



FLOOD MANAGEMENT

DEVELOPMENT CONTROL

FLOOD RISK AND SURFACE WATER MANAGEMENT REQUIREMENTS

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DOCUMENT CONTROL

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FLOOD RISK AND SURFACE WATER MANAGEMENT REQUIREMENTS

1. INTRODUCTION

- 1.1 The City of Edinburgh Council (CEC) is the Planning Authority and has statutory duties under the *Flood Risk Management (Scotland) Act 2009* to reduce the risk of flooding. As part of these duties CEC must not permit development which has the potential to increase flood risk.
- 1.2 CEC intends to strengthen resilience to flood risk by promoting avoidance as a first principle, in alignment with Scotland's *National Planning Framework 4 (NPF4)*.
- 1.3 This document details CEC's technical requirements for surface water management and flooding that developers must comply with for planning applications. The following assessments are required when considering surface water management and flooding impacts in planning applications:
 - Flood Risk Assessment (FRA) – FRAs are required for applications where there is likely to be a risk of flooding. The trigger points for when a FRA is required are detailed in Section 4.
 - Surface Water Management Plan (SWMP) – SWMPs are required for all applications to demonstrate how surface water will be managed across the site. Further details on the SWMP requirements are presented in Section 5.
- 1.4 CEC has implemented a self-certification process for the preparation of flood risk and surface water management assessments. By signing the self-certification declaration, applicants are confirming that in their professional opinion the application conforms to the requirements noted within this document. Developments classified as Major, under the *Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009*, require an independent check and signed declaration as part of the application. Further details on the process and requirements are presented in Section 6.
- 1.5 This document has been prepared to reflect updates to best practice and guidance within the following supporting documentation. The references to guidance within this document have been made as up-to-date as possible, however applicants should ensure they review the relevant guidance:
 - *Vision for Water Management in the City of Edinburgh* (CEC, 2020).
 - *City of Edinburgh Council Sustainable Rainwater Management Guidance* (CEC, 2021).
 - *Climate Ready Edinburgh Plan 2024-2030* (CEC, 2024)
 - Water Environment Section 3.8 of the *Edinburgh Design Guidance* (CEC, 2020).
 - *The SuDS Manual C753* (CIRIA, 2015).
 - *Sewers for Scotland* (Scottish Water, 2018).
 - *SEPA Flood Risk Standing Advice for Planning Authorities and Developers* (SEPA, 2024).
 - *Technical Flood Risk Guidance for Stakeholders, SEPA requirements for undertaking a Flood Risk Assessment* (SEPA, 2022).
 - *SEPA Flood Risk and Land Use Vulnerability Guidance* (SEPA, 2024).
- 1.6 Applicants for Major or complex developments shall liaise as early as possible with the CEC Flood Management Team prior to making a formal submission.

2. SCOPE

- 2.1 The fundamental objective of these Requirements is to ensure that flood risk is adequately considered in the determination of planning applications.
- 2.2 These Requirements demonstrate that the City of Edinburgh Council has taken measures to ensure that flood risk is adequately managed and that evidence is provided.
- 2.3 Compliance with these Requirements does not in any way modify or reduce the responsibilities of any party for the work carried out or the legal responsibility of professional engineers.
- 2.4 The procedures described in this document are to be applied to the designs of all new Local and Major developments.
- 2.5 Householder applications are requested to follow the principles of this document when assessing flood risk and undertaking surface water management however they are not required to complete the self-certification declarations when submitting a planning application.
- 2.6 If during the detailed design any refinements or changes made will affect potential flood risk the proposals must be resubmitted to the Council's Flood Management Team for consideration and it may be necessary to re-certify. For example, changing a road gradient / crossfall or relocating a manhole could result in significant changes to perceived flooding.
- 2.7 CEC Flood Management do not support the use of planning conditions with regard to flood risk or surface water management as there may be issues which cannot be overcome and therefore would go against the planning permission.

3. THE DEPARTMENT'S ROLE

- 3.1 The role of the Flood Management Team will be:
 - To examine Planning Applications with respect to Flood Risk and Surface Water Management across the Council area.
 - To determine whether Flood Risk and Surface Water Management has been adequately addressed in the design documents supplied in support of the Planning Application.
 - To be available for consultation by the Design Team or Check Team.
 - To receive from the Designer, certificates of compliance with the Requirements.
 - To provide a consultation response to the CEC Planning Department, where appropriate, and support CEC Planning Department through the determination process and any subsequent appeal processes.
- 3.2 The Flood Management Team will not check the calculations nor their translation.

