

Surface Water Management Guidance

Lead Local Flood Authority Requirements for Major
Planning Applications



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Abbreviations and Acronyms

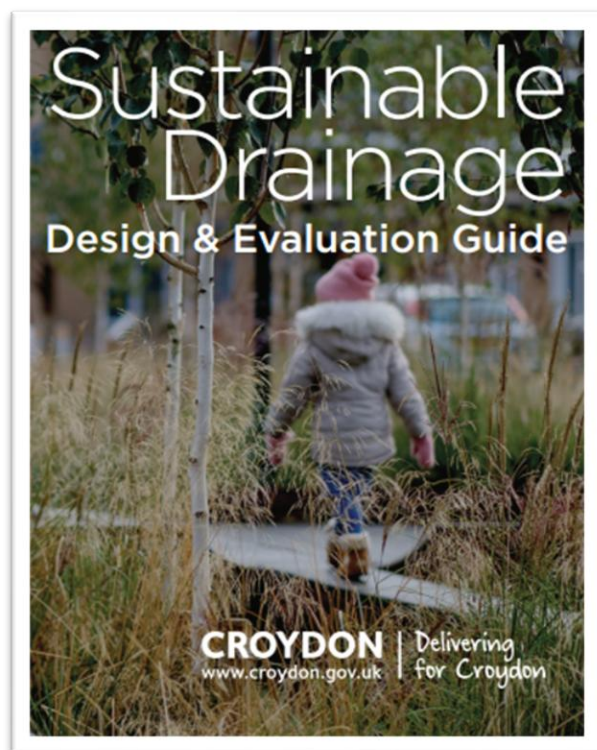
BRE	Building Research Establishment
CIRIA	Construction Industry Research and Information Association
CDA	Critical Drainage Area
DEFRA	Department of Environment Food and Rural Affairs
DoC	Discharge of Condition
FFL	Finished Floor level
FRA	Flood Risk Assessment
FRAP	Flood Risk Activity Permit
LBC	London Borough of Croydon
LiDAR	Light Detection and Ranging
LPA	Local Planning Authority
LLFA	Lead Local Flood Authority
National Standards	National Standards for SuDS
NPPF	National Planning Policy Framework
OWC	Ordinary Watercourse
PPG	Planning Practise Guidance
SFRA	Strategic Flood Risk Assessment
SPZ	Source Protection Zone
SuDS	Sustainable Drainage Systems
SuDS D&E Guide	Sustainable Drainage Design and Evaluation Guide

1 Introduction

The London Borough of Croydon (LBC), serving as the Lead Local Flood Authority (LLFA) is a statutory consultee to the planning process for major planning applications. This document outlines the information required by the LLFA as part of the planning application to ensure that surface water management aligns with national and local flood risk and drainage policies, as well as sustainable drainage principles.

This document provides a [checklist approach](#) of information required for different types of planning applications. It is recommended that applicants use these checklists as a template to develop their Surface Water Drainage Strategy (Drainage Strategy). This guidance does not cover tailored guidance for minor developments; applicants should seek advice from the planning authority.

LBC published the [Sustainable Drainage Design and Evaluation Guide \(SuDS D&E Guide\)](#) in 2018, it provides guidance on the design and implementation of surface water drainage systems. Since its publication, there have been updates to relevant policies and guidance. This document should be used alongside the SuDS D&E Guide when developing a drainage strategy. To support applicants, this document specifies where reference to the SuDS D&E Guide is recommended to support ongoing design development, including:



- **Local SuDS Requirements:** Understanding Croydon's Sustainable Drainage Systems (SuDS) requirements within the context of the borough's landscape and constraints.
- **SuDS Design Process:** Guidance on SuDS design, from the concept stage through to detailed design.

The LLFA remains committed to supporting sustainable growth and enhancing community resilience in response to the increasing flood risks posed by climate change. By adhering to the requirements and recommendations outlined in these guidance documents, applicants can not only facilitate the assessment process but also take **shared responsibility to support the borough in sustainably managing flood risk for present and future communities.**

2 Policy Background

Applicants for major planning applications must use the policies and guidance detailed in this chapter as the foundation for surface water drainage arrangements on site. **The LLFA will object to proposals that do not demonstrate compliance with national and local policies and guidance.**

2.1 National Planning Policy and Guidance

The **National Planning Policy Framework** (NPPF) outlines the Government's planning policies for England. [Section 14](#) outlines the proposed requirements on proposed development to ensure flood risk is minimised and ensure that multifunctional SuDS are incorporated into the proposed development. The accompanying **Planning Practice Guidance** (PPG), which supports the NPPF, details additional requirements and standards for SuDS, particularly in the [Flood Risk and Coastal Change](#) chapters, with specific reference to **Paragraphs 055 – 063**.

The NPPF and the PPG establish a framework aimed at minimising vulnerability, enhancing resilience to climate change impacts, and thoroughly considering potential climate change effects throughout the development's lifetime within mitigation measures. The PPG has been further strengthened to emphasise the importance of utilising multifunctional SuDS in development proposals to achieve a range of biodiversity environmental net gains.

DEFRA Non-Statutory Technical Standard

In June 2025, the [national standards for SuDS](#) (the national standards) were published setting out prioritisation and minimum design criteria for the build, maintenance and operation of SuDS. There are **11 principles** supporting the national standards.

In summary, the principles emphasise adopting a natural drainage approach by using SuDS to mimic natural processes, managing flooding, enhance water quality, and ensuring long-term maintenance – collectively known as the 'SuDS Approach'. This involves integrating multiple drainage features into site planning from the outset to improve water quality, biodiversity, and climate resilience. Applicants must demonstrate adherence to the national standards throughout the planning process, engage early with the LPA to align with local strategies, and ensure a smooth application process. All applications, including phased developments, must comply with the national standards.

There are seven interrelated standards, each contributing to the successful implementation of the others. The standards emphasise the use of 'SuDS Approach' to manage surface water at each step. The 'SuDS approach' advocates for the use of a management train, consisting of different SuDS and drainage features located as close as possible to the source of surface water runoff. This approach aims to 'control flow rates and reduce runoff volumes, while also delivering water quality benefits and opportunities to enhance biodiversity and amenity'.

A comprehensive version of these standards is accessible online and should be reviewed in detail. Below is a summary highlighting the key aspects of these standards, though not exhaustive:

Standard 1 - runoff destination

Surface water management for developments must adopt a 'SuDS approach', treating runoff as a resource while minimising negative impacts on flood risk, water quality, morphology, and associated ecology. Runoff discharge should follow a prioritised hierarchy: non-potable use, infiltration to ground, discharge to an above-ground water body, surface water sewer, and finally, combined sewer. Developers must provide evidence if higher-priority options are not fully utilised, as cost alone is not an acceptable reason to opt for lower-priority destinations.

Standard 2 - management of everyday rainfall (interception)

The first 5mm of rainfall from most events is retained on-site, preventing runoff to surface waters or drainage systems. Runoff management should also support water quality, amenity, and biodiversity benefits.

