



# Value My Land

**Maximising Returns for Landowners**

## **Flood Risk and Drainage for Development Land**

**A Practical Guide for Landowners**

How to assess flooding from all sources, plan sustainable drainage and protect development capacity before promoting or selling land.



**Value My Land**

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# Flood Risk and Drainage for Development Land

Flood risk and drainage are fundamental to whether land can support safe and deliverable development. A well-located site may still be constrained if buildings, roads or access routes would flood, or if surface water cannot be managed without increasing risk elsewhere.

Assessment goes beyond distance to a river or the mapped Flood Zone. Rivers and sea, surface water, groundwater, sewers, reservoirs, canals, watercourses and future climate conditions may need to be considered with infiltration, storage, discharge and maintenance.

**Flood Zone 1 does not mean no flood risk, and a nearby sewer or watercourse does not guarantee a suitable drainage outfall.**

## Why should landowners assess flooding and drainage early?

An early review can prevent a planning strategy, valuation or agreement from relying on an unrealistic developable area, unsafe access route or drainage outfall that is unavailable or outside the owner's control.

- Identify current and future flood risk from all relevant sources, including access and escape
- Check flood mapping, Strategic Flood Risk Assessment evidence, levels, history and flow routes
- Test the runoff hierarchy, infiltration, receiving systems and third-party rights
- Reserve land for SuDS, flood storage, buffers, exceedance, maintenance and environmental benefits
- Understand the evidence, consents, infrastructure, cost and programme needed for delivery

## Where do flood risk and drainage sit in the process?

Site and mapping review -> topography and flood checks -> runoff destination and outfall -> site assessment or allocation -> Flood Risk Assessment and drainage strategy -> approvals -> construction and maintenance

**[Read the full online Flood Risk and Drainage Guide](#)**

# Why Flood Risk and Drainage Evidence Matters

A site can relate well to a settlement yet remain difficult to develop if vulnerable uses occupy a floodplain, surface water crosses the layout or safe access cannot be maintained. Flood risk should shape the boundary and masterplan from the outset.

The planning authority considers the overall case. The Environment Agency may advise on river, sea and main-river matters, while the Lead Local Flood Authority commonly advises on surface water and SuDS. Sewerage undertakers and other risk management authorities may also be relevant.

## The Flood Zone is only a starting point

Flood Zones primarily describe river and sea flooding. Flood Zone 1 land can still face surface water, groundwater, sewer, reservoir, canal or watercourse risk, and future risk may differ from today. Site-specific evidence may therefore be needed in every zone.

## Safe layout, access and residual risk must be addressed

The most vulnerable development should occupy the safest land. Floor levels, storage, land raising, flow routes, emergency arrangements and safe access may determine whether the scheme remains safe for its lifetime without increasing risk elsewhere.

## Surface water drainage is part of placemaking and delivery

A sustainable drainage strategy should manage frequent rainfall, extreme events, water quality, amenity, biodiversity and maintenance as one system. Swales, ponds, wetlands, basins and permeable surfaces can form green infrastructure, but the discharge route, land, rights and adoption must be deliverable.

**A credible strategy combines flood risk, safe layout, the runoff hierarchy, SuDS, water quality, maintenance, land control and delivery - not just a map designation.**

**[Open the Environment Agency Flood Map for Planning](#)**

## Key Flood Risk and Drainage Issues at a Glance

A credible flood risk and drainage strategy is based on mapped evidence, site levels, ground conditions, proposed vulnerability and a realistic discharge route - not a Flood Zone label or an assumption that a nearby sewer, ditch or watercourse can accept runoff.

|                                                                                                                                                                                                 |                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flood Sources &amp; Future Risk</b><br>Review rivers, sea, surface water, groundwater, sewers, reservoirs, canals, watercourses, climate change and interactions between sources.            | <b>Sequential &amp; Vulnerability Tests</b><br>The location and use should respond to the lowest available risk, the vulnerability classification and any sequential or exception-test requirements. |
| <b>Levels, Flow Routes &amp; Safe Access</b><br>Topography, flood depths, velocities, hazard, finished levels, off-site inflows, exceedance and access or escape can determine the safe layout. | <b>Runoff Destination &amp; Outfall</b><br>Rainwater use, infiltration, surface water, piped systems and combined sewers should be considered in order with capacity, levels, rights and approvals.  |
| <b>SuDS, Water Quality &amp; Biodiversity</b><br>A treatment train can manage frequent and extreme rainfall while improving water quality, landscape, amenity, habitats and placemaking.        | <b>Maintenance, Adoption &amp; Cost</b><br>Access for maintenance, ownership, adoption, monitoring, permits, phasing and whole-life funding affect whether the strategy remains effective.           |

## What information should be assembled?

- The site boundary, topographical levels, low points, watercourses, ditches, culverts and off-site catchments
- Flood maps, surface-water information, the Strategic Flood Risk Assessment and relevant historic records
- Proposed use, realistic capacity, vulnerability, development lifetime, access and emergency considerations
- Soil, geology, groundwater, contamination and proportionate infiltration or soakaway feasibility evidence
- The runoff destination hierarchy, possible outfalls, receiving-system capacity, levels and third-party rights
- Land for SuDS, storage, exceedance, water treatment, amenity, biodiversity, maintenance and adoption
- Local guidance, consultees, permits, ordinary-watercourse consents, sewer agreements and delivery phasing

The early review should establish whether flooding can be avoided or safely managed, whether drainage has a credible destination and how those matters affect the realistic development boundary and capacity.

