

Aberdeen Planning Guidance 2023: Flooding, Drainage and Water Quality

Table of Contents

1 Introduction	Page 2
1.1 Status of Aberdeen Planning Guidance	Page 2
1.2 Background	Page 2
1.3 Climate Change	Page 3
1.4 Health and Wellbeing	Page 4
2 Aberdeen Planning Guidance	Page 5
2.1 Statutory Roles and Responsibilities	Page 5
2.2 Scotland's River Basin Management Plan	Page 6
2.3 Flood Risk Management Planning in Scotland	Page 7
2.4 Sustainable Drainage Systems	Page 9
2.5 Culverts and Open Watercourses	Page 9
2.6 Run Off and Acceptable Discharge Rates	Page 11
2.7 Flood Risk Assessments	Page 12
2.8 Drainage Impact Assessment	Page 13
2.9 Climate Change Allowances	Page 16
2.10 Planning Applications	Page 17
2.11 Certification Compliance	Page 17
3 Further Reading	Page 18
Appendix 1: DIA Summary Guidance for designers and checkers	Page 20
Appendix 2: Drainage and SuDS Compliance Certificate	Page 23
Appendix 3: Flood Risk Assessment Compliance Certificate	Page 24

1. Introduction

1.1 Status of Aberdeen Planning Guidance

This Aberdeen Planning Guidance (APG) forms part of the Development Plan and is a material consideration in the determination of planning applications. The APG expands upon the following Aberdeen Local Development Plan policies:

- Policy NE4 – Our Water Environment

This APG complements other APG documents on Natural Heritage, Trees and Woodland, Green Space Network and Open Space and Landscape.

Given the timing of the Local Development Plan, a pragmatic approach has been taken to changes in the planning system. National Planning Framework 4 (NPF4) was adopted following the examination and subsequent modification of the Local Development Plan, and the publication of a draft version of this APG for consultation. As a result, some terminology referred to in this APG may vary from the new NPF4 policy framework. References to the former Scottish Planning Policy (SPP) and Strategic Development Plan (SDP) have been largely removed from this APG to minimize confusion, and wherever possible updated references to NPF4 have been included. Occasional references to SPP and the SDP have been retained where necessary to explain the source of data and/or essential context for the APG, but it should be noted that the LDP together with NPF4 now forms the basis of the statutory development plan.

1.2 Introduction to Topic / Background

Planning has a key role to play in a modern approach to managing flood risk in Scotland. When preparing development plans and determining planning applications, Aberdeen City Council (ACC) will consider flood risk from all sources, to help prevent development which would have a significant probability of flooding or increase the probability of flooding elsewhere. This APG provides further guidance for developers which will help them to ensure their proposals properly address flood risk.

Flood risk is considered as part of the wider assessment of the effectiveness of development sites. In order to determine this at an early stage of the planning process, discussions are encouraged with the local authority to consider both flood

risk to the site, as well as the cumulative effects of the development. It is strongly advised that applicants seek pre-application advice from the local authority.

In exceptional circumstances where development is permitted on land at risk from flooding, the development must be designed to be flood resilient, minimise damage as well as take into consideration the evacuation of people.

1.3 Climate Change

Scotland's climate is changing, and these changes will lead to an increase in flooding from surface water, watercourses and coastal sources. The UK Climate Projections (UKCP09) projects that climate change will see an increase in autumn and winter rainfall intensity of approximately 10% by 2050 and a relative sea level rise of 0.5 metres in Aberdeen by the 2080s. In addition to an increase in rainfall intensity there will also be a reduction in rainfall during summer months, which will result in hard and dry ground conditions during the warmer season. Therefore, extreme rainfall events during the summer will have greater impact as the ground is less absorbent with greater vulnerability to faster surface water run-off. Updated in 2018 (UKCP18) climate projections are broadly consistent with those in UKCP09, projecting hotter and drier summers and, warmer and wetter winters by the 2070's. Increase in rainfall intensity will require a change in how we manage surface water. Extreme local weather events provide good examples of the consequences of the changing climate in Aberdeen. The Local Climate Impacts Profile (LCLIP) assesses the impact of extreme weather on Aberdeen City Council and continue to investigate necessary adaptations. As Aberdeen is a coastal city, rising sea levels are also a concern. [Dynamic Coast](#) offers maps which document coastal change and risk of erosion projections.