3.3 Additionally, the Flood Management Team will have a policy role in the context of applying special parameters such as:

- Any extra criteria suggested for a particular problem and/or any proposed departure from current standards.

Decisions on these questions will be given by the Flood Management Team. It will be the responsibility of the CEC Planning Team to ensure that these decisions are recorded in the Planning Decision document as appropriate. Rulings given for a particular scheme are not to be applied to another scheme without the prior agreement of the Flood Management Team.

4. FLOOD RISK ASSESSMENTS

4.1 Flood Risk Assessment Requirements

4.1.1 Flood Risk Assessments (FRAs) are required for all applications where there is likely to be a risk of flooding from either coastal, fluvial (watercourse), pluvial (surface water), groundwater, or other sources of flooding. A FRA is required in instances where the site has one of the following:

- The online SEPA Flood Maps identify flooding at, or nearby, the site from any source.
- Historic flooding has been recorded in the area.
- The proposed development is close to a watercourse, drainage ditch, or water body that poses a potential flood risk.
- The development is considered a Major development, as defined under the *Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009*.

4.1.2 The Flood Risk Assessment shall make a reasoned evaluation of the potential flood risk from all sources of flooding, including coastal, fluvial, pluvial, groundwater, sewer inundation, or infrastructure failure such as canal, reservoir or flood protection structures.

4.1.3 Assessment of the pluvial flood risk (flooding from rainfall flowing overland) shall feed into the SWMP – guidance for which is presented in Section 5.

4.1.4 CEC Flood Management requires that a development site is not at risk of flooding from a 1:200-year return period storm event (including an allowance for climate change).

4.1.5 Sensitivity analysis shall be conducted to demonstrate the effect of varying input data and assumptions on the flood risk assessment results. The sensitivity analysis shall consider the 1:1000-year return period event (including an allowance for climate change), if the development is classed as 'most vulnerable' in the *SEPA Flood Risk and Land Use Vulnerability Guidance* (SEPA, 2024).

4.1.6 If flood risk is confirmed, developments are only supported if they fall under the exceptions listed in Policy 22 of *National Planning Framework 4* (2023). Applicants shall address all points raised and requested by this policy.

- 4.1.7 FRAs shall include a completed *SEPA Flood Risk Assessment Checklist (SS-NFR-F-001)*.
- 4.1.8 The detail required for a FRA is dependent on the complexity of the flood risk mechanisms, uncertainty, the site and the severity of the risk. Guidance on the appropriate levels of FRA required is described in *CIRIA C624* under Level 1, Level 2 or Level 3. This hierarchy shall be followed when considering flood risk at the proposed development and this should inform whether a more detailed level of FRA is required. Early engagement with CEC is recommended to discuss the level of FRA required, prior to submitting a planning application.
- 4.1.9 The applicant should be aware that if a Level 3 FRA is deemed to be required, CEC hold water level data from historic hydraulic modelling studies of several watercourses within the city. The developer should contact CEC to discuss if data is available to inform the FRA. Where available, water levels and river flows can be supplied, but the transfer of actual hydraulic models is limited. Applicants will be required to satisfy themselves of the suitability of all data.

4.2 Hydrology and Climate Change Impacts

- 4.2.1 An up-to-date method for estimating design rainfall and river flow shall be used. FEH22 rainfall data is recognised as the most recent method available for estimating design rainfall. Applicants shall clarify the method used to estimate design rainfall and demonstrate why alternative methods are more appropriate, if used.
- 4.2.2 Applicants shall refer to the latest *SEPA Climate Change Allowances for Flood Risk Assessment in Land Use Planning* guidance on climate change considerations in rainfall intensity, watercourse flows and coastal flood risk assessments.

4.3 Finished Floor Levels and Freeboard

- 4.3.1 CEC Flood Management require a minimum freeboard of 600mm above the peak flood level.
- 4.3.2 Where applicable a freeboard assessment may be undertaken to demonstrate that a lower freeboard is acceptable using an applicable method. CEC Flood Management will not however accept a freeboard of less than 300mm.
- 4.3.3 Minor extensions to existing properties defended by a flood protection scheme will be allowed to retain the same finished floor level as the rest of the property.
- 4.3.4 New developments located behind a flood protection scheme must have their finished floor level at or above the peak flood level (including an allowance for climate change) with the required freeboard duly considered.
- 4.3.5 Properties which do not achieve the minimum required finished floor level to minimise flood risk must be flood resilient. This may mean the use flood resistant and flood resilient building techniques and products in the design.

