Flood Risk and Sustainable Drainage: requirements and guidance for Planning Application.

All major development applications are required to submit for approval a surface water management strategy. Surface water management details must be set out within a Flood Risk Assessment Report for all applications in Flood zones 2 and 3 over 250sqm, in a Critical Drainage Area (CDA) and any development over 1 hectare.

All other major developments that do not require a FRA are required to provide surface water management detail in form of a Drainage Strategy Report based on SUDS principles.

The applicant’s plans for the management of surface water and drainage strategy need to meet the requirements set out by:

- **Newham Local Plan 2018** (www.newham.gov.uk/localplan) - Policy SC1 and SC3.
- **LBN’s Local Flood Risk Management Strategy** (LFRMS).
- **LBN’s Surface Water Management Plan (SWMP)**. **NB standard of runoff reduction within the SWMP does not represent current requirement.** *(See this guidance and Local Plan policy SC3)*
- **Newham Strategic Flood Risk Assessment** (SFRA) 2017
- **London Plan (2016)**: Policy 5.13 and its guidance: **Sustainable Design and Construction SPG**.
- They also need to meet the requirements of the approved building regulations **Part H: drainage and water disposal**.
- You will need planning permission to use a material that cannot absorb water (e.g. impermeable concrete) in a front garden larger than 5 square metres.

FRAs will be reviewed by London Borough of Newham (Lead Local Flood Authority) and the Environmental Agency under their complementary remits:

- **Lead Local Flood Authority** will assess surface water flood risk for all major developments and their drainage scheme. The lead local flood
authority will ask that you complete the Drainage pro-forma to assist in their assessment.

- The Environment Agency will focus their assessment on river and tidal flood risk aspects.

**General pre-application advice on Surface Water Management**

In drawing up your surface water management schemes developers should refer to the SUSDRAINS website and CIRIA Guidance, as this includes a wealth of detailed information on sustainable drainage to assist the developer in managing surface water drainage. Reference to the technical guidance in Defra/EA Rainfall Runoff Management for new Developments science report, Revision E provides applicants with advice on the management of storm water drainage and in particular to assist in sizing of storage elements for the control and treatment of storm water runoff. Applicants may also want to use the online tool from www.UKsuds.com to help derive preliminary calculations.

**Newham LLFA’s pre-application advice**

Newham LLFA can provide specific advice as relevant to a development proposal. This can include review information provided by developer, review of LLFA available data on local flood risk and SuDS design and make recommendations to developer with regard to local and national policies.

However, please note that this service is not part of the LLFA’ statutory duties and needs to be agreed with the LLFA and Newham LPA as part of a pre-planning consultation agreement. A fee is entailed to meet LLFA’s costs.

**Drainage Strategy Information Required Outline Applications**

An outline planning application should include enough information to demonstrate a workable solution for managing surface water drainage. The assessment submitted should include a preliminary study outlining the existing surface water run-off rates from the site and an indication of post development run-off rates with associated storm water storage requirements. An indication should be given to how sustainable drainage will be established with the preferred option of infiltration to ground where this is acceptable.

There needs to be clear view of where the proposal is going and underlying principles. At the outline planning stage it should be possible for an outline drainage strategy to be produced which clearly identifies and quantifies the defining principles to be taken forward. This would allow a reasonably worded surface water drainage condition, to be satisfied at the reserved matters detailed design stage, to be included as part of the outline planning permission.

**Drainage Strategy Information Required for Full or Reserved Matters Applications**
Application should have progressed from an initial preliminary drainage study and include detailed information about the existing run-off rates and storage requirements. In addition to this, the drainage strategy should show that opportunities to implement sustainable drainage techniques at the site have been maximised and any obstacles to their use is clearly justified within the report. This should include, where appropriate, provision for the adoption of drainage infrastructure and maintenance contributions to that party.

Completion of the **Newham surface water pro-forma** for new developments by the developer will present a summary of the key information from the surface water drainage strategy and will support a LPA in making a decision on the suitability of the proposal. When further detail of the proposed scheme is required the use of a planning condition to secure this information can be considered.

Copy of **Newham Drainage pro-forma** can be obtained by Newham LPA, LLFA or Newham Council Website (Flooding). Please check that the form is the up to date version including Climate Change Allowance of plus 40% as per current requirement.

**Newham’s Standards**

NB. LBN’s Local Flood Risk Management Strategy (LFRMS) is Newham’s most up to date document in matter of surface water flood risk and SuDS requirements and reflects provisions of Newham Local Plan 2018. Please also note Planning Application Requirements (PAR) document issued by Newham Local Planning Authority.