Adaptation measures include sustainable flood risk management, like Sustainable Drainage Systems (SuDS), buffer strips and blue, green and grey infrastructure. They provide multiple benefits such as biodiversity enhancement, habitat creation and improved amenity for those living and working in the area. Green Spaces also play a role by controlling run off, managing floods and providing space for SuDS.

The APG supports the [Strategic Infrastructure Plan \(Energy Transition\)](#) Sustainable Urban Drainage Project, [Aberdeen Adapts](#) Goal 3 (Buildings and Infrastructure) and Goal 4 (Flooding and Coastal Change) and [Net Zero Aberdeen RouteMap](#): Natural Environment Strategy all of which aim to prevent long term flood damage to Aberdeen, will provide natural flood management and nature based solutions, increase capacity to retain storm water and increase biodiversity. This will lead to reduced pressure on drainage systems, protection of water courses and, these actions will ensure mitigation and adaptation to the wetter winters and drier summers Aberdeen is set to experience. The above measure also address [UN Sustainable Development Goals](#) 11 (Sustainable Cities and Communities) and Goal 13 (Climate

Action) by ensuring a safe, resilient and sustainable city, while also taking action to combat climate change and its impacts.

1.4 Health and Wellbeing

Where we live, where we work, and where we spend our time has an important influence on our health and wellbeing. How places are designed within their urban or natural environmental are vital to the health of the people and communities within them. Developments can mitigate against any negative public health consequences of flooding, such as loss of electricity or running water, that have been shown to negatively affect physical and mental health.

This guidance can help to achieve the following Public Health Priorities for Scotland:

- Priority 1: A Scotland where we live in vibrant, healthy and safe places and communities; and
- Priority 3: A Scotland where we have good mental wellbeing.

This guidance is deemed to have a strong impact on population health and wellbeing. This means that it is likely a Health Impact Assessment (HIA) screening report will be requested to support any planning application, however this will depend on the detail and scope of the application. There may be elements of the proposals that relate to the health and wellbeing of the population that warrant consideration. If that is the case, then a screening HIA will be required.

2. Aberdeen Planning Guidance

2.1 Statutory Roles and Responsibilities

The Flood Risk Management Act (Scotland) 2009 ('the FRM Act') is the primary legislation relating to flood risk in Scotland. It is designed to ensure national legislation complies with the EC Floods Directive (2007/60/EC) and gives many different parties key roles in sustainable flood risk management in Scotland.

Climate Ready Scotland: Scottish Climate Change Adaptation Programme 2019 - 2024, required under Section 53 of the Climate Change (Scotland) Act 2009, sets out objectives for a climate ready natural environment, buildings and infrastructure and society. It addresses the risks set out in the UK Climate Change Risk Assessment (UK CCRA) 2017, published under section 56 of the UK Climate Change Act 2008. The programme is outcomes based, of which there are seven. Flooding and coastal resilience are topics woven into the outcomes in line with National Planning Framework 4 and the Flood Risk Management (Scotland) Act 2009. The table below describes the main roles and responsibilities held by different stakeholders, as defined by the Flood Risk Management Act (Scotland) 2009. Further information on flood risk management can be found in SEPA's natural flood management handbook.

Stakeholder	Key Roles, Responsibilities and Powers	Relevant Legislation
All responsible bodies (including local authorities, SEPA, Scottish Ministers, Scottish Water)	§ Act with a view to reducing overall flood risk, securing compliance with the Directive and having regard to the environmental, social and economic impact of carrying out their functions.	Flood Risk Management Act (Scotland) 2009
Planning Authority	§ Responsible for control of development through determination of planning applications and preparation of development plans, taking into account flood risk from all sources when doing so; § Enforcement action against illegal development	Planning etc. (Scotland) Act 2006
Local Authority	§ Assess condition of water courses and use their powers to maintain them; § Powers to implement measures to manage flood risk; § Prepare/contribute to the preparation of assessments, maps and plans relevant to their jurisdiction; § Lead the preparation of the Surface Water Management Plan	Flood Risk Management (Scotland) Act 2009