Standard 3 - management of extreme rainfall and flooding

Manage runoff during extreme rainfall, factoring in climate change and urban creep, to protect people and property from flooding and mitigate downstream risks. Flooding from surface water systems for events up to the 1% AEP should be contained on-site, and off-site flooding should be managed or safely routed through the site. Exceedance events beyond 1% AEP require managed risk on and off-site.

Standard 4 – water quality

Manage surface water runoff to protect surface, groundwater, and coastal waters from pollution risks. SuDS should follow a management train based on a thorough water quality risk assessment appropriate to the pollution hazard and sensitivity of receiving waters, using recognised industry guidance or agreed quantitative methods.

Standard 5 - amenity

Maximise amenity benefits by creating multi-functional spaces and landscapes.

Standard 6 – biodiversity

Maximise biodiversity by creating resilient ecosystems, supporting local habitats, and improving habitat connectivity throughout the development lifecycle.

Standard 7 - design of drainage for construction, operation, maintenance, decommissioning and structural integrity

Ensure surface water drainage systems are safe, sustainable, and designed for easy construction, operation, and maintenance, minimising environmental impacts. Designers must provide a management and maintenance plan to uphold performance standards throughout the development's lifespan, address potential failure risks, and ensure structural integrity under anticipated conditions.

It should be noted that the standards only apply to the management of uncontaminated surface water runoff that consists predominantly of rainwater. Please refer to **Section 6.8** for further information on additional requirements.

2.2 London Plan (2021)¹

Development must comply with the policies set out in the London Plan. The flood and water related policies are detailed below:

Policy SI 12 Flood Risk Management

*C. Development proposals should ensure that **flood risk is minimised and mitigated, and that residual risk is addressed**. This should include, where possible, making space for water and aiming for development to be set back from the banks of watercourses.*

Policy SI 13 Sustainable drainage

A Lead Local Flood Authorities should identify – through their Local Flood Risk Management Strategies and Surface Water Management Plans – areas where there are particular surface water management issues and aim to reduce these risks. Increases in surface water run-off outside these areas also need to be identified and addressed.

*B Development proposals should aim to **achieve greenfield run-off rates** and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for **green over grey features**, in line with the **following drainage hierarchy**:*

- 1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)*
- 2) rainwater infiltration to ground at or close to source*
- 3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)*
- 4) rainwater discharge direct to a watercourse (unless not appropriate)*
- 5) controlled rainwater discharge to a surface water sewer or drain*
- 6) controlled rainwater discharge to a combined sewer.*

*C Development proposals for **impermeable surfacing** should normally be resisted unless they can be shown to be unavoidable, including on small surfaces such as front gardens and driveways.*

*D Drainage should be designed and implemented in ways that **promote multiple benefits** including increased water use efficiency, improved water quality, and enhanced biodiversity, urban greening, amenity and recreation.*

2.3 Croydon Local Plan (2018)²

Development must comply with the policies set out in the Local Plan. The flood and water related policies are detailed below:

¹ The London Plan is under review, with the 2021 version being the latest when this document was produced. Applicants must ensure that the most current London Plan policies are considered.

² The Croydon Local Plan is under review, with the 2018 version being the latest when this document was produced. Applicants must ensure that the most current Local Plan policies are considered.

Policy DM25: Sustainable Drainage Systems and reducing flood risk

DM25.1 The Council will ensure that development in the borough reduces flood risk and minimises the impact of flooding by:

- a. Steering development to the areas with a lower risk of flooding;*
- b. Applying the Sequential Test and Exception Test in accord with Table 8.1;*
- c. Taking account of all sources of flooding from fluvial, surface water, groundwater, sewers, reservoirs and ordinary watercourses; and*
- d. **Applying the sequential approach to site layout** by locating the most vulnerable uses in parts of the site at the lowest risk of flooding.*

*DM25.2 In areas at risk of flooding development should be **safe for the lifetime of development** and should incorporate **flood resilience and resistant measures into the design**, layout and form of buildings to reduce the level of flood risk both on site and elsewhere.*

***DM25.3 Sustainable drainage systems are required in all development** and should:*

- a. Ensure surface run-off is managed as close to the source as possible;*
- b. Accord with the London Plan Sustainable Drainage Hierarchy;*
- c. Achieve better than greenfield runoff rates;*
- d. Be designed to be multifunctional and incorporate sustainable drainage into landscaping and public realm to provide opportunities to improve amenity and biodiversity;*
- e. Achieve improvements in water quality through an sustainable drainage system management train; and*
- f. Be designed with consideration of future maintenance.*

Policy SP6: Environment and Climate Change

SP6.4 The Council, as a Lead Local Flood Authority, will work in partnership with the Environment Agency, community groups, water and highways infrastructure providers, developers and other Lead Local Flood Authorities to reduce flood risk, protect groundwater and aquifers, and minimise the impact of all forms of flooding in the borough. This will be achieved by:

- c. Requiring all development, including refurbishment and conversions, to **utilise sustainable drainage systems (SuDS) to reduce surface water run-off and provide water treatment on site**; and*
- d. Requiring development proposals to account for possible **groundwater contamination in Source Protection Zones 1 and 2**.*

SP6.5 The Council and its partners will promote the implementation of 'Urban Blue Corridors', enabling a network of multifunctional spaces and corridors that provide safe routes and storage for flood water within the urban environment. This will be achieved by:

- a. Supporting schemes that make space for water in flood events.*
- d. Maximising opportunities to **establish overland flow paths, surface water ponding areas**, urban watercourse buffer areas and **multi-use flood storage areas in locations of high surface water flood risk and critical drainage areas**.*

3 SuDS in Croydon

In accordance with the Croydon Local Plan Strategic Policy SP6.4(c), Croydon Local Plan Detailed Policy DM25.3, London Plan Policy SI 13, **all development must utilise SuDS to reduce surface water runoff rates and volumes.**

SuDS are an approach to managing surface water runoff which seeks to mimic natural drainage and retain water on or near the site as opposed to traditional drainage approaches which involve piping water off site as quickly as possible. SuDS offer significant advantages over conventional piped drainage systems in reducing flood risk by attenuating the rate and quantity of surface water runoff from a site, promoting groundwater recharge and biodiversity benefits, as well as improving water quality and amenity value.

A site's drainage design can be made up of a range of SuDS techniques. In line with national standards, applicants should adopt a 'SuDS Approach' that maximises multifunctional benefits, such as enhanced biodiversity and amenity. **Priority should be given to the most sustainable options, with particular emphasis on above-ground 'green' SuDS features.** The variety of SuDS techniques available means that any development should be able to include a scheme based around the principles outlined in this guidance document. These should be explored **early** in the design of any development, to ensure they are an integral part of the site layout. The applicant should also give consideration to long-term maintenance of drainage features from the very early stages of design development.

Further information on SuDS can be found in:

- [SuDS D&E Guide](#)
- [CIRIA C753 SuDS manual;](#)
- [CIRIA C687 Planning for SuDS; and,](#)
- [CIRIA C609B Sustainable Drainage Systems - Hydraulic, structural and water quality advice.](#)

4 Planning Application Submission Requirements

The submitted Drainage Strategy and supporting information must include a level of detail appropriate to the type of planning application. The Drainage Strategy must be provided to support all major planning applications. The strategy must set out the surface water drainage assessment for the site proposal, demonstrating compliance with the relevant planning policy and guidance set out in **Chapter 2**.

