

Advisory Note for Planning Applicants on Flood Risk and Drainage

Flooding is an act of nature, which cannot be completely eradicated but can be managed to reduce the potentially devastating effect on people, property, business and cultural heritage. Within Moray, there are a number of areas at risk of flooding from all sources, including rivers, the sea, surface water and ground water.

The Flood Risk Management (Scotland) Act 2009 (the Act) places a duty on Local Authorities to exercise their functions with a view to managing and reducing overall flood risk.

In line with the requirements of the Act, the Council wants to steer new development away from areas at risk of flooding by requiring developers to consider, at an early stage in the planning process, the susceptibility of their development to flooding and the impact it would have on flood risk elsewhere.

Scottish Planning Policy (SPP) requires planning authorities to take account of flood risk when considering new development. This document provides advice to developers on the information required to support development applications. Flood risk and drainage should be assessed at an early stage in the development process by a competent and experienced professional. The location, layout and design of new developments are critical factors when determining the probability and impact of flooding and designing drainage systems.

Detailed information on the concept of 'flood risk' i.e. the probability that a particular magnitude of flood will occur sometime in the future is available from publications such as CIRIA C624 and SEPA's [Technical Flood Risk Guidance for Stakeholders](#).

Section 1 of this advisory note provides information on what should be included if a flood risk assessment is required to support an application; and Section 2 provides information on what should be included if a drainage impact assessment is required.

1 FLOOD RISK ASSESSMENT (FRA)

Where Development Management, in consultation with the Flood Risk Management Team, considers there might be a risk of flooding to a proposed development or that the development may increase flood risk elsewhere, it will require that a FRA be submitted in support of the application. If an FRA is not submitted in support of the application then it may be refused.

It is advisable to anyone wishing to apply for planning permission to first check if the proposed development site is considered to be at flood risk. Information on flood risk can be found at <http://www.sepa.org.uk/flooding.aspx>.

Listed below are the basic requirements for a FRA. It should be noted that if the FRA indicates that the proposed development site is at flood risk, development will not be permitted.

1.1 Levels of Flood Risk Assessment

There are different levels of FRA, dependent on the nature of the development. Level 1 is a statement providing basic information about the development site with regard to flood risk and applies to developments of less than 10 dwellings or non residential developments of less than 100 square metres, unless there are known flooding issues at the proposed development site in which case a Level 2 assessment will be required. Level 2 is a full Flood Risk Assessment providing details of: the proposed development; flood risk from all sources; results of hydrological and hydraulic studies; and proposed mitigation. It is recommended that an appropriate level of FRA be carried out as soon as the site is considered for development, if possible before the site is purchased. The level of FRA required should be discussed with the Council prior to submitting a planning application. The FRA should be completed by a professional with relevant experience in flood risk and drainage design. Guidance on appropriate levels of FRA required can be found in SEPA's Technical Flood Risk Guidance for Stakeholders which can be found at <http://www.sepa.org.uk/media/162602/ss-nfr-p-002-technical-flood-risk-guidance-for-stakeholders.pdf> or CIRIA Report 624 Development and flood risk – guidance for the construction industry, which can be purchased at [CIRIA online bookshop](#).

1.2 Flood Risk Management Guidelines for Developments

- The FRA should demonstrate that the development is not at risk of flooding during a 1:200 year flood event (including an allowance for climate change, refer UK Climate Projections 2009). A key requirement of the FRA is that it must consider all sources of flooding (with the specific exclusion of internal sewer flooding as defined in The Flood Risk Management (Scotland) Act 2009) and demonstrate how mitigation methods will be managed. With regard to coastal flood risk this should allow for surge and wave action as well as the astronomical tide level. The FRA will be required to demonstrate that any flood risk associated with the development can be managed now and for the lifetime of the development, taking into account the potential effects of

climate change. It should also demonstrate that the development will not increase the risk of flooding elsewhere.

- As set out in SPP “Land raising should only be considered in exceptional circumstances, where it is shown to have a neutral or better impact on flood risk outside the raised area. Compensatory storage may be required. “
- The adoption of flood mitigation measures may be acceptable in some circumstances (such as a Brownfield site) but avoidance would be the Council’s primary objective.
- In circumstances where mitigation is considered acceptable, the developer must demonstrate the measures will not increase flood risk elsewhere. Mitigation measures should include an allowance for freeboard and climate change.

2 DRAINAGE IMPACT ASSESSMENT (DIA)

Drainage is a material consideration at the planning stage of a development and due consideration must be given to the impact of the proposed development, both during and after construction. The Council will only consider the quantity of surface water runoff, i.e. flood risk but the developer should also consider water quality (pollution).

A DIA is a report prepared by the developer, demonstrating the site specific drainage issues relevant to a proposal and the suitable means of accommodating these drainage needs. The DIA should cover surface water and foul drainage. Early discussions with the Council, SEPA and Scottish Water are encouraged for applications of a significant scale.

Surface water should be drained according to the principles of Sustainable urban Drainage Systems (SuDS). The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) make SuDS a requirement for nearly all new development within Scotland.

The requirements for the DIA should be proportionate to the scale of the proposed development. The Council will request a Drainage Statement for small developments and a full DIA for larger developments. The Drainage Statement and the DIA should be submitted with the planning application. If the required drainage information is not submitted with the application then it may be refused.

2.1 Drainage Statement

All developments for less than 10 new dwellings or a non-householder extension under 100 square metres, will need to provide a drainage statement. This statement should describe the proposed drainage arrangements for the development, e.g. a private drainage system such as a soakaway or connection to Scottish Waters drainage network. Plans submitted with the application should include the proposed layout of the drainage proposals. If the proposed drainage system involves infiltration, information on ground conditions should also be provided.