Scottish Water	<ul style="list-style-type: none"> § Responsible for provision of sewerage infrastructure; § Consider requests from landowners to vest/ adopt constructed, approved and planned SuDS; § Vest/ adopt if SuDS meets relevant standards and requirements*; § Dealing with flooding caused by water infrastructure failure; § Co-operation with the Local Authority in the preparation of the SWMP; § Where roads drainage and curtilage drainage enter into the same sewer, enter into an agreement with the Roads Authority for the provision, management, maintenance or use of sewers or drains for the conveyance of water. 	Sewerage (Scotland) Act 1968 (as amended)
SEPA	<ul style="list-style-type: none"> § Regulate discharges into controlled waters; § Provide independent advice and guidance on flood risk to LA's in their role as a statutory key agency; § Preparing national-level assessments and plans 	Control of Pollution Act 1974 (as amended) Planning etc. (Scotland) Act 2006 Flood Risk Management (Scotland) Act 2009
Owner/Occupiers	<ul style="list-style-type: none"> § Responsibility for safeguarding their property and avoiding/managing flood risk; § Maintaining any watercourses/bodies on their land; § Maintain SuDS within the boundaries or curtilage of private property. 	Flood Risk Management (Scotland) Act 2009

* In accordance with Sewers for Scotland where a shared drainage system is proposed for adoption by Scottish Water, this applies to assets sized for a 1:30 storm event. Any requests to vest SuDS infrastructure sized to 1:200 storm events will require a Joint Maintenance Agreement between Local Authority and Scottish Water under Section 7 Sewerage (Scotland) Act 1968.

2.2 Scotland's River Basin Management Plan

The River Basin Management Plan (2021 – 2027) is the third plan in a series of RBMPs prepared by SEPA. This Plan builds upon the objectives of the two previous Plans (2009 and 2015). It sets out a framework for protecting and improving the benefits provided by the water environment across Scotland, by providing a programme of actions to

achieve a revised set of objectives. The objectives support and encourage the use of natural surface water management measures to prevent flooding and protect the natural environment.

2.3 Flood Risk Management Planning in Scotland

The FRM Act established a new set of arrangements for flood risk management planning in Scotland. At a national level, the National Flood Risk Assessment (NFRA) has been prepared by SEPA with the aim of identifying the areas of Scotland most vulnerable to flooding.

The NFRA identified 243 Potentially Vulnerable Areas (PVAs) of which there are 4 in Aberdeen City, covering almost the whole local authority area. The potential impact of flooding in each PVA is considered significant enough to justify further national action.

At a regional level, Flood Risk Management Plans are required to be produced for each Local Plan District in Scotland. These are comprised of two elements:

- **A Flood Risk Management Strategy** for the North East District has been prepared by SEPA, and identifies the main flooding issues and impacts for each PVA and high-level objectives to address them.
- **The North East Local Flood Risk Management Plan** has been prepared by a local partnership, which is led by Aberdeenshire Council and includes Aberdeen City Council. It identifies areas at risk of flooding and where the impact of flooding is sufficient to justify further assessment and appraisal there is a short description of the causes and consequences of flooding and the agreed objectives for flood risk management are set out. The Plan includes maps for each PVA and actions that will deliver progress against the objectives over the first six-year planning cycle from 2022 to 2028, including when they will be implemented, which organisation is responsible, and how they are to be funded.

The Local Flood Risk Management Plan 2022 - 2028 identifies 7 Objective Target Areas (OTAs) in Aberdeen City, which are:

- Aberdeen Central
- Bridge of Don
- Peterculter
- Cove Bay
- Dyce

- Nigg Bay
- Kingswells (north)

Local authorities under the Flood Act (Scotland) 2009, Surface Water Management Plans Guidance (2018) and National Planning Framework 4 have the powers to manage and reduce flood risk. This APG provides additional information on the Natural Environment policies in the Local Development Plan (NE1-NE5), specifically NE4 Our Water Environment. When preparing development plans and assessing planning applications, ACC will consider flood risk from all sources, to help prevent development which would have a significant probability of flooding or increase the probability of flooding elsewhere. In addition, **ACC will require surface water drainage systems that have a neutral or better effect on the risk of flooding both on and off site, taking account of rain falling on the site and run off from adjacent areas.**

This document aims to guide the design of surface water drainage & Sustainable Drainage Systems (SuDS) and the preparation of Flood Risk Assessments for new developments within the ACC boundary.

In exceptional circumstances guidelines could be relaxed, however this will only be considered in areas with no existing nearby, upstream or downstream flood risk.