The following section provides checklists, tailored for each application type, summarising the expected level of information.

Table 1 Application Type and Required Supporting Surface Water Drainage Checklist

Application Type	Drainage Information Required	LLFA Checklist
Outline	A principal surface water drainage strategy is required. It should demonstrate the overall principle for surface water drainage and flood risk management.	See Appendix 1
Full	A comprehensive surface water drainage strategy is required.	See Appendix 1
Discharge of Condition	A comprehensive surface water drainage strategy is required, addressing the imposed surface water related condition(s).	See Appendix 2
Change of Use	As a minimum, a drainage statement will be required to detail how surface water will be managed.	See Appendix 3

By working from the relevant checklist and reviewing the associated guidance in this document and in the **SuDS D&E Guide**, applicants can help ensure that the LLFA does not object to the application due to insufficient information. Please note, additional supporting information may be requested by the LLFA for applications involving complex local issues.

To assist the LLFA in their review, it is recommended that the Drainage Strategy uses the same headings and structures as set out in the relevant checklist. The applicant is recommended to complete and issue the **London Sustainable Drainage Proforma** with the Drainage Strategy. The latest copy of the proforma can be found [here](#).

The applicants must ensure that accurate, comprehensive, and appropriately detailed information is submitted based on the type of application. If an applicant deems it not possible to meet the requirements and recommendations detailed in the guidance document, they must provide robust evidence and justification to support their rationale. Without this evidence, an objection may be raised, delaying the application process.

5 Advice and Consultations

5.1 Pre-application advice

The LLFA offers a charged pre-application service for all application types and strongly advises applicants to engage in pre-application discussions for complex projects, such as hybrid applications. Pre-application discussions with the LLFA offer applicants a valuable opportunity to present the initial SuDS design concepts and outline the requirements for the proposed development and application type. These discussions enable the LLFA to gain a clear understanding of the development's objectives and characteristics. During the pre-application discussion, the LLFA will be able to guide the applicant through LBC's planning requirements, and provide feedback on the proposal, as well as discuss particular constraints and opportunities in further detail.

Applicants are strongly advised to follow the design approach outlined in **Sections 7.2 to 7.4** of the **SuDS D&E Guide (Concept Design)** and bring the specified information from **Section 7.5** to the pre-application meeting. Applicants should visit the [Croydon Council website](https://www.croydon.gov.uk) for more information on the LLFA's pre-application service.

5.2 Consultation and engagement with third parties

The functionality of surface water drainage arrangements may depend on the approval of other consultees or authorities, in addition to the LLFA's approval. For example, if the applicant proposes to discharge surface water into a public sewer network, it is strongly recommended to engage in early discussions with Thames Water to ensure the proposed discharge rates are acceptable.

Table 2 provides a list of consultees who may need to be approached during the planning application stage. The listed consultees may also have broader planning responsibilities not covered in this document. Early engagement with these authorities is advisable to avoid delays and ensure the drainage strategy meets all necessary requirements.

Please note, the LLFA will require evidence of consultation and approval from the relevant approving / adopting body in order to approve the application. Further information can be found in **Section 6.9**.

Table 2 Consultees' surface water responsibilities

Consultee (Function)	Responsibility	When you need to consult	Further information
Croydon Council (LLFA)	Strategic role in managing local flood risk sources (surface	Proposed development is a major development	Since 2015, through the planning system, the LLFA has been a statutory consultee on all major developments, reviewing surface water drainage strategies.

	water, groundwater flooding and ordinary watercourses)	Minor developments - within an area at high to medium surface water flood risk	The LPA may wish to consult the LLFA as a non-statutory technical advisor for minor applications in relation to the surface water drainage arrangements.
		Propose to undertake works within or near to an ordinary watercourse (OWC)	Under the Land Drainage Act 1991, any works (temporary or permanent) which may change or impact water within an OWC will require consent, prior to any works being carried out. Please refer to Council's website for further information.
Environment Agency (Strategic and operational role)	Provide strategic overview for managing all sources of flooding, coastal erosion and groundwater protection	Proposed development within Flood 3 or 2 or Flood Zone 1 with site area of 1 hectare or more Or Critical drainage problems	A Flood Risk Assessment (FRA) may be required to support a planning application. Further guidance on when an FRA is needed can be found on the gov.uk website .
		Proposed to undertake works within 20m of a Main River or flood defence (including where proposing to discharge surface water runoff into a Main River)	A Flood Risk Activity Permit (FRAP) may be required if applicant is proposing any surface water drainage arrangement that meets specific criteria or involves discharging surface water runoff into a Main River. Applicants should consult the gov website , and engage with the Environment Agency at the earliest opportunity.
		Infiltration SuDS are proposed within Source Protection Zone (SPZ) 1 or 2	Development proposals must account for groundwater contamination in accordance with PPG and Croydon Strategic Policy 6.4(d). The Environment Agency must be consulted if the existing or proposed use (including the storage of potentially contaminating substances) may pose a contamination risk and the site lies within a SPZ.

Thames Water (Sewerage Undertaker)	Water company and sewerage undertaker for the borough	Propose to discharge surface water runoff into an adopted sewer	Thames Water are responsible for surface water drainage from development via adopted sewers. Consultation will be required to agree discharge rates and connection points. The applicant should make reference to Thames Water's Pre-planning Service page.
Croydon Council (Local Highways Authority)	Local transport infrastructure provider	Propose to discharge runoff from adoptable highways into highways surface water sewer	Consultation will be required for any development projects proposing to discharge surface water runoff from adoptable highways into a highway drain. The council does not permit runoff from private development or private road networks to be discharged into the council's adopted highways network

Applicants are advised to seek the advice of the relevant consultee at the earliest opportunity (e.g., pre-application stage) to discuss any potential constraints and to ensure that all requirements for the sufficient management of surface water are addressed and met. There may be other stakeholders, beyond those listed in **Table 2**, who may need to be consulted during the planning application process in regard to surface water management.

5.3 SuDS Adoption

Applicants are strongly encouraged to consider the adoption for SuDS at the earliest stage of design development. Early consideration of adoption routes and proactive engagement with the relevant parties will help ensure the long-term effectiveness and sustainability of surface water drainage systems. Potential SuDS adoption routes:

- **Croydon Council:** The council may adopt SuDS features where they provide a wider public benefit. For further information, applicants should contact floodandwater@croydon.gov.uk.
- **Third-Party Company:** A third-party company can be established to adopt and maintain a SuDS scheme across all or part of a development. However, it is the responsibility of the landowner to ensure that, in the event the third-party company ceases to operate, another company is appointed, and the maintenance responsibilities are successfully transferred.

6 Checklist Requirements and Guidance

This chapter expands on the checklist headings detailed in the **Appendices**. It outlines LBC's policy requirements (in boxed text) and specifies the information required as part of the Drainage Strategy for different application types.

