, Director Health and Environmental Services (ext. 3260).
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### Relevant Background Information

Across Northern Ireland, the historical approach to managing disposal of storm and foul water has been the combined sewer system, which has been used to transport both types of effluent to a treatment works. In recent years however, the practice has been to install separate drainage systems within new developments for each type of effluent. Accordingly, foul sewage is now typically collected in a dedicated sewer for transportation to a treatment works whereas storm water is normally channelled into a convenient watercourse with little or no treatment. A large number of combined sewers still remain in operation, particularly in built up urban areas where population growth and the loss of permeable surfaces has meant that these sewers are increasingly unable to cope with the volume of waste water being generated. This issue has been exacerbated further by both the legal requirement to comply with the provisions of the Water Framework and Floods Directives and the intermittent intense rainfall experienced across Northern Ireland over recent years.

In order to address these issues and in response to sustainable drainage system commitments articulated within the Northern Ireland Sustainable Development Strategy, government has developed a Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland. Sustainable Drainage Systems (SuDS) are hard and soft engineering solutions designed to mimic closely natural catchment processes in the management and treatment of stormwater. Source control SuDS seek to reduce stormwater discharge from developments by dealing with run-off close to source whereas permeable conveyance SuDS slow the velocity of run-off and then reduce its volume via filtration, infiltration and evaporation. An established benefit of SuDS is that the engineering techniques are easily scaled from for example, good housekeeping measures and soakaways for individual premises through to the use of infiltration devices, storage tanks, basins and wetlands for more significant developments.

In developing the Sustainable Drainage Systems Strategy, government convened a working group comprised of representatives from Northern Ireland Water, Department of Regional Development Roads Service, Department of the Environment Planning Service, Department of Agriculture and Rural Development Rivers Agency, Northern Ireland Housing Executive, DoE Planning and Environmental Policy Group, Department of Finance and Personnel Central Procurement Directorate, the Agri-Food & Biosciences Institute and Belfast City Council. Mr. Reg Maxwell (Area Manager) represented Belfast City Council on the working group with the Council's Sustainable Development Manager joining in the latter stages of the strategy development.

### Key Issues.

In publishing the SuDS Strategy for consultation, the Northern Ireland Environment Agency has included a range of questions for consideration by consultees. The attached draft Council response addresses these questions where applicable.

Of particular relevance to Belfast City Council however, is a strategy recommendation that local authorities, post Review of Public Administration implementation, should be given responsibility for maintenance, subject to funding, of vegetative and soft-engineered SuDS features meeting the criteria for adoption into the public realm.

Arising from the Environment Minister's Statement in March 2008 on the future shape of local government, a Transfer of Functions Working Group was established under Policy Development Panel C. Following discussions between senior officials of transferring Departments and local government, the Strategic Leadership Board adopted a recommendation of Policy Development Panel C that the Minister be requested to seek early discussions with Ministerial colleagues on a number of

### **Key issues contd.**

specified changes to the transfer of functions. These changes included a recommendation that a number of the 11 public realm roads functions should not transfer on grounds that included that there would be limited added value through their transfer without significant investment by local government. This recommendation has not yet been considered by the relevant Executive sub-Committee.

Furthermore, although the SuDS Strategy highlights that the maintenance obligation will require appropriate funding, it does not explicitly identify where this funding should be obtained, instead highlighting that the use of Article 40 agreements, under the Planning (Northern Ireland) Order 1991, or direct charging could be considered in order to secure financial contributions. Moreover, the consultation document asks respondents to consider whether a SuDS maintenance charge, instead of a charge for conventional drainage, should be introduced if water charges are eventually introduced.

In view of the Strategic Leadership Board recommendation, and since a source of funding has not been explicitly identified at this juncture, it is recommended that Belfast City Council opposes transfer of responsibility for maintenance of vegetative and soft-engineered SuDS features meeting the criteria for adoption into the public realm. It is recommended instead, that Belfast City Council proposes that appropriate funding should be provided directly to existing agencies to undertake maintenance. This approach would enable the immediate introduction and promotion of SuDS, as opposed to delaying until 2011 when the Review of Public Administration is scheduled to be completed.

### **Resource Implications**

#### Financial

It is considered that the proposed maintenance obligation for vegetative and soft-engineered SuDS features meeting the criteria for adoption into the public realm would require significant additional funding, particularly as CIRIA (Construction Industry Research and Information Association) publication C697 'The SuDS Manual' indicates that 'soft' options for hydraulic control structures are the preferred approach. The SuDS working group has not however, attempted to quantify likely local authority maintenance costs prior to publication of the draft Strategy.

#### Human Resources

If Belfast City Council was required to provide maintenance for vegetative and soft-engineered SuDS, additional staff resources would likely be required.