4.4 Access and Egress

- 4.4.1 The FRA must demonstrate that safe and flood-free access and egress to the site can be maintained during the design flood event.

- 4.4.2 A safe, dry, access and egress route for people (not vehicles) of all abilities (on foot or with mobility assistance) between the development and a place of safety beyond the design flood level shall be clearly marked on the relevant application drawings.
- 4.4.3 The applicant shall provide one drawing showing the following: the proposed development and finished floor levels, flood extent during the design flood event, flood levels, flood depth, post-construction ground levels and a clearly marked access and egress route.

4.5 Land Raising and Compensatory Storage

- 4.5.1 New development must not affect the ability of the floodplain to store and convey flood water. Removal or modification of the floodplain by land raising will displace flood water and may have an unacceptable impact unless it is linked to the provision of compensatory storage. Generally, no development within the flood plain will be accepted – defined by the 1:200-year return period storm event flood extent (including an allowance for climate change).
- 4.5.2 Land raising to protect a proposed development will not generally be acceptable if the development lies within the 1:200-year return period storm event flood extent (including an allowance for climate change).
- 4.5.3 If the proposed development requires land raising within the floodplain, 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, 2022)).
- 4.5.4 Stilted development is a form of flood risk mitigation, where a building is elevated or supported by structures such as pillars. Stilted development may be considered appropriate, provided that all key principles are met including:
- The first occupied/utilised floor of the development is above the relevant flood return period level (including an allowance for climate change), plus a separate freeboard.
 - The proposed development has a neutral impact on floodplain capacity and flow characteristics.
 - The sites have been previously developed and are within a built-up area.
 - Proposals do not create an island of development (i.e., development will adjoin developed areas outside of the floodplain).
 - Safe, flood-free pedestrian access and egress is provided.
 - The area that is susceptible to flooding is designed to be flood resilient and can drain effectively once flood waters subside.
 - Owners and occupiers are made aware that the under-croft area is designed to flood and that the property title deeds record that the under-croft is susceptible to flooding and that development there should be limited.

4.6 Watercourse Buffer Strips

- 4.6.1 'Buffer strip' is a term usually used to describe the area of land in the riparian zone between the watercourse and other land uses. Buffer strips have the potential to conserve, enhance and protect the water environment by safeguarding corridors that enhance blue-green infrastructure and enhance habitat connectivity promoting biodiversity.

- 4.6.2 The effectiveness of a buffer strip will be influenced by the width of the buffer, its characteristics and how it is managed. CEC will typically accept no development within buffer strips.
- 4.6.3 The table below provides the recommended minimum buffer strip widths, based on the width of the watercourse. However, these will be dependent on the site conditions. The buffer strip shall be measured from the top of the bank and the minimum widths stated below are required on each side of the watercourse. The applicant must provide sufficient justification for why the recommended buffer strip cannot be provided.

Width of watercourse (measured between the top of banks)	Minimum width of buffer strip (measured from either side of the watercourse top of bank)
Less than 1m	6m
1-5m	6-12m
5-15m	12-20m
Greater than 15m	20m+

- 4.6.4 *Sewers for Scotland* (Scottish Water, 2018) guidance on building over or near a sewer should be applied to culverted watercourses.

4.7 Other Key Considerations

- 4.7.1 Daylighting of culverts is actively encouraged by CEC Flood Management and SEPA to reduce flood risk and help promote sustainable river basin management approaches. CEC supports SEPA's stance against culverting for land gain.
- 4.7.2 A flood response plan shall support the FRA. This shall include:
- Plans showing safe access and egress points during flood conditions.
 - Instructions for residents to sign up for flood warning alerts.
 - Flood warning thresholds after which no access to any underground car park (if part of the development) will be allowed.
- 4.7.3 No access roads to proposed developments will be accepted adjacent to watercourses, as this may encourage fly tipping that can exacerbate flood risk.
- 4.7.4 Several areas throughout Edinburgh are served by flood protection schemes. Proposed developments in these areas are not permitted to discharge to a watercourse through flood scheme infrastructure without design approval from CEC Flood Management.

5. SURFACE WATER MANAGEMENT PLANS

5.1 Surface Water Management Plan Requirements

- 5.1.1 Surface Water Management Plans (SWMPs) are required for all applications. The purpose of the SWMP is to demonstrate how surface water will be managed across, and drained from, the site and how attenuation and treatment requirements will be satisfied. This guidance document highlights the key criteria required to enable the Flood Management Team to be satisfied, before recommending an application for approval.
- 5.1.2 Householder applications are requested to follow the principles of this document when assessing flood risk and developing surface water management, however they are not required to complete the self-certification declarations when submitting a planning application.
- 5.1.3 Applications for single new houses are still requested to complete a basic SWMP (and potentially a FRA) and comply with the surface water attenuation and treatment requirements described in this document.