Items highlighted in purple boxes identify the key policies that all applications should comply with. If an application does not meet the requirement set out in these policies, the LLFA will object to the application. The supporting text in this chapter provides further guidance on the specific requirements for different application stages. Applicants are strongly advised to read each section in full to ensure a comprehensive understanding of the LLFA's requirements.

6.1 Existing Site Characteristics

SuDS Requirement 1:

The applicant must demonstrate a clear understanding of the existing site characteristics and how surface water would flow across the site.

6.1.1 Site Information

The applicant should provide comprehensive details about the current site, including, but not limited to:

- **Land use:** Description of how the site is presently used
- **Site boundary:** Clearly defined boundaries of the site and applicant land boundary.
- **Impermeable and permeable areas:** Area measurements (in m²) of both impermeable and permeable surfaces.
- **Land ownership details**
- **Planning designation and constraints:** Any existing planning designations or constraints that apply to the site.

6.1.2 Existing Drainage Arrangements

The applicant must demonstrate understanding of how surface water runoff is managed across the site prior to development. This should include consideration of any sub-catchments within the existing site, with runoff calculations provided for each sub-catchment, detailing any existing drainage network and outfalls.

6.1.3 Topography

A topographical map of the site, with contour lines (at a reasonable interval relative to the site), is required to demonstrate an understanding of how surface water would flow across the site pre-development. The applicant must also consider how the fall from external areas may result in flows entering the site. As a minimum the following information would be required:

- **Outline application:** LiDAR mapping, where available spot levels should be provided.
- **Full application:** A topographical survey of the entire site, and LiDAR mapping of external areas to understand external flow contribution.

The applicant must also provide proposed site levels across the site and finished floor levels, for a full application. For outline applications, this information should be provided where available.

6.1.4 Assessment of Flood Risk

SuDS Requirement 2:

In compliance with London Policy SI 12 1`1e. In line with Croydon Local Plan, the proposed development should aim to **reduce surface water flood risk** to both the site and surrounding areas.

The LLFA require all Drainage Strategies to detail and assess the following:

- Assess existing and proposed surface water and groundwater flood risk,
- Assess whether other sources of flood risk could impact the functionality of the proposed surface water drainage system throughout the development's lifetime; and
- Where an impact is identified, the applicant must detail proposed mitigation to manage flood risk.

Table 3 outlines flood sources and data sources that should be reviewed when assessing flood risk. Note that this list is not exhaustive; there may be additional data sources that the applicant needs to review. Where there is a risk to the management of surface water, the design considerations and mitigation measures outlined in **Section 6.11**, should be explored.

Table 3 Flood risk, design considerations and mitigation measures

Flood Source	Data Sources ³
Surface water	• Environment Agency Flood Map for Planning • Environment Agency Long Term Flood Risk Mapping • Strategic Flood Risk Assessment (SFRA) • Critical Drainage Areas (contained within Surface Water Management Plan) • Section 19 Flood Investigation Reports
Fluvial	• Environment Agency Flood Map for Planning • SFRA
Groundwater	• British Geological Survey (BGS)

³ This list is not exhaustive, and there may be additional data sources that outlines flood risk

	• SFRA • Source Protection Zones • Ground Investigation Reports
All Sources	• Environment Agency Flood Map for Planning • SFRA

6.1.4.1 Critical Drainage Areas

As the LLFA for the London Borough of Croydon is responsible for managing local flood risk from surface water, groundwater and ordinary watercourses across the borough. The Surface Water Management Plan identifies 16 Critical Drainage Areas (CDAs) within the borough. A CDA is defined as “a discrete geographic area, usually a hydrological catchment, where multiple and interlinked sources of flood risk, including surface water, groundwater, sewer, main river and/or tidal flooding, cause flooding in one or more Local Flood Risk Zones during severe weather, thereby affecting people, property or local infrastructure.” All developments in CDAs are required to demonstrate the management of surface water runoff in accordance with the guidance set out in **Section 6** to ensure flood risk is appropriately managed.

6.2 Proposed Site Area

SuDS Requirement 3:

The applicant must demonstrate that all positively draining areas, both impermeable and permeable, have been accounted for in the drainage strategy, with consideration for urban creep allowance.

The applicant must detail the proposed impermeable and permeable area (in m²). Consideration must also be given to any runoff from landscaping areas that would flow towards the proposed drainage network and therefore contribute to the overall volume of storage required. The contribution from all positively draining areas (impermeable and permeable) must be accounted for in the hydraulic calculations. The applicant should aim to reduce impermeable area within the proposed development.

SuDS Requirement 4:

In compliance with London Plan Policy SI 13, the **LLFA requires the use of pervious surfacing (e.g., permeable paving) to be prioritised** to help reduce runoff volumes. Impermeable surfaces will only be accepted where it is demonstrated that no alternative option exists.

6.2.1 Urban Creep

Consideration must be given to potential urban creep of the development proposal over the lifetime of the development (e.g., paving over front gardens and extensions). In accordance with the national standards, an **urban creep allowance of 10% should be applied** for all developments.

The only exception is where there are no external private permeable spaces, such as in flats or commercial buildings, in which case the allowance can be set at 0%.

Below is a sample table that should be included in the Drainage Strategy to document the site area assessment:

Table 4 Example table to use in Drainage Strategy to capture existing, proposed and future site area

	Impermeable area (m ²)	Permeable area (m ²)	Positively draining area (m ²)	Urban creep allowance (% and m ²)
Existing	[Enter text]	[Enter text]	n/a	n/a
Proposed	[Enter text]	[Enter text]	[Enter text]	[Enter text]
Difference	[Enter text]	[Enter text]	n/a	n/a

6.3 Drainage Hierarchy

SuDS Requirement 5:

In compliance with PPG, national standards, London Plan SI 13 and Building Regulations the applicant **must follow the drainage hierarchy** when exploring method of discharge, ensuring that **surface water run-off is managed as close to its source as possible**. As outlined in the national standards, lower priority final destinations may only be used if you can provide evidence that all higher priority options have been used as much as possible. Higher cost alone is not a valid reason to choose a lower priority destination.

The applicant should seek to re-use surface water runoff on site, where this is not feasible, surface water discharge must follow the London Plan drainage hierarchy as illustrated in **Figure 1**. The information required to demonstrate compliance is outlined in the proceeding sections.

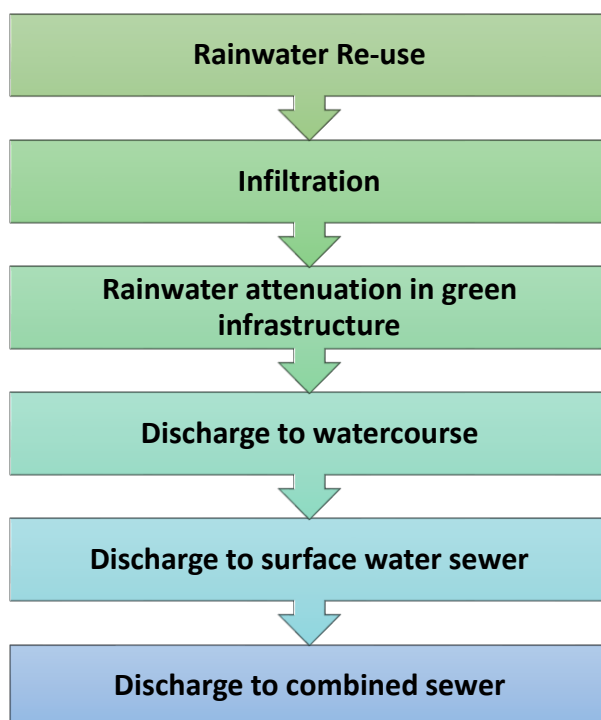


Figure 1 London Plan Drainage Hierarchy Flowchart

6.3.1 Rainwater Re-use

In line with the national standards (section 1.12) and given London's classification as water-stressed by the Environment Agency, applicants are expected to consider non-potable water use, such as rainwater harvesting systems. As a minimum, the LLFA expects water butts to be installed on all sites, unless a reasonable justification is provided for their omission.

