



Supplementary Planning Guidance

LPGN 29 - Management of Surface Water for New Development

Adopted by Flintshire
County Council on 17th
January 2017



Purpose

It is Flintshire County Council's intention to prepare and keep up to date a series of Supplementary Planning Guidance (SPG) Notes which will provide detailed guidance on a range of development issues and topics. The purposes of these Notes are:

- To assist the public and their agents in preparing planning proposals and to guide them in discussions with officers prior to the submission of planning applications,
- To guide officers in handling, and officers and councillors in deciding, planning applications, and
- To assist Inspectors in the determination of appeals

The overall aim is to improve the quality of new development and facilitate a consistent and transparent approach to decision making.

Planning policies: the Flintshire context

The Development Plan

Under planning legislation, the planning policies for each area should be set out formally in the Development Plan. Flintshire County Council, as the Local Planning Authority (LPA), has a legal duty to prepare and keep up to date a development plan for the County, and the Flintshire Unitary Development Plan was adopted in 2011. The UDP provides broad policies together with allocations of land for all the main uses such as housing, employment and retailing, and will help to shape the future of Flintshire in a physical and environmental sense as well as influencing it in economic and social terms. The Plan therefore seeks:

- To help the Council make rational and consistent decisions on planning applications by providing a policy framework consistent with national policy and
- To guide development to appropriate locations over the period up to 2015.

The need for Supplementary Planning Guidance

Despite the Plan containing policies with which the Council can make consistent and transparent decisions on development proposals, it cannot in itself give all the detailed advice needed by officers and prospective applicants to guide proposals at the local level, such as house extensions or conversions of agricultural buildings. The Council's intention is to prepare a range of Supplementary Planning Guidance notes (SPG) to support the UDP by providing more detailed guidance on a range of topics and issues to help the interpretation and implementation of the policies and proposals in the UDP. The review of the Local Planning Guidance Notes will be undertaken on a phased basis and details of the available SPG's can be found on the Council's website. Where there is a need to refer to another SPG this will be clearly referenced. These SPG Notes are freely available from Planning Services, Directorate of Environment, County Hall, Mold, Flintshire CH7 6NF (telephone 01352 703228), at the Planning Services reception at County Hall and can be downloaded from the Planning Web pages www.flintshire.gov.uk/planning

The status of Supplementary Planning Guidance

Supplementary planning guidance can be taken into account as a material consideration in the decision making process. The National Assembly will give substantial weight to SPG which derives out of and is consistent with the development plan. In accordance with National Assembly advice the Council's suite of SPG's has been the subject of public consultation and Council resolution. The draft of this SPG was approved for public consultation on November 12th 2015 (Council Minute no. 39). The SPG was the subject of a public consultation exercise between December 18th 2015 and February 12th 2016. The 8 comments submitted to the Council have been taken into account and where appropriate amendments have been incorporated into this final draft which was approved by the Council on 17.01.17 (Council Minute no.8) for use as a material consideration in determining planning applications and appeals. A summary of the representations and the Council's response is set out in Appendix 3.

This document should therefore be afforded considerable weight as a material planning consideration.

LPGN 29 - Management of Surface Water for New Development

1 - Introduction

1.1 - Welsh Government Planning Policy Wales states that flood risk is a material planning consideration. Technical Advice Note 15: Development and Flood Risk (TAN 15, 2004) also states that the disposal of surface water is a material consideration and explains that development should not create additional run-off compared with the undeveloped situation and re-development schemes should aim to reduce run-off where possible.

1.2 - It is essential to consider sustainable drainage early in the development process because there may be implications for land purchase or the design and layout of the roads, buildings and public open spaces. It is strongly advised that applicants consult the Council's Flood & Coastal Risk Management Team (as the Lead local Flood Authority – LLFA) as early as possible in the planning process. It is advisable for developers to provide an initial assessment of drainage options at this time to enable constructive discussions with the Council. The earlier it can be determined that the drainage proposals are viable, the less chance of delay, wasted effort and costs for all parties involved.

1.3 - This approach ensures that conditions are not attached to a planning permission which could later prove to be impossible to implement for legal or technical reasons.

1.4 - This document and pro-forma are supported locally by both Dŵr Cymru / Welsh Water and Cyfoeth Naturiol Cymru / Natural Resources Wales and assumes that any submitted design or calculations have been carried out by a suitably qualified person carrying an appropriate professional indemnity.

1.5 - *Please note this document will continue to be updated in line with amendments to legislation and national guidance. Applicants should confirm they are using the most current version of this guidance. Any queries can be directed to The Flood Risk Management Team, Flintshire County Council at FloodRiskManagement@Flintshire.gov.uk*

Who to consult

1.6 - The Council's Planning officers consider observations from a number of organisations in relation to surface water management of new developments. Drainage designs may need to take into account specific requirements of these bodies depending on the individual details of each proposal. It is therefore recommended that applicants consult with the organisations below as early as possible when considering their development proposals.