5.2 Surface Water Management Measures Layout

- 5.2.1 The applicant shall provide a layout drawing showing proposed surface water management measures and the location of discharge. The layout drawing shall include feature references that cross-reference those used in the calculations noted in Section 5.3.6.
- 5.2.2 The layout drawing and supporting SWMP report shall show the catchment areas draining onto the proposed development, including those outwith the development boundary. Measurements of the permeable and impermeable areas must also be provided.

5.3 Attenuation

- 5.3.1 The proposed discharge rate from a development site shall be no greater than the lesser of:
 - 1:2-year return period greenfield runoff rate.
 - 4.5 l/s/ha of impermeable or positively drained area.
- 5.3.2 In order to attain these flow rates, surface water shall be retained within the development boundary. Should overland flows result as part of the surface water management strategy then these must also be managed and retained within the property boundary up to the 1:200-year return period storm event (including an allowance for climate change).
- 5.3.3 The risk of blockage of outlets shall be considered in the design of flow controls, particularly for small sites where the 1:2-year greenfield runoff rate is small.

CEC will not accept flow control devices which are less than 75mm in diameter as they pose an increased blockage and maintenance risk.

Materials that may cause blockages should be removed from the system as early as possible in the system conveyance and treatment train, and as close to source as possible. A maintenance plan should be developed and adhered

to, to manage blockage risk. To minimise the risk of blockage due to small orifice diameters, alternative flow control measures could be explored including permeable paving and vortex flow control devices.

Discharge rates higher than the 1:2-year greenfield runoff rate will only be accepted in exceptional circumstances and depending on approval from owner of the receiving asset. Where it is not possible to limit rates to the 1:2-year greenfield runoff rate, because this may cause blockages, additional consideration shall be given to rainwater re-use to minimise the impact of smaller storm events.

The SWMP shall consider the impact of potential blockages and confirm that exceedance flows can be safely managed on site, as discussed in Section 5.7.

- 5.3.4 It is not acceptable to treat a mere reduction or “betterment” of current flows from a site as satisfying Section 5.3.1 above. The only exception of compliance with discharge rates noted in Section 5.3.1 above is that all existing roofs and walls are retained and there is no additional positively drained area contributing to the surface water drainage network.
- 5.3.5 The SWMP must confirm the volume of storage provided and confirm that the 1:30-year return period storm event (including an allowance for climate change) remains contained within the SuDS and drainage network. The SWMP must confirm that the 1:200-year return period storm event (including an allowance for climate change) remains on site and does not pose a flood risk to sensitive receptors.
- 5.3.6 Drainage calculations can be conducted either by hydraulic modelling software or by hand. If using hydraulic modelling software, the software parameters and outputs shall be included within the SWMP. This shall include details of all proposed drainage features and rainfall data. Drainage feature schedules (to mAOD) and surcharge reports shall also be included. The drainage features in the calculation shall be cross-referenced to the surface water management drawing(s) to enable interpretation. The results shall include the 1:30-year and 1:200-year return period storm events (including an allowance for climate change). A sensitivity analysis exercise shall be conducted to understand how the drainage network responds to blockage and exceedance scenarios and if adjustments should be made to the design to make it more robust. The sensitivity analysis shall consider the 1:1000-year return period event (including an allowance for climate change), if the development is classed as ‘most vulnerable’ in the *SEPA Flood Risk and Land Use Vulnerability Guidance* (SEPA, 2024).
- 5.3.7 Should the hydraulic model identify flooding in the system, then supporting drawings will be required to indicate where exceedance flow will be directed and to what depth and extents the water will reach. The SWMP shall clarify the expected depth of ponding and how this relates to floor levels in nearby properties. The SWMP shall also clarify how it will be contained within the site and lastly how it will be drained once the event has subsided. Dry pedestrian access and egress must be maintained at all times during events up to the 1:200-year return period event (including an allowance for climate change). Where flooding is predicted on the road, the applicant must demonstrate that emergency vehicle access can be safely maintained.

- 5.3.8 Should the calculations be undertaken by hand then account must be taken of the staged discharge relationship which applies to orifices and vortex flow control devices. In order to provide a conservative estimate, a halved discharge rate must be applied when calculating the required storage volume.