#### Asset and Other Implications.

If Belfast City Council was required to provide maintenance for vegetative and soft-engineered SuDS, additional maintenance equipment and vehicles would likely be required.

### **Recommendations**

The Committee is requested to consider the SuDS maintenance charging proposals as articulated in Appendix A questions 9 and 10 in light of the proposal that the Council should oppose transfer of the responsibility for maintenance of SuDS and to consider whether specific comment should be made.

The Committee is also recommended to endorse the attached draft Council response in respect of the Northern Ireland Environment Agency Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland consultation and to recommend that, taking account of Committee views concerning funding, it be submitted to the Northern Ireland Environment Agency by 16<sup>th</sup> October 2009.

### **Key to Abbreviations**

CIRIA - Construction Industry Research and Information Association.  
SuDS - Sustainable Drainage Systems.

### **Documents Attached**

Appendix A - Belfast City Council consultation response to the strategy for promoting the use of Sustainable Drainage Systems (SuDS) within Northern Ireland.

## **Appendix A.**

### **Belfast City Council Consultation response to the Strategy for Promoting the Use of Sustainable Drainage Systems (SuDS) within Northern Ireland.**

#### **Belfast City Council General Comments in Relation to the Provisions of the Building Regulations.**

It is important to note that the Building Regulations control only drainage layouts, sizes, design etc., whether foul or storm, when within the confines of individual sites or when connected within individual buildings. Where two or more drainage lines join in a development, then that drain becomes a public drain, adoptable by Northern Ireland Water and subject to its legislation. Equally, once a drainage line leaves the confines of an individual site, it is also classified as a public drain.

#### **Questions asked within the Consultation Document.**

##### ***Question 1 - do you agree that traditional drainage systems are inadequate in dealing with the issue of storm drainage in new developments, especially the more intense and increasingly unpredictable rainfall arising from climate change?***

It is accepted that in many cases, there may be inadequate storm drainage provision within new developments but it is considered an over-generalisation to state that this is always the case. The problem is that individual buildings are now designed on a twin system but that system could be merged at the main drain, which might be only a single combined system.

##### ***Question 2 - do you agree that the loss of permeable surfaces which can absorb rainfall is both exacerbating existing drainage problems and creating new flooding problems in the urban environment?***

It is accepted that the loss of permeable surfaces that can absorb rainfall is exacerbating existing drainage problems and creating new flooding problems in the urban environment. This is particularly prevalent where large houses are 'harvested' and replaced by multi apartment buildings with large car parking spaces and little or no gardens. The reduction in urban green space is increasing but this loss of amenity needs to be balanced against governmental objectives of growing the population in urban areas in order to limit urban sprawl and reduce commuter travel.

##### ***Question 3 - Taking account of the increase in flood risk arising from climate change do you agree that alternative options to traditional drainage systems need to be considered and that SuDS should be considered as one such viable option?***

It is considered that alternative options to traditional drainage systems do need to be considered and that SuDS should be considered as one such option, although it is probably more prudent to say that there need to be additional methods of dealing with storm water drainage to supplement or replace traditional systems. Preventing stormwater from entering combined sewerage systems will have a beneficial effect on the operation of sewage plants and, moreover, SuDs are also beneficial in conserving valuable water resources that would be otherwise used to irrigate gardens, etc.

**Question 4: - Should the automatic right to connect to a public sewer be amended for new sites and redevelopments?**

The general matter of connection rights is currently the subject of ongoing debate between Northern Ireland Water, Building Control and the Department of Finance and Personnel although no definitive position has been reached on the issue to date. Therefore, Belfast City Council offers no comment in relation to question 4.

***Question 5: - do you agree that Sustainable Drainage Systems offer mitigation against the current flooding and water pollution problems caused by traditional drainage systems, and exacerbated by the intense and increasingly unpredictable rainfall arising from climate change?***

It is considered that Sustainable Drainage Systems can offer mitigation against the current flooding and water pollution problems caused by traditional drainage systems although it is emphasised that care needs to be taken with design, especially in urban areas, where permeability of the ground is a critical factor. There is no point in preventing storm water from surging drains if this results in flooded gardens.

***Question 6: - do you agree that a holistic approach involving developers working with a number of disciplines and agencies (planners, drainage engineers, architects, landscape architects, ecologists and hydrologists) from the earliest stage of the planning process can enable SuDS to be integrated into the design of the site thus maximising the flood alleviation and water pollution prevention benefits of SuDS?***

Involving developers working with a number of disciplines and agencies from the earliest stage of the planning process is an eminently sensible approach but will require clear regulations setting out accountability, guidance on design, testing for permeability of soils, adequate geophysical mapping of watercourses and an identified agency with the necessary enforcement powers to ensure that any agreed design is properly implemented and maintained.