- **The Council's Flood & Coastal Risk Management Team** (the Lead Local Flood Authority) should be consulted early on development proposals, particularly those intending to discharge via infiltration or to watercourses that are not designated a 'main river'.
- **Dŵr Cymru / Welsh Water** Should be consulted on all proposals to discharge to the public sewerage system, as satisfying DCWW surface water criteria will impact on the adoption design.

- **Cyfoeth Naturiol Cymru / Natural Resources Wales (NRW)** should be consulted early on proposals intending to discharge to a 'main river'. The Council's Flood & Coastal Risk Management Team may refer surface water proposals to NRW (as part of their oversight role) to advise where the suitability of the point of discharge is uncertain and/or the impact to third parties is unclear.
- **The Council's Highways Development Control Team** should be consulted early on proposals to ensure drainage of a proposed highway meets their requirements.

Surface water design criteria

1.7 - The Flood & Coastal Risk Management Team will need to be satisfied that the criteria below which apply to all developments are being met. Applicants should expect a review of proposals for all major development applications, or where local site conditions dictate.

1.8 - Flintshire County Council advocates that surface water run-off should be controlled as near to its source as possible. Preferably sustainable drainage systems (SuDS) should be utilised. The variety of SuDS techniques available means that virtually any development should be able to include a scheme based around these principles. Surface water should be disposed of to the destinations as prioritised below in keeping with the Jan 2016 Welsh Government's: Recommended non-statutory standards for sustainable drainage (SuDS) in Wales.

Priority level 1: Surface water runoff is collected for use;

Priority level 2: Surface water runoff is infiltrated to ground;

Priority level 3: Surface water runoff is discharged to a surface water body (watercourse);

Priority level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system;

Priority level 4: Surface water runoff is discharged to a combined sewer.

1.9 - **Undeveloped (greenfield) sites:** Discharge rates and volumes are normally required to be limited to the equivalent greenfield runoff rate (with on-site attenuation for all events up to the 1% (1 in 100 year) rainfall event with an appropriate allowance for climate change).

1.10 - **Previously developed (brownfield) sites:** The developer must calculate the existing brownfield runoff rates and to seek to improve the existing situation. This should aim to be as close as reasonably practicable to the greenfield runoff rates. If it cannot be demonstrated that previously developed land has functioning positive drainage or the details of components cannot be ascertained (even if there are known outfalls), an assumption should be made that the system is no longer operational and the site should be treated as an "undeveloped site".

1.11 - **Storage of water on site:** The drainage system should be designed so that flooding does not occur on any part of the development for the 3.33% (1 in 30 year) rainfall event other than in those areas/ systems designated to store or convey water. It may be acceptable to allow some on-site flooding of roads etc. for rainfall events in excess of this. However flooding within the development site should not occur in any part of a building or utility plant susceptible to water during a 1% (1 in 100 year) + climate change rainfall event.

1.12 - **Practicable minimum limit of discharge:** A practicable minimum limit on the discharge rate from a flow attenuation device is often a compromise between attenuating to a satisfactorily low flow rate while keeping the risk of blockage to an acceptable level. It is suggested that this is 5 litres per second, using an appropriate vortex flow control device or other technically acceptable flow control device. The minimum size of pipe discharging from a flow attenuation device should be 150mm laid at a gradient not flatter than 1 in 150, which meets the requirements of Sewers for Adoption 7th Edition.

1.13 - For the purpose of this document major development is defined as:

- The number of houses or units to be provided is 10 or more
- The development site is in excess of 0.5 hectares
- The floor space to be created by the development is 1,000 square metres or more

Information for submission:

1.14 - Pro-formas to be completed by the applicant and submitted as part of the relevant planning application are provided in Appendix A. The information needed will depend on the significance, complexity and stage of the development proposal.

- **Indicative Drainage Proposal:** This should provide the minimum amount of information to demonstrate that the proposed approach is feasible and/or that the detailed design could be covered by way of a planning condition.
- **Detailed Drainage Design:** A detailed drainage design should provide sufficient information to demonstrate that the system will function as intended to achieve the above drainage criteria. It should be comprehensive enough to allow any condition related to surface water management placed on the development to be discharged.

1.15 - Planning Officers consult with the Flood & Coastal Risk Management Team and other consultees to review and provide advice on drainage proposals related to planning applications. Failure to submit any of the information requested will prevent these consultees from providing constructive observations to the Planning Team. This may result in a recommendation to the Planning Team for refusal of the planning application on grounds of insufficient information being received.