Example discharge calculation:

The proposed discharge rate from site is ~3l/s. If using hand calculations, then a discharge rate of 1.5l/s must be applied across the duration of the storm to take account of storage which has not been accounted for due to varying discharge at varying head.

- 5.3.9 Nature-based solutions for surface water management that enhance blue-green infrastructure and connectivity should be prioritised. Above ground SuDS should be used to provide surface water attenuation and treatment. Above ground SuDS features, that are integrated into the landscape, allow for easier maintenance and identification of potential reductions in storage capacity or blockages. SuDS should be designed to encourage wider benefits, such as biodiversity and placemaking enhancements. The applicant should minimise the amount of impermeable areas in the proposed design and increase permeable areas, where appropriate.
- 5.3.10 Underground storage will generally not be accepted, unless the applicant can demonstrate robust reasons why above ground measures are not feasible.
- 5.3.11 The SWMP shall confirm how the volume of surface water discharging from the site will be minimised. Applicants should consider rainwater harvesting and SuDS that encourage evapotranspiration and infiltration, which have the potential to reduce the volume of surface water discharging from the site.
- 5.3.12 Surface water management systems that manage runoff as close to source as possible should be encouraged, from both a water quality and flood risk management perspective. The SWMP should provide evidence demonstrating that the first 5mm of rainfall is managed at a plot level, where appropriate and runoff is managed in stages as it drains through the site.

5.4 Surface Water Discharge

- 5.4.1 Discharge locations for the drainage system must be identified and the applicant must confirm approval in principle from the landowner at those locations. The evidence of approval shall be attached to the SWMP. If proposing to discharge into the public sewer network, then confirmation that Scottish Water will accept the flows must be included with the application.
- 5.4.2 If discharging to a watercourse or culvert, the SWMP shall confirm the condition of the watercourse is adequate to accommodate the proposed surface water discharge. This will typically require confirmation via survey.
- 5.4.3 If a survey has been conducted to confirm the condition of a culvert is adequate, the survey results should be provided as part of the SWMP.
- 5.4.4 The outfall invert level should be located above flood level of the receiving waterbody. The applicant should confirm the impact that flood levels have on surface water discharges and confirm that surface water can be safely managed when the surface water cannot discharge.

5.4.5 Discharging property drainage into road drainage is not accepted. An exception can only be made when other alternatives are deemed non-viable and the applicant obtains a separate agreement with CEC which dissolves responsibility and has an acceptable discharge limit.

5.4.6 Sites discharging directly to coastal waters will not require attenuation. Surface water treatment measures should be applied, where possible.

5.5 Hydrology and Climate Change Impacts

5.5.1 An up-to-date method for estimating design rainfall shall be used. FEH22 rainfall data is recognised as the most recent method available for estimating design rainfall. Applicants shall clarify the method used to estimate design rainfall and demonstrate why alternative methods are more appropriate, if used.

5.5.2 Applicants shall refer to the latest *SEPA Climate Change Allowances for Flood Risk Assessment in Land Use Planning* guidance on climate change considerations in rainfall intensity.

5.6 Soakaways

5.6.1 If a soakaway is proposed then the adequacy of soil (ground investigations) and other investigations (i.e., porosity tests) will be required to demonstrate the proposals are feasible, prior to determination. The soil permeability test results shall be attached to the SWMP.

5.6.2 The applicant must demonstrate the soakaway can manage the design storm event without posing a flood risk to properties (neighbouring and proposed) and that it can drain in a suitable time to accommodate successive events. Dry pedestrian access and egress must be maintained at all times.

5.6.3 The soakaway must not be located within 5 metres of building foundations.

5.7 Overland Flow Paths

5.7.1 The landscape shall be designed to manage exceedance storm events. All schemes should consider exceedance flows that could be channelled away from sensitive receptors through landscape areas via shallow and subtle ground profiling.

5.7.2 Roads can be designed to manage exceedance flows and maximise their storage capacity, but care is needed to ensure they do not cause detriment and do not represent a hazard to vehicles and pedestrians. Care is also needed to check exceedance flow paths and accumulations do not disrupt strategic transport routes, particularly emergency response routes, or prevent safe access and egress to properties.

5.7.3 Pre-development and post-development overland flow path diagrams must be identified on separate drawings. This can be achieved by taking the existing site survey and over-marking arrows to denote falls and then completing the same with the post-development arrangement. This should include runoff from outside of the site, and from areas in events which exceed the capacity of the drainage system. Simply submitting an un-annotated topographical survey is not sufficient. The purpose of these drawings is twofold. First, to understand if

there is any significant re-direction of surface flows to surrounding land. Second, to identify if surface water will flow towards property entrances.