2.2 Drainage Impact Assessment

A full DIA will be required for all proposed developments other than those identified above. The DIA should meet the basic requirements listed below. Advice regarding specific requirements for major applications will be provided at pre-application consultation stage.

- The DIA should demonstrate that the surface water drainage system adopts Sustainable urban Drainage System (SuDS) principles and specifications in accordance with current legislation and guidelines, such as CIRIA C697 – The SuDS Manual and Sewers for Scotland 22nd Edition – A design and construction guide for developers in Scotland.
- The SuDs principles must conform to General Binding Rules 10, 11 and 21 under the Controlled Activities Regulations (CAR) and developments of more than one thousand properties will require a CAR licence.

- Any discharge to a watercourse must have the appropriate permission from the Council and Scottish Environment Protection Agency (SEPA), in terms of compliance with the relevant CAR General Binding Rule. Discharge to a sewer must be agreed with Scottish Water and the letter of agreement should be included in the DIA.
- The DIA should demonstrate, that the post-development runoff rate does not exceed the pre-development runoff rate or increase flood risk through discharge to a receiving watercourse.
- Details of any flow limiting device(s) should be included in the DIA. If discharging to a body of water, the proposed rate of discharge, point of discharge and outfall structure should be included.
- Subsoil porosity test for proposed infiltration devices should be undertaken in line with the requirements in Building Research Establishment (BRE) Digest 365, which can be purchased at BREbookshop.com, or similar recognised methodology (developer to make clear which methodology has been used). These tests must be representative, i.e. they must be taken on or near the proposed area for infiltration.
- The requirements for drainage should be taken into account when determining the overall layout of the development. For large developments with separate zones that will be constructed at different stages or by different developers, a drainage master plan covering the whole development will be required.
- The capacity of the drainage system including attenuation measures such as SuDS features should be designed to withstand a 1:30 year event, without surcharging.
- Exceedance events up to and including the 1 in 200 year event should be contained and managed on site, such that they do not increase flood risk. Details of the method used to manage this flow should be provided in the DIA. This method should also be shown on the general arrangement drawing.
- If attenuation systems take longer than 24 hours to drain completely, long duration events should be assessed to ensure that storage is not overwhelmed.
- To aid review and understanding, all calculations should be annotated to provide descriptive text of the logic, reasoning and methodology used. The origin of all formulae should be identified. All assumptions should be clearly stated with reference to their origin. All units should be clearly stated.
- A schedule detailing inspection and maintenance arrangements for the entire drainage system should be submitted at the same time as the design. This document should include how the various elements are accessed for maintenance operations – as per Construction Design Management (CDM) 2015. A coloured-up plan showing which body/bodies is responsible for each

aspect of the drainage system should be included confirming inspection and maintenance duties for each.

- The body responsible for overall management of the SuDs system should be identified in the DIA and a letter of agreement with the responsible body should be included. If the overall management of the system is to be undertaken by a property manager employed jointly by the property owners, this arrangement should be made clear in the title deeds.
- The Council will not assess or comment on options for dealing with foul water. However, they should be included in the DIA for submission to Scottish Water and / or SEPA for approval, depending on the preferred option.

2.3 Future Maintenance Arrangements

The drainage requirements outlined above may be subject to change to accommodate the agreement under Section 7 of the Sewerage (Scotland) Act 1968, between highway and local authorities, and Scottish Water, regarding responsibility for surface water drainage requirements.

CONSULTANCIES IN OR NEAR THE MORAY COUNCIL AREA

The list below provides details of some consultancies in and around Moray that can provide advice and/or assistance in the development of Flood Risk Assessment and Drainage Impact Assessment. This is not an exhaustive list, other companies that provide this service may be available in the Moray area and beyond.

<p>Mott MacDonald Moray House 16-18 Bank Street Inverness IV1 1QY Tel: 01463 239 323</p>	<p>AECOM 6 Ardross Street Inverness IV3 5NN Tel: 0141 354 6050</p>
<p>CH2M Pavilion 3 Fairways Business Park Inverness IV2 6AA Tel: 01463 231 707</p>	<p>Jacobs UK Ltd Kintail House Beechwood Business Park Inverness IV2 3BW Tel: 01463 228 300</p>
<p>Fairhurst Ltd 25a High Street Elgin IV30 1EE Tel: 01343 543 876</p>	<p>Millard Consulting 35 Queens Road Aberdeen AB15 4ZN Tel: 01382 227 380</p>
<p>Cameron & Ross 15 Victoria Street Aberdeen AB10 1XB Tel: 01224 642 400</p>	<p>Allen Gordon & Co 8 Ardross Street Inverness IV3 5NN Tel: 01463 236 516</p>
<p>Arch Henderson (formerly AF Cruden Associates) 24 Bank Street Inverness IV1 1QU Tel: 01463 719 200</p>	<p>GMC Surveys 34 Castle Street Forres Moray IV36 1PW Tel: 07557431 702 gmc-surveys@gmail.com</p>
<p>Enviro Centre Ltd Alder House Cradlehall Business Park Inverness IV2 5GH Tel: +44 01463 794 212</p>	<p>Terra Firma Surveys Ltd 10 South Street Elgin Morayshire IV30 1LE Tel: 01343 550 653 Email: iancstewart@btinternet.com</p>
<p>Property and Land Surveys (Highland) Ltd Suite 5 The Green House, Beechwood Business Park North, Inverness IV2 3BL Tel: 01463 718 933</p>	<p>Caintech Ltd 36 Longman Drive Inverness IV1 1SU Tel: 01463 719 623</p>

Please note that The Moray Council does not endorse any individual or company listed above.