1.16 - It is suggested that applicants refer to the Welsh Government's document: 'Recommended non-statutory standards for sustainable drainage (SuDS) in Wales – designing, constructing, operating and maintaining surface water drainage systems' Jan 2016. The SUSDRAIN website, CIRIA Guidance and other publications are further sources of detailed information on sustainable drainage (see Appendix B). 'Rainfall Runoff Management for Developments - Report SC030219' provides advice and technical guidance on the management of surface water drainage, including run-off rates and storage sizing. Alternatively applicants may want to use the free online calculation tools (based on the above report) to assist with this, available at www.UKsuds.com.

1.17 - If you wish to discuss proposals prior to submission, please contact the Flood & Coastal Risk Management Team, Flintshire County Council at FloodRiskManagement@Flintshire.gov.uk

Appendix 1: Pro-Forma A - Indicative drainage proposal

The information required below is considered the minimum amount of information to demonstrate that the proposed approach is feasible and/or that the detailed design could be covered by way of a planning condition.

1	Site location details with site address and national grid reference.
2	A plan of the existing site, noting its topography and how it presently drains.
3	A plan of the proposed site, its topography and proposed future drainage arrangements. A fully detailed design is not required at this stage. Sufficient information should be submitted to demonstrate that the system requirements have been considered and are achievable.
4	Areas of permeable and impermeable land for the existing site.
5	Area of permeable and impermeable land for the proposed development site.
6	Explanation of how the drainage hierarchy (Infiltration-watercourse-sewer) has been followed.
7	Evidence that the site has a satisfactory point of discharge*.
8	The existing surface water run-off rates from the site .
9	An indication of the post development discharge rates from the site. This should include an explanation of how this has been calculated.
10	An indication of the volume of attenuation storage that would be required on site. This should be based on the 100 year critical storm duration with an appropriate allowance for climate change for the site and the allowable discharge rate.
11	The method of proposed attenuation and the basis for its selection.
12	A plan indicating a suitable location for the attenuation within the proposed development.
13	An explanation of how it is proposed to manage and fund the maintenance of the proposed system over the lifetime of the development. This should include the requirements for access for future maintenance.
14	For large phased sites an explanation of how the site will adequately consider surface water drainage at all stages of the development may be required.

*When considering the different types of discharge, the following information should be provided

Infiltration:

If surface water is to be infiltrated on site, applicants are required to provide percolation tests in accordance with CIRIA R156 or BRE Digest 365 to determine site suitability this approach. The BGS Infiltration SuDS Map may be useful in providing an early indication of possible site ground conditions.

Watercourse:

If discharging to a watercourse, ditch, stream etc. the applicant must demonstrate that the system is an appropriate point of discharge for the site i.e. it receives existing pre-development flows. Where this is not the case, an assessment will be required to determine the suitability of the system to receive the proposed flows and that the development does not increase flood risk to others. If the proposed discharge point is beyond the development boundary, the applicant must demonstrate that the proposed connection can be achieved.

Public Sewer:

If connecting to a public sewer then evidence of agreement in principle from the owner/undertaker i.e. Dwr Cymru / Welsh Water) will be required.

Pro-Forma B - Detailed drainage design

In addition to the details outlined in Pro-forma A, the details below are required to enable the Council to determine if the surface water management system serving the development will function satisfactorily. This information is considered comprehensive enough to allow any condition related to surface water management placed on the development to be discharged.

The responsibility for providing and satisfying these criteria rests with the developer and would normally be undertaken by a suitably qualified person carrying the appropriate professional indemnity. The Council's Flood & Coastal Risk Management Team can provide advice to assist them.

In addition to 1 to 14 in Pro-forma A, please include:

15	Detailed drawings/plans of the proposed drainage system including dimensions, levels, pipe sizes, manhole details etc.
16	Details of the proposed discharge control.
17	Details of the storage required based on the above discharge control and how this attenuation will be achieved on site.
18	<p>Calculations or modelling of the proposed systems. This will need to show how the design addresses the following criteria:</p> <ul style="list-style-type: none">. No on-site flooding for rainfall up to the 3.33% design event (1 in 30 year).. How surface water arising from rainfall between the 3.33% (1 in 30 year) and 1% (1 in 100 year +climate change) events is managed on site. <p>Residual Risk and Designing for Exceedance: There should be an assessment of the effect of rainfall in excess of the design events and/or the result of system failures e.g. blockage. It is expected that the development will be designed to minimise the consequences of such scenarios.</p>

Appendix 2

Recommended guidance.