***Question 7: – do you agree that the benefits of SuDS outweigh the constraints of the system?***

It is not clear that this will be true in every case but it is accepted that with increasing flooding problems, particularly in Belfast, any efforts to address this problem are welcome. It is imperative however, that adequate information is available to ensure that local circumstances are properly considered so that sound design decisions are taken. Where SuDS systems have been introduced already, such as in Freiburg Germany, the installations do seem to be beneficial, but they must be brought forward through a co-ordinated approach.

***Question 8: - do you agree that SuDS will be a useful tool in meeting the aims, objectives and requirements of the policy and legal drivers. If you have indicated no, please provide reasons.***

It is agreed that SuDS will be a useful tool for meeting the aims of policy and legal drivers although it is difficult to imagine that economic factors will not be a barrier to full compliance, particularly within

the private sector. The present system assigns the responsibility for managing storm water to other bodies such as Northern Ireland Water and the Rivers Agency since the drainage system is principally designed to move water offsite. By employing SuDS, an extra though correct burden is imposed on the developer. This approach may prove particularly useful, in cases where developments would otherwise be refused because of inadequate main storm drainage provision.

**Question 9: - do you consider that if SuDS are a replacement for existing traditional drainage systems that those who currently pay for the maintenance of those systems should continue to do so? Please state your reasons.**

**Question 10: - Do you consider that if water charges are introduced a SuDS maintenance charge, instead of a charge for conventional drainage, should be a component of the bill for those customers served by SuDS systems? Please state your reasons.**

***Question 11: - do you agree that the proposed recommendations are a realistic way forward in the promotion of SuDS as the preferred method of storm drainage in Northern Ireland? Please identify any important measures that we have missed.***

As highlighted previously, it is difficult to see how SuDS will be successfully embraced within the private sector without some tangible advantages to the client. Previous experience has shown that unless there is a legal requirement to comply, there will be limited deployment of a system on a voluntary basis. Examples of reticence to adopt emerging provisions include access and facilities for people with disabilities. Few building developers adopted these provisions, despite the fact that many people experience disabilities, until they became a Building Regulation. Moreover, most buildings still only comply with basic thermal and sound insulation standards despite the obvious financial advantages to owners and the environmental benefits of making additional provisions. Consequently, it is considered that some form of financial incentive could be considered as a way of encouraging greater uptake and awareness of SuDS.

However, a more effective method to ensure success would be to ensure that appropriate enforcement powers are provided for the Planning Service and local authority Building Control to be exercised in liaison with statutory agencies such as the Rivers Agency and Northern Ireland Water. This would entail amending the current Planning Order and Building Regulations to make it mandatory to consider incorporating SuDS into the design and construction of all building work.

In terms of Building Regulations, recent amendments to the governing Order have introduced the provision to make Regulations in this regard and it is strongly recommended therefore that the Building Regulations Unit of the Department of Finance and Personnel be involved in further development work on the strategy.

In addition, with planning and development control responsibility scheduled to be transferred to local authorities in 2011, the opportunity potentially exists for closer links to be established with Building

Control in order to ensure that planning conditions regarding sustainable drainage are properly implemented at the construction stage.

***Question 12 - do you consider that we identified the correct organisations responsible for each recommendation? Please give your reasons.***

Within the recommendations section of the strategy, it has been proposed that local councils, post Review of Public Administration implementation, should be given responsibility for maintenance, subject to funding, of vegetative and soft engineered SuDS features meeting the criteria for adoption into the public realm.

Arising from the Environment Minister's statement in March 2008 on the future shape of local government, a Transfer of Functions Working Group was established under Policy Development Panel C. Following discussions between senior officials of transferring Departments and local government, the Strategic Leadership Board adopted a recommendation of Policy Development Panel C that the Minister be requested to seek early discussions with Ministerial colleagues on a number of specified changes to the transfer of functions. These changes included a recommendation that a number of the 11 public realm roads functions should not transfer on grounds that included that there would be limited added value through their transfer without significant investment by local government. This recommendation has not yet been considered, however, by the relevant Executive sub-Committee.

Belfast City Council considers therefore, that responsibility for the maintenance of public realm aspects of soft-engineered SuDS should not be assigned to local authorities. The Council recommends instead that appropriate funding should be provided directly to relevant existing agencies to undertake maintenance. Such an approach would enable the timely introduction and promotion of SuDS as opposed to delaying until 2011 when the Review of Public Administration is scheduled to be concluded.

***Question 13 - what suggestions do you have to develop further SuDS in Northern Ireland?***

Suggestions have been included within the response to question 11.

***Question 14 - can you suggest how SUDS features can be regulated so that they remain effective?***

Once installed, a form of continuing control will be required to ensure that designed and constructed SuDS remain viable. This provision does not exist currently within the Building Regulations, although there is scope to include continuing control within that Order. It must be stressed however, that the practicalities of administering and enforcing the systematic control of SuDS would be problematic.