6.3.2 Infiltration

As outlined in **Chapter 6** of the **SuDS D&E Guide**, the underlying bedrock in the borough is predominantly Middle and Upper Chalk in the south, which generally has good infiltration. These are overlain by superficial deposits (such as river terrace gravels and alluvium) in parts of the borough, which may allow infiltration. Further information on the geology of the borough can be found in the British Geological Survey (BGS) website

SuDS Requirement 6:

The LLFA will require all sites that have an underlying geology of chalk or superficial deposits that infiltrate to explore the use of infiltration. Where infiltration SuDS are proposed in SPZ 1 or 2 or proposed in contaminated land in line Local Plan SP6.4(d) and Policy DM24: (Land contamination) the applicant must address groundwater contamination risks and provide

The LLFA will require infiltration test results be submitted for all sites to support any proposed infiltration measures. However, if it is not possible to access the site to conduct soakage tests prior to seeking planning approval, a desktop study should be carried out to assess the underlying

geology and groundwater levels in the area. In such cases, the worst-case infiltration rate for the site should be provided.

For **full applications**, where infiltration testing has not been conducted, an alternative drainage scheme prioritising above ground SuDS techniques will be required. Please note the LLFA may request that an alternative drainage arrangement is provided for an **outline application**, in areas where it is considered that infiltration will not be feasible. An alternative drainage strategy is required in the event infiltration is deemed infeasible through testing and to demonstrate to the LLFA that a sustainable alternative arrangement can be provided on site.

The below, outlines the LLFA requirements that must be considered when proposing the use of infiltration techniques on site:

Infiltration Test Requirements

- Infiltration rates should be determined in accordance with **BRE Digest 365**.
- Soakaway tests should correspond to the depth infiltration is proposed.
- Appropriate water quality treatment should be provided prior to the discharge of surface water runoff into the proposed infiltration system.
- A minimum infiltration rate of 1×10^{-6} m/s.
- Groundwater monitoring should be undertaken for a significant period of time, in order to determine the highest recorded groundwater level, ideally over the course of one year.
- A minimum distance of 1m to be provided between the base of the infiltration system and the maximum recorded groundwater level.
- Applicant must include appropriate safety factor, in line with national standards Table S3.1.
- Single point infiltration features must be located no less than 5m from any building or road, or no less than 10m when used in areas of chalk. However, the LLFA will accept dispersed infiltration (i.e., permeable paving) within 5m of a building or road.

The supporting hydraulic calculations must demonstrate the following:

- The storage feature should discharge from full to half full within a reasonable timeframe, ideally within 24 hours for any event up to the 1 in 100-year event plus climate change, to minimise the risk of being unable to handle a subsequent rainfall event.
- The system should not be shown to be too full or unstable.
- Infiltration rate used in the calculations must be the same as shown in the report and drawings.
- Applicant needs to detail if base and/or side infiltration is proposed. If only side infiltration is utilised, the applicant must not solely rely on the infiltration rate of the base. Unless ground investigation reports confirm that the strata at the base remain consistent throughout the entire depth of the structure, the infiltration rate should be capped at the point where the strata change.
- A factor of safety must be applied. Please refer to **Section 9.5.5.1 (Infiltration)** of the SuDS D&E Guide.

In accordance with the national standards, the LLFA does not consider deep-bore infiltration features (those extending more than 2 meters below ground level) to represent a true 'SuDS Approach' or to comply with the drainage hierarchy, which prioritises shallow infiltration systems that better mimic natural drainage processes. If deep infiltration is the only practicable option for surface water discharge, the applicant must provide robust justification for this approach and secure agreement from the Environment Agency's groundwater team.

6.3.3 Rainwater Attenuation in Green Infrastructure

In accordance with the London Plan SI13, the applicant must seek to attenuate rainfall within green infrastructure features for gradual release (for example green roofs, rain gardens). In accordance with the national standards, the applicant must demonstrate that the first 5mm of rainfall can be retained on site.

Prior to considering alternative drainage options, the applicant should seek to retain rainfall onsite to ensure gradual release. Where the green SuDS components equate to 25% of the development area, the LLFA will accept an allowance for interception losses (5mm) be applied to the hydraulic calculations.

6.3.4 Watercourses

The applicant must seek to discharge into a watercourse as the next alternative option. If it is proposed to discharge into a watercourse within the site boundary, this must be clearly shown on a plan. For off-site connections, the applicant must provide associated plans and evidence of approvals from landowners and relevant approving bodies.

If there is a watercourse in close proximity or within the applicant's land ownership (even if beyond the red line boundary), the LLFA expects surface water runoff to be discharged into the watercourse unless a robust justification is provided.

For a **full application**, the applicant must demonstrate that the necessary permissions are in place to discharge additional flows into the watercourse. Where an existing outfall is to be used, photographs and a condition assessment of the outfall must be provided. For new connections, the applicant must demonstrate agreement with the relevant approving authority and confirm long term maintenance arrangement of the watercourse and outfall are in place.

6.3.5 Surface Water Sewer

For any proposed connection to the public surface water sewer, the applicant will need agreement from Thames Water. Where connection is proposed to a private sewer or drain, agreement must be obtained from the relevant asset owner. For any surface water runoff from adoptable highways discharging into highways drain, the applicant must obtain agreement from the highway authority to confirm there is sufficient capacity within the network. The highway authority does not accept discharge to a highway sewer other than for adoptable highways runoff. See **Section 6.9** for the level of information required in support of application type.

Where the applicant proposes to utilise the existing outfall / existing drainage network to manage surface water runoff from the proposed site area, the LLFA will require the following as a minimum:

- **Outline application:** Location and approximate levels of the existing outfall.
- **Full application:** Final outfall location, levels and volume of the existing drainage network. Supporting hydraulic calculations to demonstrate that there is suitable capacity within the network to manage flows.
- **DoC application:** In addition to the items outlined for a full application, a full CCTV / condition survey must be provided, and this will be secured via a pre-commencement condition.

6.3.6 Combined Sewer

The LLFA will only accept this option if there are no alternative methods to discharge surface water runoff. When a surface water connection to an existing combined sewer is unavoidable, it must be designed and located to allow for future separation of surface water from the combined system. See **Section 6.9** for the level of information required in support of application type.