**Newham Local Plan (Policy SC3)** consistently with Newham LFRMS provides that:

‘c) All development should enable separation of foul and surface flows and incorporate Sustainable Urban Drainage Systems (SUDS) that reduce surface water run-off.

All major development and any development falling within a Critical Drainage Area (CDA) should achieve Greenfield Run-off and be accompanied by a Surface Water Drainage Strategy (SWDS) that:

i. clarifies before and after development run-off rates and addresses water quality impacts, ensuring run-off water is clean and safe;
ii. follows the drainage hierarchy of the London Plan;
iii. maximises the use of SUDS in accordance with the SUDS hierarchy (see SC1);
iv. confirms the ownership, management and maintenance arrangements of any SUDS features;
v. shows regard to the recommendations of Newham’s Surface Water Management Plan (SWMP) and Local Flood Risk Management Strategy (LFRMS);
vi. confirms, only where it can be demonstrated that site conditions prohibit the achievement of greenfield run-off, that a rate no higher than 3 times greenfield will be achieved.’

Major development post-development runoff rate requirements

All new development proposals should achieve post development Greenfield runoff rates, unless it can be demonstrated that site conditions prohibit meeting this standard. Drainage calculations should always make reference to this benchmark.

As minimum requirement Newham (in line with the London Plan Guidance and UKCIP guidance) requires that ‘brownfield’ redevelopments greater than 0.1 hectare to reduce post development runoff rates for events up to and including the 1 in 100 year return period event with an allowance for climate change (i.e. CC = 40%) to not more than 3 times the calculated greenfield runoff rate for the site (calculated in accordance with IoH124).

NB Newham LLFA does not accept 50% reductions from pre-development condition as a minimum standard.

The only other exceptions to the above, for which discharge rates greater than 3 times the calculated greenfield runoff rate could be considered, are where:

- Surface water drainage discharge is to tidal waters and unacceptable scour would not result. In such cases, where controlling discharge rate is less crucial under flood risk concerns, proposals will be evaluated on whether SUDS additional benefits (i.e. biodiversity habitat, water quality, amenity value, community resource etc.) are sufficiently represented in the proposed design.

- Where a pumped discharge would be required to meet applicable standard (i.e. post-development runoff equal/between greenfield and 3-greenfield runoff rate). In such cases the LLFA would consider the proposal on its own merits, including local flood risk, additional sustainability benefits (e.g. biodiversity habitat, water quality, improved amenity value, community resource etc.) content of the proposal and evidences of non-feasibility of alternative design solutions meeting the required standards.

Minimum and Maximum Discharge rates

Proposed post-development runoff reduction must be demonstrated for all applicable return periods (i.e. 1in1, 1in30, 1:100 and 1 in 100 + CC) critical rainstorm event.

Please note that major development proposals should not aim at the minimum requirement: Newham LFRMS (2.15.23) specifies that: ‘LLFA will adopt a presumption against proposals that arbitrarily pre-empt SUDS feasibility or aim from the onset at minimum standards’
Drainage scheme proposing a single capped maximum discharge rate for all applicable return periods should note that this will be expected not higher than the calculated Greenfield Qbar for the site.

Please note that historical 5 l/s standard as minimum discharge rate is no longer supported in current practice or accepted by Newham.

Proposals should demonstrate that discharge rates are managed as close as feasible to required standard by adopting suitable flow control measure: Hydrobrakes devices can manage flow rates as low as 1-2 l/s without incurring in blockage issues.

**CDA requirements**

Development in a Critical Drainage Area (CDA) attracts the highest standards in terms of flood risk reduction, accordingly major development proposals are required to meet standard of post development peak run runoff reduced to greenfield rates for all events up to and including the 1 in 100 year return period event with an allowance for climate change.

**Climate Change Allowance**

Climate Change Allowance applicable to drainage calculation in line with EA guidance is currently plus 40%.

**Greenfield Rates Calculation**

Greenfield calculations should be performed using IH124 method as supported by the HR Wallingford tool.


This is required to enable consistency between different planning applications across the borough. Use of default soil type and equivalent SPR obtained by ‘click on’ map tool is the required approach.

Please note that Newham LLFA does not accept use of urban soil types or other *ad hoc* derived soil in a greenfield runoff calculation nor, under the same concern, apply urban catchment parameters.

**Further Guidance**

A Sustainable Drainage Guidance, co-authored by Newham and GLA: ‘SuDS Guide for Newham’ is being developed and will be published in the near future.