These guidelines do not replace SEPA's and Scottish Water's policies and requirements or any National policies, legislation and guidelines for Flood Risk and Drainage. In addition, they aim to support surface water drainage systems that should have a better effect on the risk of flooding both on and off site. SEPA, Scottish Water, ACC Planning and other departments, and other local authorities have been consulted to produce this document.

2.4 Sustainable Drainage Systems

As set out in Policy NE4, all new developments are required to incorporate SuDS to manage surface water, with the exception of single dwellings / extensions to residential properties or discharges to coastal waters. For change of use and/or redevelopment, opportunities should be sought to retrofit SuDS where appropriate.

SuDS is an approach to surface water management that aims to manage rainfall close to where it falls, mimicking natural systems and provide flooding alleviation and attenuation benefits. SuDS can be designed to slow water down before it enters rivers and streams and provide areas to store water before it soaks into the ground or evaporates. For these reasons, SuDS are more sustainable than traditional ‘hard’ drainage measures and may allow development in built up areas where existing drainage systems are close to capacity. SuDS and natural flood management solutions may take a range of forms for example, green roofs/walls, permeable surfaces, swales, wetlands, grass paving and detention basins. These features may provide many other benefits such as habitat and biodiversity enhancement, recreational opportunities and increased residential or workplace amenity.

Commensurate with the scale and nature of the development, the SUDs required will be expected to maximise all of the benefits above. It is important that SuDS also address water quality issues by providing appropriate treatment of surface water run-off prior to discharge.

Please refer to the SuDS Manual (2015) and Natural Flood Management Handbook in the Further Reading section of this guidance for examples of solutions and set standards.

Further guidance is available in the Aberdeen Planning Guidance documents on: Natural Heritage; Open Space and Green Infrastructure; and Landscape.

2.5 Culverts and Open Watercourses

ACC supports SEPA’s position statement against culverting for land gain ([SEPA: WAT-PS-06-02: Culverting of Watercourses - Position Statement and Supporting Guidance](#)).

ACC as a Flooding authority recommends watercourses be kept open for the following reasons:

- There is excessive engineering to install and construct culverts and there is negative impact to geomorphology.
- Culverted watercourse maintenance is always much more complicated and costly to any party than open watercourse maintenance when it comes to a potential blockage/collapse etc.

- Open watercourses capture run off from surrounding grounds.
- The existence of an open watercourse rather than a culverted watercourse is an opportunity for alleviating any future drainage or flooding issues.
- Placing a culvert under individual properties puts specific responsibilities on the landowners to undertake maintenance and prevent deterioration of the culverted watercourse. This can be difficult and costly to enforce.

De-culverting proposals are welcomed.

The minimum requirements for culverts and open watercourses are:

1. Culverting will only be considered if there is strong justification for doing it and in all cases it will not be considered for land gain. In case of culverting, this should be placed under an open space area which will be generally factored. The culvert should be designed to accommodate the 1 in 200-year storm event plus climate change.
2. Diversions of culverted watercourses are generally acceptable, however 90 degrees bends should be avoided.
3. An undeveloped buffer area for an open or culverted watercourse is required for maintenance access. This should be minimum 6 metres for open watercourses and 3 metres for culvert watercourses. This requirement also applies to proposed extension of existing buildings.
4. Where there is no alternative to a road or footway crossing a watercourse, a short section of culvert may be accepted. Long lengths of culverted watercourses or land drainage under roads or footways are not acceptable.
5. Proposed extensions of existing buildings over a culvert or land drainage pipe will not be approved unless a diversion of the culvert or the pipe is provided. If there is no space available, then the application may be rejected. Applicants should provide evidence that there will be no culvert or land drainage pipes within the area to be developed.
6. If a culverted watercourse section or land drainage exists or is proposed within the site, the developer must identify the individual or organisation taking the responsibility of it.
7. The new drainage system should always connect to an existing culvert manhole. Technical justification is required if it is not feasible to achieve a direct connection to a service cover.

2.6 Run off and acceptable discharge rates

When preparing a Drainage Impact Assessment (see section 2.8 below), the proposed discharge rates will have an impact on the required storage volume and therefore the size of the SuDS and the layout of the proposal. In areas where there is a known upstream or downstream flood risk, Aberdeen City Council will look to promote surface water drainage systems that have a better effect on the risk of flooding both on and off site.

