North Somerset Council Lead Local Flood Authority Checklist for Developers

**Full Permission**

# What information should be included at full submission?

The LLFA are statutory consultees for major development and expect the following to be considered within full planning applications they review to demonstrate that flood risk and surface water drainage is appropriately managed by the proposals. Minor planning applications should also take into account the below, when submitting a planning application.

The proposals will be checked to ensure they comply with:

* National Planning Policy Framework and associated guidance
* Non-statutory technical standards for sustainable drainage systems
* West of England SuDS Developer Guidance
* North Somerset Council Planning Policies and supplementary planning documents:
	+ CS2 Delivering sustainable design and construction
	+ CS3: Environmental impacts and flood risk assessment
	+ CS4: Nature conservation
	+ CS9: Green infrastructure
	+ Creating sustainable buildings and places Supplementary Planning Document
	+ Biodiversity and trees Supplementary Planning Document (watercourse buffers)

| **Check** | **Information Required** | **Reason for Requirement**  |
| --- | --- | --- |
|[ ]  Site Location Plan | Identify the site location, extents and location of any offsite works |
|[ ]  Detailed Site (and offsite) Topographic Information | Site topographic survey information to understand drainage and surface water flood risk implications of site levels both before and post development. |
|[ ]  Detailed Geological Assessments and Infiltration Testing | To determine the viability of infiltration in accordance with the Drainage Hierarchy. If infiltration is proposed, testing should be carried out in accordance with BRE digest 365 Soakaway Guidance. |
|[ ]  Evaluation of Flood Risk, including Hydraulic Modelling (where required) | Assessment of flood risk from all sources including surface water commensurate with the scale and nature of the development to identify:* Existing flood risk to the site from within the site;
* Existing flood risk to the site from outside of the site;
* Flood risk to the site generated by the proposed development;
* Flood risk outside the site generated by the proposed development;
* Details of any appropriate mitigation measure that may be required.
 |
|[ ]  Proposed Layout Plan(s) including:* Proposed development layout plan,
* Drainage Areas Catchment plan,
* Finished Floor and External Levels
* Proposed Drainage Layout including level information, and
* Exceedance and Overland Flow Route Scheme for the proposed development
 | Identify flood risk and drainage elements of the proposed development. |
|[ ]  Site-specific Approach to Surface Water Drainage including:* Consideration of SuDS
* Evidence that the drainage hierarchy has been applied.
* A simple index approach (CIRIA C753) calculation
* Clearly marked discharge location (s) and discharge rates
* An explanation of how the volume of discharge will be managed i.e. the approach taken, long term storage or (2 l/s/ha or Qbar)
* Spatial arrangement of the required attenuation
* Surface water drainage calculations which demonstrate that the proposed development will not be at risk from flooding and will not exacerbate flood risk elsewhere.
 | To provide evidence that the proposed development has been designed in accordance with National and Local planning policy, with particular regard to the implementation of sustainable drainage (SuDS).Demonstrate consideration of various types of SuDS within the site appraisal and that water quality, amenity and biodiversity considerations have been incorporated into the SuDS proposals. |
|[ ]  Operation & Maintenance including:* Site specific management and maintenance plan,
* Evidence that the proposed layout is adequate to access proposed SuDS or other drainage features (e.g. watercourses) for maintenance
* Details of how responsibilities for private assets will be communicated with the purchaser/lessee/renter.
 | Demonstrate how the operation and maintenance for the surface water drainage strategy including the proposed SuDS features along with any existing drainage features within the site will be undertaken. This should detail how the maintenance requirements will be met and carried out on this specific site and by what organisation or individual. |
|[ ]  Written evidence of agreements in principle from third parties such as Wessex Water, Internal Drainage Boards and owners of other assets or owners of land that maybe needed to be crossed. | To demonstrate that the proposed discharge location is viable and achievable.  |

The following table should be filled in and submitted with the application:

|  |  |  |
| --- | --- | --- |
| **Site Characteristics** |  | **Where referenced (Document page no/drawing no etc)** |
| Total Site Area (m2): |  |  |
| Significant public open space (m2): |  |  |
| Existing Impermeable Area (m2): |  |  |
| Proposed Impermeable Area (m2): |  |  |
| Area drained by infiltration (m2): |  |  |
| **Topographic Information** |  |  |
| Maximum pre and post development site elevation (mAOD): |  |  |
| Minimum pre and post development site elevation (mAOD): |  |  |
| General slope of the site pre and post development (1 in X): |  |  |
| **Geological information** |  |  |
| Soil type (from FSR, HOST Class from FEH or WRAP map from Wallingford Procedure – specify where from): |  |  |
| Superficial geology classification: |  |  |
| Bedrock geology classification: |  |  |
| Depth to groundwater level (m): |  |  |
| Groundwater source protection zone: |  |  |
| Drinking water protected area: |  |  |
| Lowest non-extrapolated infiltration rate from three tests per test hole (BRE 365): |  |  |
| Lowest non-extrapolated infiltration rate from three tests per test hole (BRE 365): |  |  |
| Ground contamination present? |  |  |
| **Flood risk information** |  |  |
| EA fluvial flood zone: |  |  |
| EA tidal flood zone: |  |  |
| Surface water flood risk (h/m/l): |  |  |
| Percentage of site area at risk of flooding: |  |  |
| Risk of groundwater flooding (y/n): |  |  |
| Risk of sewer flooding (y/n): |  |  |
| Risk of flooding from artificial sources (y/n): |  |  |
| **Surface water drainage proposals** |  |  |
| Discharge location and hierarchy justification: |  |  |
| **Hydraulics** |  |  |
| Existing Qbar (l/s) |  |  |
| Existing 1 in 1 (l/s) |  |  |
| Existing 1 in 30 (l/s) |  |  |
| Existing 1 in 100 (l/s) |  |  |
| Urban creep percentage: |  |  |
| Climate change amount applied: |  |  |
| Long term storage volume (if applicable): |  |  |
| Attenuation storage volume: |  |  |
| CIRIA SuDS Manual C753 Simple index approach undertaken (y/n) |  |  |
| Proposed 1 in 1 (l/s): |  |  |
| Proposed 1 in 30 (l/s): |  |  |
| Proposed 1 in 100 (l/s): |  |  |
| Volume control approach (LTS) or (2 l/s/ha or Qbar) |  |  |
| Submerged outfall? |  |  |
| **Maintenance**  |  |  |
| Sufficient space for maintenance of surface water drainage and watercourses?  |  |  |
| Details of what organisation or person will be maintaining what: |  |  |
| Site specific management and maintenance plan detailing how the maintenance will be undertaken: |  |  |

**Limitations**

This document has been developed by North Somerset Council for the purpose of providing advice to all persons involved in all matters relating to surface water drainage and associated flood risk with regard to the submission of planning applications and all other planning matters within North Somerset

North Somerset Council accepts no liability for any costs, liabilities or losses arising as a result of the use of or reliance upon the contents of this guidance.