6.3.7 Pumped Systems

The LLFA generally does not permit the use of pump systems within surface water drainage networks. Exceptions may be considered only if the applicant can demonstrate that no other viable alternatives exist and that gravity drainage is not possible. In such cases, a risk assessment addressing potential pump failure must be provided, including mitigation measures to prevent pollution and flooding. The applicant must provide ownership details of the pump as part of the SuDS maintenance and management plan.

SuDS Requirement 7:

In line with the national standards, if the final destination drainage system includes a pumping station downstream of the development's discharge location, the developer must obtain written confirmation from the asset owner ensuring that there is sufficient capacity to handle the anticipated post-development flows.

6.3.8 Foul Water Sewer

SuDS Requirement 8:

In accordance with national standards, the LLFA will not permit the discharge of surface water runoff into the foul drainage network.

Discharging surface water into the foul sewer network is not included in the drainage hierarchy and will not be permitted. This option will only be considered in exceptional circumstances, and where it has been clearly demonstrated that rainwater reuse has been maximised. Applicants wishing to explore this route are strongly encouraged to engage in pre-application discussions with the relevant authorities and provide robust justification for its consideration.

6.4 Runoff Rates

SuDS Requirement 9:

All applicants should **achieve runoff rates better than greenfield conditions** for greenfield development sites. For **brownfield sites, applicants should also aim to achieve better than greenfield runoff rates** in compliance with Croydon Local Plan Policy DM25.3 and London Plan Policy SI 13. This approach helps minimise the impact of development on surface water drainage infrastructure.

To comply with this requirement, the applicant must demonstrate:

- **Greenfield Sites:** Runoff rates are restricted to either the greenfield rate for a 1 in 1-year event or 1 l/s, whichever is higher (refer to the guidance below for more details).
- **Brownfield Sites:** Runoff rates are limited to, or as close as possible to, the greenfield rate for a 1-in-1-year event or 1 l/s, whichever is higher. In exceptional circumstances, the LLFA will consider as a maximum three-times the greenfield (1 in 1-year) runoff rate to be used.

6.4.1 Existing Runoff Rates

The applicant must provide calculations of the existing peak runoff rates (l/s) for the following storm events:

- 1 in 1-year event
- 1 in 30-year event
- 1 in 100-year event

If the site is a brownfield development, the applicant should provide supporting calculations using the modified rational method. The applicant must also provide the greenfield runoff rates for the above outlined storm events.

6.4.2 Post Development Runoff Rates

The applicant must demonstrate that the peak discharge rates from the site will not increase as a result of the proposed development for all events up to and including the 1 in 100-year event, with an allowance for climate change. The applicant must provide calculations of the existing peak runoff rates (l/s) for the following storm events:

- 1 in 1-year event
- 1 in 30-year event
- 1 in 100-year event
- 1 in 100-year event with climate change allowance

Where the applicant seeks to use a simple flow device (described as 'Approach 2' in the SuDS D&E Guide), runoff rates for all storm events should be limited to the 1 in 1 year event. If this is not possible, the applicant should aim to limit the runoff rate as close to this value. With available flow control devices on the market, discharge rates can potentially be reduced to as low as 1l/s.

Therefore, the LLFA will require runoff rates to be limited to greenfield (1 in 1 year) or 1l/s, whichever is greater. The hydraulic calculations must demonstrate that self-cleansing velocity can be achieved in all pipes. The LLFA will require a robust justification for the omission of the above requirements.

6.5 Runoff Volumes

SuDS Requirement 10:

Applicants must demonstrate that the post-development runoff volumes do not exceed the existing runoff volumes on site.

Runoff volumes from developed sites typically increase compared to their natural condition, which may lead to an increase in flood risk. SuDS design aims to mimic the natural losses that occur across the catchment, ensuring that post-development runoff volumes align with those of the natural catchment. A reduction in runoff volumes should be achieved using the techniques outlined in Sections 7.4.13 and 9.5.5.2 of the SuDS D&E Guide, including measures such as rainwater harvesting, interception losses, and long-term storage.

To demonstrate effective management of runoff volumes on-site, **applicants must provide evidence that the proposed discharge volume (with flow control measures in place) will not exceed the greenfield runoff volume during the 1 in 100-year, 6-hour storm event.** The LLFA expects all sites to adopt this approach; however, if an applicant is unable to implement the required measures, the expectation is to hold more water on site and ensure gradual release of water.

6.6 Attenuation Volumes

SuDS Requirement 11:

In accordance with national standards, it must be demonstrated that the proposed drainage system is designed so that no flooding will occur anywhere on the development site during rainfall events up to the 1 in 30-year event. Additionally, the development must be designed to prevent flooding of any building, utility plant, or route intended to provide safe access and escape during flooding, for rainfall events up to the 1 in 100-year event including an appropriate allowance for climate change.

An assessment of the volume of attenuation storage on-site is required, based on the 1 in 100-year storm event including an allowance for climate change, and the allowable discharge rate for the site. The applicant must provide hydraulic calculations that demonstrate the following:

- **Outline Applications:** As a minimum, the applicant should demonstrate that the maximum required storage for the 1 in 100-year event, including an allowance for climate change can be provided on site.
- **Full or DoC Applications** (advisory note for Outline Application):
 - The applicant must demonstrate that there is no flooding within the site for rainfall events up to and including a 1 in 30-year event, with an allowance for climate change.

- The applicant must demonstrate that the site will not experience surface water flooding up to a 1 in 100-year event, including an allowance for climate change, or ensure that any surface water flooding is safely contained on-site up to this event. This is to ensure that surface water runoff will not increase flood risk to the development or third parties. Please note any temporary flooding along the public highways must not exceed the kerb height (typically 100mm).

Additionally, the applicant should maximise storage opportunities throughout the development, detailing the 'volume (m³) per m²' to simplify the evaluation process (see **Section 7.4.9** of the **SuDS D&E Guide**).

6.7 Climate Change Allowance

SuDS Requirement 12:

In accordance with national policy, the applicant must demonstrate that an appropriate allowance for climate change has been incorporated into the design.

The latest climate change allowance must be incorporated to account for increased rainfall intensity over the lifetime of the development, for both the 1 in 30-year and 1 in 100-year events. Applicants should refer to the latest guidance and allowance specific to the London Management Catchment area, as provided by the [Environment Agency on data.gov website](https://www.gov.uk/government/organisations/environment-agency).

The applicant will be expected to use the upper-end climate change allowance to assess flood risk implications. The Drainage Strategy must clearly define the 'lifetime of the development' and provide a clear rationale for applying the proposed climate change allowance(s) used in the calculations.

6.8 Water Quality

SuDS Requirement 13:

In line with Local Plan SP6.4(c) applicants **must use SuDS to provide water treatment on site**.

Surface water runoff must be treated in accordance with the CIRIA SuDS Manual (Chapter 26, Water Quality Management: design methods (CIRIA, 2015) to minimise the risk of pollution to the receiving system. A treatment train should be implemented to provide multiple stages of surface water treatment. More information on the Council's requirements can be found in **Section 7.4.7** and **Section 9.7** of the **SuDS D&E Guide**.