The minimum requirements for pre and post run off discharge rates are set out below:

1. Evidence or demonstration of where currently an existing site drains must be provided.
2. Brownfield sites should be considered as though they were greenfield sites and the run-off rate shall be calculated accordingly.
3. The greenfield run-off rates shall always be calculated for the proposed impermeable or positively drained areas and not the whole site.
4. Post development discharge rates;

- Scenario 1; Sites with no significant flood risk upstream or downstream;

The post development run off should be equal to or less than the greenfield run-off for all events.

- Scenario 2; Sites with known significant flood risk upstream or downstream.

The post development run-off rate shall be restricted to 3.5 l/s/ha or the 1 in 2-year storm greenfield run off (whichever is lower). This restriction applies to all events up to 1 in 30-year storm event. For a storm event higher than 1 in 30-year, the post development run off should always be less than the pre-development run off for the same event.

- Scenario 3; Sites that currently drain into the combined system and are now proposed to drain into a surface water system.

The post development run-off rate shall be restricted to 2 l/s/ha or the 1 in 2-year storm greenfield run off (whichever is lower). This restriction applies to all events up to 1 in 200-year storm event. For this scenario, the developer may also need to undertake additional mitigation measures outwith the boundary of the proposed site as there may be increase of flood risk upstream or downstream.

For the 3 above scenarios, upstream or downstream flood risk refers to the watercourse/s that the site drains to.

5. Altering a watercourse catchment area is generally not acceptable. However, if catchment alteration is proposed where the catchment area is increased, then the post development run off rate should be restricted to the greenfield run-off of the original catchment area.
6. Calculations for the pre and post run off should include the 1 in 10-year storm event, 1 in 30-year storm event and 1 in 200-year storm event plus climate change.
7. For small sites of less than 1 hectare, discharge rates could be relaxed, as it is not technically feasible to have less than 75mm flow control. In this case, the recommended discharge rate is 2 l/s per site.
8. For proposed extensions of existing buildings where planning permission is required and where a new impermeable area is proposed, compensation storage is encouraged. This could be a raingarden, green roof, garden water butt etc within the boundary of the property or consider the use of permeable materials to outdoor surface areas.
9. Developers are advised to enter into pre-application discussions with the Council's Flooding Team to agree the proposed discharge rates.

2.7 Flood Risk Assessments (FRAs)

Floods are inherently complex phenomena that are extremely difficult to predict; the effects of climate change are likely to have even further impact on the frequency, intensity, and unpredictability of flood events. Although probability-based flood maps guide us to areas which are most vulnerable to flooding, they should not be taken as infallible, and the granting of planning permission never implies that there is an absence of flood risk.

ACC will ask SEPA to review Flood Risk Assessments. SEPA will provide comments on the appropriateness of the study, its conclusions, and the acceptability of the proposals in line with Policy 22 'Flood Risk and Water Management' within National Planning Framework 4, which sets out the parameters within which development is likely to be acceptable to strengthen resilience to flood risk.

An FRA is required in the following circumstances;

- The SEPA Flood Maps identify flooding at, or nearby, the site from any source.
- Historic flooding has been recorded within the site or the surrounding area.
- The proposed site includes, or is close to, a waterbody that poses a potential flood risk. This could be an open or culverted watercourse, however may also refer to ditches or small watercourses.
- The proposed site arrangements alter the existing public drainage pipe network. This refers mainly to urban areas.

1. An FRA will consider flood risk from all sources (coastal, river, surface water, groundwater, reservoirs, sewers etc) to help prevent development which would have a significant probability of flooding or increase the probability of flooding elsewhere. The level of the FRA detail depends on the site, level of risk, variety of complexity of flooding.
2. SEPA has produced standard technical guidance on producing FRAs, which includes a checklist to help ensure that all key elements have been included. It is strongly recommended that applicants make use of the guidance in preparing a FRA.
3. Infrastructure and buildings should generally be designed to be free from surface water flooding in rainfall events where the annual probability of occurrence is greater than 0.5% (1 in 200-year storm event).
4. Land raising of the flood plain is not acceptable, however it may be considered in some cases and with the confirmation that compensatory storage demonstrates it has been designed and constructed to work during extreme storm events. SEPA guidance on compensatory storage area should be followed (as referred to in [SEPA Technical Flood Risk Guidance for Stakeholders, SEPA Requirements for Undertaking a Flood Risk Assessment \(SEPA, 2019\)](#)).
5. The minimum recommended freeboard for rivers and watercourses is 600 mm above the 1 in 200-year storm event plus climate change. For areas with pluvial flood risk, the minimum recommended freeboard is 300mm.
6. Developers are advised to enter into pre-application discussions with the planning authority and SEPA for developments which require an FRA.