5.8 SuDS Selection

- 5.8.1 Nature-based solutions for surface water management that enhance blue-green infrastructure shall be considered as a means of encouraging multiple benefits beyond solely flood risk and water quality improvements. Applicants should refer to the *Vision for Water Management in the City of Edinburgh* (CEC, 2020), *Edinburgh Design Guidance* (CEC, 2020) and supporting guidance for further advice on encouraging placemaking and environmental enhancements via appropriate SuDS selection.
- 5.8.2 The designer should consider the SuDS Management Train to create green corridors, link habitats together and add recreational, educational, amenity and biodiversity value.
- 5.8.3 As noted in Section 5.3.12, surface water management systems that manage runoff as close to source as possible should be encouraged, from both a water quality and flood risk management perspective. SuDS should be designed for interception to closely reflect greenfield runoff behaviour – where infiltration or evapotranspiration measures limit the runoff that occurs in smaller rainfall events.
- 5.8.4 Surface water runoff collection systems shall be designed to effectively intercept and convey runoff and exceedance flows where they cannot be dealt with at source. Designs should prioritise areal, then linear, then point-type features to accept and convey water with consideration of blockage and maintenance requirements.
- 5.8.5 The following hierarchy should be used to prioritise how surface water is discharged from a site:
- Water used as a resource for natural processes such as evaporation and transpiration; or reuse of surface water via rainwater harvesting or similar techniques.
 - Discharge into the ground, via infiltration.
 - Discharge to a water body (e.g. watercourse).
 - Discharge to a surface water sewer, highway drain or another drainage system.
 - Discharge to a combined sewer.
 - Surface water discharges to the combined sewer network should be avoided. As noted in Section 5.4.1, if proposing to discharge into the combined public sewer network, then confirmation that Scottish Water will accept the flows must be included with the application.
- 5.8.6 Developers should mimic natural processes and catchment characteristics maximising opportunities for long term storage, as it is defined by *The SuDS Manual* (CIRIA, 2015).

5.9 Treatment

- 5.9.1 SuDS shall be incorporated into all developments to ensure surface water is being adequately treated before discharging from the site.

- 5.9.2 The SWMP shall provide confirmation of the SuDS treatment train noting which components are included to treat the surface water prior to discharge from site. CEC supports sustainable development and for this reason, all surface water discharges require treatment whether discharging to the combined public sewer network or to a watercourse.
- 5.9.3 The Simple Index Approach, as described in *The SuDS Manual C753* (CIRIA, 2015), shall be used to demonstrate that surface water is being adequately treated.
- 5.9.4 When discharging to a waterbody, the treatment measures must be approved by SEPA.

5.10 Adoption and Maintenance

- 5.10.1 The SWMP shall confirm who will adopt and maintain the surface water network, including any SuDS. Applicants must demonstrate an appropriate maintenance regime has been developed.
- 5.10.2 Pumped surface water drainage should be avoided, where possible. Pumped surface water drainage is only recommended if Scottish Water adopt it. If this is not possible, then the onus is on the developer to confirm that the property owners ensure a robust maintenance programme is adhered to. CEC cannot take responsibility for the rectification for any failure. Further information is available within *Sewers for Scotland* (Scottish Water, 2018) for design guidance on surface water pumping requirements.
- 5.10.3 Implementing measures that monitor the performance of surface water management systems is encouraged. This will help to inform the management and maintenance of the system, and also help to inform future design development and delivery.

6. SELF CERTIFICATION / INDEPENDENT CHECKING

- 6.1 CEC implement a self-certification process for the preparation of flood risk and drainage assessments. The design for a proposed development must comply with the requirements noted in Sections 4 and 5 above. The Self-Certification Declaration shall be signed confirming this (Certificate A1, presented in Annex A). The declaration must be signed by an appropriately qualified and experienced senior member of staff within the Designer's organisation. The senior member of staff must be a Chartered Professional with either the Institution of Civil Engineers (ICE), the Chartered Institution of Water and Environmental Management (CIWEM) or Landscape Institute (LI). By signing the declaration, they are confirming that in their professional opinion the application conforms to the requirements noted within this document.
- 6.2 For developments classified as major, under the *Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009*, an independent check of the application will be required. This involves a separate organisation from the Designer undertaking an independent check of the submission. The Checker must complete the appropriate part of the Self-Certification form (Certificate B1, presented in Annex A) confirming which part of the submission that they are checking (the SWMP, the FRA, or both). The declaration of the

Checker must also be signed by a senior member of staff in the Checker organisation. Similarly, to Section 6.1 above, by signing they are confirming that in their professional opinion the applicant conforms to the requirements noted within this document.