As outlined in the national standards, for some land uses, where there is a higher risk of pollutants (for example, a large car park), the inclusion of proprietary water quality treatment measures may be needed, in addition to SuDS. Where there is potential for pollution, it may be necessary to obtain an Environmental Permit or register an exemption with the Environment Agency.

When using infiltration in areas with high pollutant loads and/or within a SPZ, the applicant must follow the SuDS Manual's guidelines for groundwater risk screening and, if necessary, conduct a detailed risk assessment as outlined in Chapter 26 of Ciria SuDS Manual, to demonstrate that there

is no risk of mobilising pollutants into groundwater or surface water. The Environment Agency must be consulted if the existing or proposed use (including the storage of potentially contaminating substances) is potentially contaminative to groundwater and the site lies within a SPZ.

The LPA may request additional assessments for development proposals on or near potentially contaminated land. In such cases, a remediation strategy may be required to accompany the drainage strategy.

6.9 Third Party Agreement

SuDS Requirement 14: The applicant must provide evidence of third-party agreements when proposing to discharge surface water runoff into systems owned or regulated by another party.

Table 2 outlines when different consultees should be consulted during the planning application stage (or earlier). For example:

- Developers must contact the Environment Agency at the earliest opportunity to discuss potential constraints, particularly if there is a risk of contamination to groundwater.
- For proposals involving discharges into a watercourse or sewer, applicants must engage with the relevant sewer owner (e.g., Thames Water or the Highways Authority), Environment Agency, or riparian owner at the earliest opportunity to confirm the agreed discharge rate and connection point. An agreement in principle, such as through a Development Enquiry, should be established prior to submission, with correspondence included in the drainage assessment.

Written correspondence confirming capacity and point of connection must be provided as a minimum for an **outline application submission**, along with the drainage strategy. For a **full application**, confirmation of the proposed discharge rate and connection point, including invert levels and location details, will be required. Applicants must also outline any necessary offsite works. To **discharge condition(s)**, applicants must present formal agreements from third parties if discharging into their systems. Furthermore, applicants must provide details of any offsite work required.

The sewerage undertaker may request a planning condition preventing occupation until capacity is confirmed, a phasing plan is agreed, and/or any necessary upgrades are completed to serve the development. Before approving the **discharge of conditions**, the LLFA will need to review any phasing agreements and plans agreed with the sewerage undertaker.

6.10 Drainage Layout Plan

SuDS Requirement 15: A drainage layout must be included as part of the drainage strategy, clearly demonstrating the proposed drainage solution with a level of detail appropriate to the application stage.

A conceptual drainage layout plan of the proposed strategy should be provided, for an **outline application**, including the following:

- Identification of SuDS locations and dimensions;
- Any connection/discharge locations to sewer networks or watercourses; and
- Indicative pipe layout to demonstrate how SuDS measures will be connected to the site drainage network.

For a **full** and **DoC application**, a detailed drainage layout plan (to scale) of the proposed strategy should be provided, including the following:

- Surface water discharge locations;
- Invert levels of drainage infrastructure (including off-site connection points);
- Pipe sizes and pipe falls/gradients (where known);
- For all proposed SuDS (including green roofs);
 - Location;
 - Dimensions and storage volumes;
- Details of the type and size of any proposed flow controls;
- Sewer or outfall infrastructure, connection point to third party infrastructure and proposed discharge rate (if applicable to the site); and
- Discharge control device details.

6.11 Flood Risk Mitigation

SuDS Requirement 16:

In compliance with [PPG, Paragraph 023](#) and Local Plan Policy DM25, and as a first step, a **sequential approach must be applied**, locating more vulnerable developments in areas at low flood risk. This includes surface water and groundwater flood risk, which the LLFA strategically manages. Where this is not possible, mitigation measures may be required to ensure that surface water runoff can be managed on site without increasing flood risk to or from the site.

Flood risk mitigation, including consideration of flood exceedance, should be integrated into the design process from the earliest stages. **Table 5** outlines flood risk mitigation measures and considerations to be explored during the designing of the development. This list is not exhaustive; applicants should consult the guidance documents outlined in **Chapter 7** for further information.

Table 5 Flood Risk, design considerations and mitigation measures

Flood Source	Risk	Design consideration and minimum mitigation measures
Surface water	Medium – High or within a Critical Drainage Area (CDA)	• Avoid: Applicants should <u>avoid</u> severing any surface water flow paths (such as overland flow paths or watercourses) and design this into proposed development as a conveyance feature. • Minimise and mitigate: If the development encroaches into a flood risk area, appropriate mitigation may be

Flood Source	Risk	Design consideration and minimum mitigation measures
		provided, such as increasing storage capacity or using flood-resistant materials.
Fluvial	Flood Zone 2 and 3	Above ground SuDS features should not be located within present or future Flood Zone 3 or present day Flood Zone 2. Where any SuDS features are proposed within the floodplain, a cumulative assessment is required to ensure surface water runoff will continue to be managed up until the design flood event.
Groundwater	High	Where groundwater flood risk is high, groundwater monitoring should be conducted (ideally over the course of one year) to determine the highest recorded groundwater level on site. As a minimum this will be required for a full planning application.
All sources	Low – Medium	“Preparing a flood risk assessment: standing advice” states that Finished Floor Levels (FFL) should be a minimum of 300mm above the surrounding ground level, and at least 600mm above maximum estimated flood levels, whichever is greater, to reduce flood risk to properties during exceedance events.

6.12 Flood Exceedance Plan

SuDS Requirement 17:

The applicant must clearly demonstrate how exceedance flood flows will be managed safely, ensuring that risks are minimised both on-site and off-site.

For an **outline application**, the applicant must show evidence that flood conveyance routes have been considered and integrated within the proposed design scheme.

The following must be provided as a minimum for a **full application** submission:

- **Flood exceedance plan:** Include flood flow arrows mapped on a topographical plan that illustrates post-development external ground levels;
- **Flooding Assessment:** Where hydraulic calculations indicate flooding during the 1 in 100-year rainfall event (plus climate change allowance), the applicant must:
 - Show the volume and depth of flooding on the flood exceedance plan.
 - Assess flood hazards and demonstrate that proposed mitigation measures ensure safe conditions for site users. Further guidance can be found in Ciria’s Designing for exceedance in urban drainage (C635).

6.13 Supporting Hydraulic Calculations

SuDS Requirement 18:

Hydraulic calculations must be included as part of the drainage strategy, clearly demonstrating the proposed drainage solution with a level of detail appropriate to the application stage.

The Drainage Strategy must include hydraulic calculations that demonstrate compliance with the requirements outlined in this chapter, and in **Chapter 9.5.10** of the **SuDS D&E Guide**. Applicants are required to reference each section to fully understand the calculation requirements applicable to the different application types.

6.14 Management and Maintenance Plan

SuDS Requirement 19:

In line with NPPF, Paragraph 182 the applicant **must demonstrate that consideration has been given to the long-term maintenance and management of all SuDS** and drainage features for the lifetime of the development. This should inform the design of the surface water drainage arrangement.