2.8 Drainage Impact Assessments (DIAs)

All new developments are required to incorporate SuDS to deal with surface water. SuDS components need to be selected based on specific site opportunities and constraints and provision should be addressed as part of the Drainage Impact Assessment. DIAs should be site-specific depending on the scale and type of development, site conditions and the sensitivity of the receiving watercourses. For extensions or single houses, a Drainage Statement may be suitable.

When will Drainage Impact Assessment be required?

Aberdeen City Council require that a DIA is required for the following development proposals:

- Any residential development comprising five or more dwellings;
- Non-residential developments of 250 square metres or more;
- Changes of use involving new buildings or hard surfacing of 100 square metres or more;
- Extension to buildings or hard surfacing of 100 square metres or more;
- Any development that is below these thresholds but falls within a sensitive area.

The SuDS Manual, produced by the Construction Industry Research and Information Association (CIRIA) is a useful resource providing guidance on the planning, design, construction and maintenance of SuDS.

Technical criteria are set out in the most up-to-date Scottish Water 'Sewers for Scotland'. If a SuDS development is constructed to these standards, Scottish Water has a duty to vest the SuDS and thereby become responsible for it. The Drainage Impact Assessment must demonstrate that the long-term maintenance and management of SUDS has been arranged to the satisfaction of all parties.

Consideration must be given to the following:

1. Infrastructure and buildings should generally be designed to be free from surface water flooding in rainfall events where the annual probability of occurrence is greater than 0.5% (1 in 200-year storm event).
2. The surface water system shall be designed and constructed so that flooding does not occur in any part of the site in a 1 in-30-year storm event, with a 1 in-200 year overall minimum flood resilience assessment check. Checks for the attenuation storage shall be made for the 1 in-200-year return period plus climate change and additional paved area allowances to ensure that properties on and off site are protected against flooding for all these scenarios.
3. Demonstration that any exceedance water from the drainage system up to the 1 in 200-year storm event remains within the site.
4. An examination of current and historical drainage routes including water courses, ditches, culverts, sewage and general land drainage, both within and adjoining the site.
5. A statement of SuDS to be incorporated, and final discharge point(s) where relevant, including how the drainage design satisfies SuDS techniques, both in terms of treatment of water quality and attenuation of water quantity, in accordance with best practice and design.
6. A Drainage Plan identifying the type of SuDS to be incorporated and the land-take of the SuDS, allowing for access and maintenance. Details of proposals, where relevant, for integrating the drainage system into the landscape or publicly accessible open space, providing habitat and social enhancement. The Drainage Plan must also provide information of all the pipe network, manholes, gullies and discharge points.
7. The soil classification for the site and evidence of subsoil porosity tests at the location for any proposed infiltration devices, showing the position of the winter water table.
8. Pre-development overland flow path arrows for site and surrounding land.
9. Post development overland flow paths and routes and flood flow map for the 1 in 200-year storm event. Indication of measures to safeguard properties from flooding.

10. Existing land drainage shall never be removed, however diversion is acceptable.
11. Land drainage or springs shall not be connected to any type of proposed or existing SuDS.
12. For large sites, proposed land drainage maps are required. This will include any culverting or diversion of the land drainage. The developer must identify the individual or organisation taking the responsibility of the proposed section.
13. For sloped sites additional drainage details shall be taken into account for provision of water entering or exiting the site. Any proposed cut off drainage details should be submitted.
14. Significant pluvial SEPA flood extents within a site may require additional mitigation measures. The proposed new drainage system does not replace the existing storage volumes, therefore additional mitigation measures may be required.
15. Maintenance of SuDS within the boundaries or curtilage of a private property, such as a residential driveway or supermarket car park, is the responsibility of the landowner or occupier. SuDS constructed outwith the boundaries of a private property may be vested by Scottish Water or adopted by ACC. The developer must identify the individual or organisation taking the responsibility of the proposed SuDS.
16. Developers are required to submit the native files (Micro Drainage, Infoworks or other software). These will include source control and surface water network system design.
17. Underground storage should be avoided where possible.
18. The DIA should include a section describing the arrangements for wastewater (water from toilets, showers, sinks etc.). National policy indicates that waste/foul water and surface water drainage should be kept separated.
19. Developers should minimise the amount of impermeable areas in the proposed design and increase permeable areas, where appropriate.