- 6.3 When the design and check of the proposals have been completed and the appropriate certificate(s) (see Annex A) filled in and signed, a copy of each should be sent to the Planning Department for acceptance and, if appropriate, endorsement. All departures from, and aspects not covered by, standards should be agreed prior to submission and must be recorded on the certificates for endorsement by the Flood Management Team.
- 6.4 All supporting drawings and documents (including revision marks) must be referenced on the signed certificate(s).
- 6.5 The Designer shall compile the SWMP and appropriate certification declaration(s) together with the FRA (if applicable) into one package for Flood Management to review. Piecemeal submissions will not be reviewed and this may delay a planning application determination.
- 6.6 The SWMP checklist, located in Annex B, shall be completed and submitted with the application to show compliance with the guidance within this document. The checklist should provide a summary of the drainage information submitted to support a planning application.

7. SUBSEQUENT PROCEDURE

- 7.1 The Designer will assume responsibility for the design of the permanent works.
- 7.2 Works cannot commence on-site until the entire procedure is complete, i.e., all relevant certificates contained in Annex A have been endorsed by the Flood Management Team.
- 7.3 Design and Check Certificates should be submitted at that the same time.

8. HEALTH AND SAFETY FILE

- 8.1 On completion of the works, the developer shall submit a Health and Safety File to the CEC Flood Management Team for any parts of the development to be adopted by CEC.

The Health and Safety File is to be completed in accordance with the Construction (Design and Management) Regulations 2015 and shall include the residual risk assessment, maintenance schedules and procedures, an up-to-date CCTV survey of all drainage within the development, and as-built drawings.

9. ROAD CONSTRUCTION CONSENT

- 9.1 The Designer must ensure that the design in relation to flooding and drainage is accurately translated into the completed works. The Design must ensure that no changes are made at the Road Construction Consent (RCC) stage which would pose a flood risk to proposed or neighbouring properties or would impact the effectiveness of the design submitted for planning approval.

10. ENQUIRIES

- 10.1 Early engagement in advance of submission of FRAs and SWMPs is encouraged.
- 10.2 All technical enquires about this Document should be marked for the attention of the CEC Flood Management Team and addressed to:

Flood Management
Roads and Infrastructure
Place
Waverley Court,
4 East Market Street,
Edinburgh
EH8 8BG

or

flood.planning@edinburgh.gov.uk

ANNEX A

SELF-CERTIFICATION AND INDEPENDENT CHECK DECLARATION

CERTIFICATE TEMPLATES

CERTIFICATE A1 – SELF CERTIFICATION (DESIGNER)

1 We certify that reasonable professional skill and care has been used in the preparation and checking of the Surface Water Management Plan / Flood Risk Assessment (*delete as appropriate*) for the development at (*Name of Development*) with a view to securing that:

i It has been designed and checked in accordance with the most recent City of Edinburgh Council Flood Management Requirements.

ii It has been checked for compliance with the relevant Standards in i.

iii details of the ground investigation and the attached interpretative report demonstrating that any soakaways provided are compliant provided (*delete as appropriate*)

iv It has been accurately translated into drawings and documents submitted alongside the planning application (all of which have been checked). The unique numbers and revisions of these drawings are:

.....
.....
.....
.....

2

Signed

.....

Name

.....

Professional Qualifications

.....
PRINCIPAL OF ORGANISATION
RESPONSIBLE FOR DESIGN

Position Held

.....

Name of Organisation

.....

Date

.....

3 Is an independent check required? (Refer to Section 6)
(*Delete as appropriate*) Yes / No

4 Confirmation that this certificate is accepted by City of Edinburgh Council Flood Management Team will be provided to CEC Planning Case Officers.

CERTIFICATE B1 – INDEPENDENT CHECK DECLARATION

1 We certify that reasonable professional skill and care has been used in the checking of the Surface Water Management Plan / Flood Risk Assessment (*delete as appropriate*) for the development at (*Name of Development*)..... with a view to securing that:

- i It has been designed and checked in accordance with the most recent City of Edinburgh Council Flood Management Requirements.
- ii It has been checked for compliance with the relevant Standards in i.
- iii details of the ground investigation and the attached interpretative report demonstrating that any soakaways provided are compliant provided (*delete as appropriate*)
- iv It has been accurately translated into drawings and documents submitted alongside the planning application (all of which have been checked). The unique numbers and revisions of these drawings are:

.....
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.....
.....