- Rainfall runoff management for developments - Report SC030219
Available online at: http://evidence.environment-agency.gov.uk/FCERM/Libraries/FCERM_Project_Documents/Rainfall_Runoff_Management_for_Developments_-_Revision_E.sflb.ashx
- CIRIA C753 The SuDS Manual -
Available online at: <http://www.CIRIA.org>
- CIRIA Report 156 – Infiltration Drainage – manual of good practice -
Available via: www.CIRIA.Org
- Soakaway Design – BRE Digest 365 -
Available at: <https://www.bre.co.uk>
- CIRIA C698 Site handbook for the construction of SUDS
Available via: www.CIRIA.Org
- CIRIA C635 Designing for exceedance in urban drainage: Good practice
Available via: www.CIRIA.Org
- CIRIA X108 Drainage of development sites - a guide
Available via: www.CIRIA.Org
- UK Sustainable Drainage – Guidance and Tools.
Available at: <http://www.uksuds.com>
- British Standard - BS 8582:2013 Code of practice for surface water management for development sites - <http://shop.bsigroup.com>
- CIRIA C713 Retrofitting for surface water management
Available via: www.CIRIA.Org
- Welsh Government: 'Recommended non-statutory standards for sustainable drainage (SUDS) in Wales - designing, constructing, operating and maintaining surface water drainage systems.'

Appendix 3

Supplementary Planning Guidance Note (SPGN) Public Consultation, (Dec 18th 2015 and Feb 12th 2016) comments and responses to SPGN No 29. Management of Surface Water for New Development

Commenting body /Individual	Comment	Response	Recommendation
No. 29 Management of Surface Water for New Development			
Dwr Cymru / Welsh Water	1.8 – The hierarchy which is listed does not correspond with the Welsh Government ‘Recommended non-statutory standards for SUDS in Wales’ January 2016, or the wording of Part H of the Building Regulations. Whilst the use of the term “surface water sewer” is welcomed, clarification is needed as to what is meant by ‘other’? Does this mean a combined sewer, or would it include highway drains too?	The hierarchy has now been amended to correspond with the Jan 2016 WG standards. The term ‘other’, has been removed and options further clarified in the updated hierarchy.	Amend Paragraph 1.8 to read:- Flintshire County Council advocates that surface water run-off should be controlled as near to its source as possible. Preferably sustainable drainage systems (SuDS) should be utilised. The variety of SuDS techniques available means that virtually any development should be able to include a scheme based around these principles. Surface water should be disposed of to the destinations as prioritised below in keeping with the Jan 2016 Welsh Government’s: <i>Recommended non-statutory standards for sustainable drainage (SuDS) in Wales.</i> Priority level 1: Surface water runoff is collected for use; Priority level 2: Surface water runoff is infiltrated to ground;

			<p>Priority level 3: Surface water runoff is discharged to a surface water body (watercourse);</p> <p>Priority level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system</p> <p>Priority level 4: Surface water runoff is discharged to a combined sewer.</p>
Dwr Cymru / Welsh Water	<p>1.16 - should also include reference to the Welsh Government 'Recommended non-statutory standards for SUDS in Wales' January 2016 as the guidance which is being recommended by Government. This should also be reflected in Appendix 2.</p>	<p>Amended to include reference to the Jan 2016 Welsh Government SUDS standards.</p>	<p>Amend first two sentences of Paragraph 1.16 to read:-</p> <p>It is suggested that applicants refer to the Welsh Government's document: '<i>Recommended non-statutory standards for sustainable drainage (SuDS) in Wales – designing, constructing, operating and maintaining surface water drainage systems</i>' Jan 2016. The SUSDRAIN website, CIRIA Guidance and other publications are further sources of detailed information on sustainable drainage (see Appendix B).</p>
Dwr Cymru / Welsh Water	<p>Appendix 2 refers to Ciria C697 –this has now been updated and the SuDS Manual is C753.</p>	<p>Amended to include reference to the SuDS Manual C753.</p>	<p>Amend reference to CIRIA C697 to C753 in Appendix 2.</p>
Mold Town Council	<p>There are no contact details such as that in SPGN No. 28</p> <p>This document lacks ambition to allow for climate change and a wetter environment, it does not allow for a projected raise. It needs to be more robust.</p> <p>It does not allow for incremental housing growth on one site. The impact can be irrespective of the number of dwellings. It</p>	<p>Appropriate contact details are provided in paragraph 1.5, 1.17 but in order to clarify add ,</p> <p>"Flood and Coastal Risk Management Team, Flintshire County Council at" FloodRiskManagement@flintshire.gov.uk</p>	<p>In order to clarify add,</p> <p>"Flood and Coastal Risk Management Team, Flintshire County Council at" FloodRiskManagement@flintshire.gov.uk</p> <p>To the final sentence of paragraph 1.5 and 1.17.</p>

	<p>should apply to all developments, e.g. permeable tarmac, tree planting, mitigation.</p>	<p>To the final sentence of paragraph 1.5 and 1.17.</p> <p>Climate change allowances are referenced throughout the document as this is fundamental to the subject matter e.g. paragraph 1.9.</p>	
--	--	--	--