Connection to the Public Sewer:

The Local Development Plan states that connection to a public sewer will be a pre-requisite of all development where this is not already provided. Developers are responsible for laying any off-site extension to connect their development to the public sewer.

Scottish Water can provide advice on the procedure for obtaining connection to a public sewer and the required standards for adoptable infrastructure. Scottish Water's Sewers for Scotland guidance is available in the further reading section below. Further information on the contributions that may be required towards the provision or upgrading of sewerage infrastructure can be found in the Planning Obligations Supplementary Guidance.

Private Sewers:

Private sewer treatment systems for individual properties will not be permitted in areas already served by a public sewer. Where public sewers are not available, developers are advised to first discuss with Scottish Water the possibility of providing a new public sewer to carry wastewater to an existing Waste Water Treatment Plant (WWTP).

If it is not physically possible for a development to be connected to a public sewer, in exceptional circumstances private sewer treatment systems for individual properties will be permitted provided that the developer demonstrates that:

- a. there will be no adverse effects on the environment, amenity and public health individually or cumulatively; and
- b. the development will not obstruct future development of the public sewer; and
- c. the private system will be removed when the public sewer becomes capable of being connected to; and
- d. the development must facilitate later connection to the public sewer.

2.9 Climate change allowances

As per the latest SEPA's guidelines regarding climate change (2022), ACC requires

1. 37% peak rainfall intensity allowance for surface water.
2. 34% peak river flows allowance for rivers.
3. 0.87 metres sea level rise allowance for coastal.

2.10 Planning Applications

During or before a planning application process for a new development the following should be considered:

1. That a drainage layout of a planning application in principle has been agreed/granted, does not imply that drainage details have been finalised in the detailed or Matter Specified in Conditions (MSC) planning application.
2. That a planning application has been granted, does not automatically imply approval of the Road Construction Consent (RCC) application or vice versa. If during the RCC process or the planning application, a significant modification has been proposed to one of them, then a new application or non-material variation may be required for the other.
3. If the development is being approached in a phased manner, then a drainage masterplan covering the drainage of the entire site will be required at outline planning stage.
4. Early discussion with the Planning Service and the Flooding team is always welcomed for every planning application.
5. Where flood risk is identified as a constraint, early discussion with the Planning Authority through the submission of a pre-application enquiry is encouraged, to establish relevant information that will be required as part the application process to address flood risk considerations.

2.11 Certification Compliance

ACC requires DIAs and FRAs to be submitted with a signed compliance certificate (refer Appendix) to certify the assessments have been carried out in accordance with the current document, relevant national legislation and guidelines for Flood Risk and Drainage. An individual certificate is required for each assessment. It is the responsibility of the author(s) to ensure that the detailed calculations and computations are technically accurate. The certifications should be submitted to the Planning Authority after approval completed. Within the certificate, reference to all related documents or drawings is required. This is not a requirement for extensions or single houses.

The minimum requirement for the individual that signs the certificate is to be an IEng from an appropriate Chartered Engineering Institution.

3. Further Reading

The SuDS Manual:

<http://www.scotsnet.org.uk/documents/nrdg/ciria-report-c753-the-suds-manual-v6.pdf>

Sewers for Scotland v4.0:

<https://www.scottishwater.co.uk/-/media/ScottishWater/Document-Hub/Business-and-Developers/Connecting-to-our-network/All-connections-information/SewersForScotlandv4.pdf>

Natural Flood Management Handbook:

<https://www.sepa.org.uk/media/163560/sepa-natural-flood-management-handbook1.pdf>