2

Signed

Name

Professional Qualifications

PRINCIPAL OF ORGANISATION
RESPONSIBLE FOR DESIGN

Position Held

Name of Organisation

Date

3 Confirmation that this certificate is accepted by City of Edinburgh Council Flood Management Team will be provided to CEC Planning Case Officers.

ANNEX B

SURFACE WATER MANAGEMENT PLAN CHECKLIST

SURFACE WATER MANAGEMENT PLAN CHECKLIST

This checklist must be attached to the submission.

Application reference:

	Item	Submission Section Reference	If not provided, comment reason
1	Location Plan.		
2	Pre-development overland flow path arrows for site and surrounding land . Post-development flow paths for site and surrounding area (on separate plan to pre-development) ³ .		
3	Area of impermeable surface (positively drained area) in proposed development.		
4	Greenfield runoff calculations for impermeable area.		
5	Confirm attenuation is provided to allow 1:200-year return period event (including climate change) discharge at the lesser of *: <ul style="list-style-type: none"> • 1:2-year greenfield runoff rate; • 4.5 l/s/ha of impermeable area. *Subject to minimum 75mmØ flow control		
6	Confirmation that the development will not increase the existing flood risk to adjacent properties.		
7	Confirm 1:200-year return period event (including climate change) is retained within the site boundary and will not cause surface-water runoff to adjacent properties.		
8	Confirm the first 5mm of rainfall is managed at a plot level, and runoff is managed in stages as it drains through the site.		
9	Volume of attenuation required to allow discharge at greenfield rate (m³).		
	Volume of attenuation provided within the proposed drainage layout (m³).		
	Volume of long-term storage provided in landscape and drainage features across site.		
10	<ul style="list-style-type: none"> • Hand calculations or • Hydraulic modelling outputs with features included¹ and 1:30-year and 1:200-year return period event outputs (including climate change). 		

11	Surface water management drawing with drainage features ¹ that cross reference with the hydraulic modelling outputs.		
12	Confirmation that 1:30-year return period event (including climate change) remains in drainage features and that 1:200-year return period event (including climate change) remains attenuated on site safely ² .		
13	Confirmation of who will adopt and maintain the surface water system including SuDS.		
14	Confirmation where the surface water ultimately discharges, and that approval has been obtained from the landowner at the discharge locations		
15	Confirmation that appropriate water quality measures (SuDS treatment) is included in the design in line with relevant guidance.		
16	Confirmation that infiltration testing has been undertaken for drainage infiltration systems, prior to determination.		
17	If discharging surface water to public sewer - confirmation that Scottish Water agree in principle to proposed connection.		
18	Confirmation that safe and dry pedestrian and vehicular access and egress is afforded to all properties.		
19	Does the proposed design take cognisance of the <i>Vision for Water Management in the City of Edinburgh</i> (CEC, 2021), <i>City of Edinburgh Council Sustainable Rainwater Management Guidance</i> (CEC, 2021) and Water Environment Section 3.8 of <i>Edinburgh Design Guidance</i> (CEC, 2020)?		
20	Does the proposed design take cognisance of Policies Des 5 City Local Plan, E44 Rural West Local Plan, Des 8 Edinburgh Local Development Plan and the City Plan 2030?		
21	Self-Certification Declaration (Certificate A1) and, where required, Independent Check Declaration (Certificate B1) signed by a Chartered Professional with either the ICE, CIWEM or LI.		

¹ Drainage features only required for FUL and AMC applications. Where part of a larger strategy attenuation network then this must all be represented. For PPP applications minimum requirements are total storage volume showing spread through masterplan and subsequent to-scale representation and location of storage shown on plan layout.

² All property FFLs are a minimum of 600mm above this 1:200-year return period water level (including climate change).

³ For PPP applications where the site layout has not been finalised, an indication of the general intention for overland water flow paths should be presented.

ANNEX C
DEFINITIONS

DEFINITIONS

The following definitions will apply throughout this document.

“Designer”	The firm of Consulting Engineers or other organisation responsible for the design, and shall also apply to the organisation responsible for the assessment where appropriate.
“Checker”	The firm of Consulting Engineers, or other organisation, responsible for undertaking the independent check of the design or assessment.
“Design Team”	The Group of Engineers responsible for the design or assessment. It may comprise an appropriate mix of specialists under the direction of a Design Team Leader.
“Check Team”	The Group of Engineers responsible for the independent check of the design or assessment. It may comprise an appropriate mix of specialists under the direction of a Check Team Leader.