The applicant must submit a management and maintenance plan, setting out the management and maintenance requirements of all surface water drainage features over the lifetime of the development. A site-specific maintenance plan should be provided, and shall include the following:

- A maintenance schedule tailored to the post-development SuDS measures and all drainage elements; generic plans from guidance documents will not be accepted.
- The frequency of maintenance for all SuDS should be specified.
- Identification of the party responsible for the maintenance of all drainage elements (including specific SuDS measures).

A maintenance plan must be submitted to the LPA prior to the occupation of the proposed development. The LLFA will seek to include a condition to ensure that maintenance ownership is clearly detailed in the plan.

As per standard 7 of the national standards an assessment of the likelihood and impact of failure of the surface water drainage system must be provided along with an identification of how these risks will be managed. This should also consider risks that are not design risks e.g. failure due to faulty parts or components of the drainage system.

6.15 Surface Water Management During Construction

The national standard requires that the design process accounts for the method of construction for all components of the surface water drainage system, to avoid the potential for poor construction. Components should be simple and designed to minimise the risk of failure. The applicant is strongly advised to produce a Construction Method Statement outlining how the drainage features will be

managed and protected during construction to ensure the functionality of the surface water drainage system is not compromised.

The applicant should submit as-built drawings, supported by photographic evidence, to the planning authority upon completion of the drainage works to demonstrate that the system has been constructed in accordance with the approved planning drawings.

7 Useful Links

The following list of documents should be used by the applicant to develop and inform the preparation of their drainage strategy for submission to the LPA for planning permission:

- [BRE 365 Soakage Test](#)
- [CIRIA C753 SuDS manual](#)
- [CIRIA C687 Planning for SuDS](#)
- [CIRIA C609B Sustainable Drainage Systems - Hydraulic, structural and water quality advice](#)
- [Ciria C635 Designing for exceedance in urban drainage](#)
- Environment Agency '[Flood Risk to People – Phase 2](#)' (FD2321/TR2)
- [LBC SFRA](#)
- [LBC SWMP](#)
- [LBC LFRMS](#)
- [LBC Section 19 Investigations](#)
- [Thames River Basin District Flood Risk Management Plan \(FRMP\)](#)
- Sewers for Adoption (7th Edition)
- [SuDS D&E Guide](#)

Appendices

Appendix 1 – Outline and Full Application Checklist

Key

-  - Detailed information required
-  - Brief outline / high level information to be provided

	Criteria	Outline	Full
1.	Development Proposal		
2.	Existing Site Arrangements - Site type (greenfield, previously developed, remediated land, contaminated land) - Existing Drainage Arrangements		
3.	Site Area(s) - Proposed impermeable area / permeable area / positively draining area (m²) - Demonstrate consideration of future build (urban creep)		
4.	Topography		
5.	Flood Risk		
6.	Ground Conditions - Description of ground conditions (using site investigation reports where available) including information regarding geology (superficial and bedrock deposit) and groundwater depth. - Source Protection Zones		
7.	Drainage Hierarchy		

8.	<u>Infiltration</u>		
9.	<u>Runoff Rates</u> - Existing runoff rates for the Qbar (1 in 2yr), 1 in 30yr and 1 in 100yr - Proposed runoff rates for the Qbar (1 in 2yr), 1 in 30yr and 1 in 100yr, 1 in 100yr plus appropriate climate change allowance		
10.	<u>Runoff Volumes</u> Runoff volumes for the greenfield and proposed 1 in 100yr: 6-hour storm event		
11.	<u>Attenuation Volumes</u> Incremental storage across development to accommodate flows for the 1 in 100yr + climate change allowance		
12.	<u>SuDS</u> Demonstration priority for above ground 'green' or multifunctional SuDS features		
13.	<u>Water Quality</u> Complete CIRIA SuDS Manual – Simple Index Tool		
14.	<u>Third Party Agreement</u>		
15.	<u>Drainage Layout Plan</u>		
16.	<u>Flood Exceedance Plan</u>		
17.	<u>Flood Risk Mitigation</u> Detail proposed mitigation to offset flood risk impacts identified in the FRA or Drainage Strategy		

18.	Drainage Layout Plan		
19.	Supporting Hydraulic Calculations		
20.	Management and Maintenance Plan		

Appendix 2 – Discharge of Condition

The recommended surface water drainage condition will be tailored for each planning application. However, the below checklist provides a list of the typical information required in order to discharge surface water conditions.

	Criteria	Tick Box
1.	Summary of LLFA approved drainage proposal	
2.	Confirmation and justification for any scheme design changes and resulting changes to approved surface water drainage design (where required)	
3.	Confirmation of proposed site area (impermeable, permeable and positively draining area, urban creep)	
4.	Confirmation of proposed infiltration rates	
5.	Proposed runoff rates	
6.	Proposed runoff volumes	
7.	Attenuation volumes	
8.	Detail SuDS design and proposals (location, volume)	
9.	Water quality - confirmation statement	
10.	Formal written third-party agreement for any connections / discharge points	
11.	Detail flood risk mitigation proposal	
12.	Detailed drainage layout plan	

13	Supporting hydraulic calculations	
14	Management and maintenance plan (detailing adopting body)	

Appendix 3 – Change of Use Application

Planning Application for Conversions or Refurbishments where there is no change in building footprint.

To demonstrate accordance with the Croydon Local Plan Strategic Policy 6.4(c) and Croydon Local Plan Detailed Policy DM25.3, applications for conversions or refurbishments, with no change in building footprint or hardstanding area, should be supported by a **drainage statement** containing the following as a minimum.

	Criteria	Tick List
1.	Development Proposal	
2.	Confirmation statement of no change to building footprint and external hand standing area	
3.	Drainage Arrangements – detail the existing and proposed drainage arrangements	
4.	<u>SuDS Implementation</u> Where possible, the applicant should utilise SuDS on-site e.g., green roof, water butts, rain planters, permeable paving. Where SuDS are not deemed suitable or feasible, justification should be provided. In considering the feasibility for infiltration SuDS features, assessment should be made to the soil types and geology for infiltration potential.	
5.	<u>Site Layout Plan</u> Applicant to provide a site layout plan showing indicative layouts and sizing (dimensions and volumes) of SuDS proposed, any connection/discharge locations to sewer networks or watercourses and indicative pipe layout to demonstrate how SuDS measures will be connected to the onsite drainage network	
6.	<u>Maintenance and Ownership</u>	

	• Provide a maintenance plan for all drainage features (this can be secured via a pre-occupation condition) • Provide name of organisation that will maintain all drainage features including SuDS features	
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Planning Application for Conversions or Refurbishments where there is a change in building footprint or external hardstanding areas.

The LLFA will typically assess this as a new application and require the same level of detail provided for a full application (refer to **full application checklist**). There may be exceptional circumstances where a reduced level of detail will be requested, and it is recommended that consultation with the LLFA is held at the earliest opportunity to confirm the appropriate level of detail to be provided.

HIGHWAY & TRAFFIC SIGN-OFF FORM

NAME: Rowland Gordon
SIGNATURE: RGordon
JOB TITLE: Highways Delivery and Contract Manager
DATE: 08/09/2026