SEPA's Flood Risk Management Plan (North East) 2021

<https://www2.sepa.org.uk/frmplans/documents/lpd6-north-east-frmp-2021.pdf>

- CIRIA C753 (2015) The SUDS Manual
- The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) (as amended);
- Climate change allowances for flood risk assessment in land use planning, SEPA, Issue No2, (2022)
- SEPA Technical Flood Risk Guidance for Stakeholders, SEPA Requirements for Undertaking a Flood Risk Assessment (SEPA, 2019)
- Planning Guidance and Advice Notes: <https://www.sepa.org.uk/environment/land/planning/guidance-and-advice-notes/>;
- Planning Advice for Developers (2019): <https://www.sepa.org.uk/environment/land/planning/advice-for-developers/>
- Planning Advice Note 51: Planning, Environmental Protection and Regulation;
- Planning Advice Note 69: Planning and Building Standards Advice on Flooding;
- Planning Advice Note 79: Water and Drainage;
- Sewers for Scotland 4nd Edition, 2018
- Scottish Water Surface Water Policy – Standard advice note and process guidance current revision;
- Flood Estimation Handbook, Centre for Ecology and Hydrology, Wallingford
- Flood Risk Management (Scotland) Act 2009
- Roads (Scotland) Act 1984
- SuDS for Roads (2009)

- Surface Water Management Planning - Guidance (2018), Second Edition
- WAT-PS-06-02: Culverting of Watercourses - Position Statement and Supporting Guidance, SEPA, (2015)

Appendix 1

DIA Summary Guidance for designers and checkers

Summary guidance	Comments
1. What are the characteristics of the site? What are the existing water features within the site or in the nearby area? Does the site have any existing underground drainage system (field/ land drainage, combined or surface water)?	
2. Where the current site drains? Is there a proposal for altering catchments? Where will the proposed development discharge?	
3. Does the site have a flooding history? Is there flooding history in the nearby area? Are there flooding issues of the watercourse that the site is proposed to drain to?	
4. Does it currently drain to a surface or combined system? Does it drain directly to an open watercourse?	
5. What is the pre-development overland flow path and the surrounding land?	
6. Do the SEPA flood risk maps show significant surface water extent within or surrounding the site?	
7. Are filtration methods proposed? Are the soil conditions sufficient?	

8. Did the calculations of the pre-development/green field run off consider the proposed impermeable areas?	
9. What are the proposed post development discharge rates? Are they complying with the required discharge rates of the current guidelines?	
10. Is there a confirmation/demonstration that the 1 in 30-year +CC storm event remains below ground and that 1 in 200-year +CC storm event remains attenuated on site safely?	
11. Have the SuDS been modelled to accommodate the 1 in 200-year storm event?	
12. What is the overland flow path or flood map in the 1 in 200-year storm event?	
13. Is there any manhole surcharging in an event higher than the 1 in 30-year storm event? If so, where will the water be received? Does it remain within the site?	
14. Are water quality and treatment of the SuDS proposal complying with guidelines? Do SuDS provide other benefits such as habitat and biodiversity enhancement, recreational opportunities and increased residential or workplace amenity?	
15. Who will be responsible for the maintenance of the drainage system, SuDS, culverts, land drainage	

pipes etc? Is there a proposal for vesting by Scottish Water or adoption by ACC? Will it remain private? Will it be factored?	
16. What type of SuDS is proposed and what is the proposed storage volumes? Is it above or below ground?	
17. Has climate change been considered?	

Appendix 2

ABERDEEN CITY COUNCIL CITY DEVELOPMENT DEPARTMENT

DRAINAGE AND SUDS DESIGN COMPLIANCE CERTIFICATE

I certify that all the reasonable skill, care and attention to be expected of a qualified and competent professional in this field has been exercised in designing the surface water drainage system for the below named development in accordance with CIRIA C753: The SUDS Manual 2015, current Edition of Sewers for Scotland and the Aberdeen City Council Drainage & Flooding Guidelines and Surface Water management for new Developments document.

Name of Development	
Name of Developer:	
Planning Application No:	
Roads Construction Consent No:	
Signed:	
Name:	
Position Held:	
Name and Address of Organisation:	
Engineering Qualifications:	
Date:	

Appendix 3

ABERDEEN CITY COUNCIL CITY DEVELOPMENT DEPARTMENT

FLOOD RISK ASSESSMENT COMPLIANCE CERTIFICATE

I certify that all the reasonable skill, care and attention to be expected of a qualified and competent professional in this field has been exercised in carrying out the Flood Risk Assessments and preparing the Flood Risk Assessment Report for the below named development in accordance with the Reporting Requirements for Flood Risk Assessments issued by SEPA.

Name of Development:	
Name of Developer:	
Planning Application No:	
Roads Construction Consent No:	
Signed:	
Name:	
Position Held:	
Name and Address of Organisation:	
Engineering Qualifications:	
Date:	