# How a Potential Development Site Is Usually Assessed

The assessment normally develops from high-level screening into a site-specific flood risk and drainage strategy. The level of evidence should increase as the land moves from early promotion through allocation, planning permission, condition discharge and construction.

- 1. Define the site and surrounding catchment - Confirm the boundary, levels, neighbouring land, watercourses, ditches, culverts, drains, sewers, low points, off-site inflows and the land that may be needed for storage, outfall or maintenance.**
- 2. Review current and future flood evidence - Use the official maps, Strategic Flood Risk Assessment, historic information and available modelling to understand river, sea, surface water, groundwater, sewer, reservoir and other relevant risks.**
- 3. Test the sequential layout and safe development - Match the proposed use and vulnerability to the lowest-risk parts of the site and consider safe access, escape, finished levels, flood storage, residual risk and climate change.**
- 4. Establish the drainage hierarchy and ground conditions - Consider rainwater use, infiltration, surface-water bodies, surface-water systems and combined sewers in the appropriate order, supported by tests, capacity checks and rights.**
- 5. Size SuDS and manage exceedance - Develop a treatment and storage train that manages everyday and extreme rainfall, water quality, off-site flows and exceedance routes while providing amenity and biodiversity benefits.**
- 6. Agree evidence, consents and maintenance - Discuss scope with the relevant authorities and system owners, prepare the appropriate assessments and identify permits, legal rights, adoption, management, construction and whole-life funding.**

**The correct solution depends on every source of risk, site levels, development vulnerability, climate change, discharge route and long-term maintenance.**

**Read the National Standards for Sustainable Drainage Systems**

# The Main Flood Risk and Drainage Evidence and Design Checks

Evidence should be proportionate to the scale, location and likely risk of the proposal. A small low-risk site may need a focused drainage note and layout safeguards, while a strategic or higher-risk site can require hydraulic modelling, a detailed Flood Risk Assessment, catchment analysis and phased infrastructure planning.

|                                                                                                                                                                                                               |                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flood Map, SFRA &amp; Historic Review</b><br>Official mapping and the Strategic Flood Risk Assessment identify present and future risks, but local records and site evidence may reveal additional issues. | <b>Topographical &amp; Catchment Survey</b><br>Levels, low points, slopes, ditches, culverts, watercourses, off-site catchments and potential flow routes are mapped to inform layout and modelling.           |
| <b>Site-Specific Flood Risk Assessment</b><br>The FRA explains risk from all relevant sources, climate change, safe development, access, residual risk and measures needed over the development lifetime.     | <b>Sequential or Exception-Test Evidence</b><br>Where required, evidence compares reasonably available lower-risk locations and addresses vulnerability, sustainability benefits and safe design.              |
| <b>Infiltration &amp; Groundwater Testing</b><br>Ground investigation tests permeability, groundwater and contamination so infiltration is supported by evidence rather than assumed from soil mapping.       | <b>Drainage Strategy &amp; Hydraulic Model</b><br>Calculations test runoff, storage, discharge, climate change, urban creep, flood-locking, off-site flows and system performance during design events.        |
| <b>SuDS, Water Quality &amp; Exceedance</b><br>The layout combines source control, conveyance, storage, treatment, amenity, biodiversity and safe exceedance routes as an integrated landscape system.        | <b>Outfall, Rights, Maintenance &amp; Consents</b><br>The strategy should confirm the receiving system, discharge agreement, easements, permits, adoption, access, management and whole-life responsibilities. |

No single report replaces professional judgement. Flood mapping, topography, hydraulic information, infiltration evidence, the site layout, drainage calculations, water-quality treatment, exceedance routes and maintenance arrangements should form a consistent case based on the same boundary and capacity.

# Flood Risk and Drainage Through the Planning Process

Flood risk and drainage are reconsidered as land moves through planning. An early conclusion can change when mapping, levels, climate information, the boundary, capacity, outfall or technical evidence changes.

**1. Initial site and title review** - Flood maps, levels, watercourses, ditches, drainage, possible outfalls, third-party land and surface-water routes are checked before promotion.

**2. Call for Sites submission** - The council is given an honest flood and drainage context rather than an unsupported claim that Flood Zone 1 or a nearby sewer resolves the issue.

**3. HELAA or site assessment** - Officers may record river, surface-water, access, drainage, sewer or delivery concerns and reduce, defer or reject an uncertain site.

**4. Draft allocation and Local Plan work** - Coordinated evidence may be needed to compare alternatives, protect floodplain, safeguard SuDS land and demonstrate deliverable infrastructure.

**5. Planning application** - The proposal may require a Flood Risk Assessment, sequential or exception-test evidence, drainage strategy, testing, calculations, SuDS layout, exceedance and maintenance information.

**6. Detailed approvals and consents** - Conditions, final design, outfall agreements, watercourse permissions, sewer approvals, land rights, adoption and maintenance may be completed separately.

**7. Construction and operation** - Temporary drainage, pollution controls, protected flow routes, SuDS construction, verification, handover, monitoring and maintenance preserve the approved system.

**Evidence becomes more detailed as the site progresses, but the boundary, capacity, flood assumptions and drainage destination must remain consistent.**

**[Read: Call for Sites Guide](#)**

**[Read: Local Plan Allocation Guide](#)**



# Sequential Tests, Safe Development and Drainage Outfalls

Flood and drainage objections often arise from several connected issues rather than one map designation. A site may have low river risk but significant surface-water flow, an unsuitable infiltration assumption, no controlled outfall, insufficient storage or an access route that becomes unsafe during a design event.

A targeted response should identify the precise concern, the evidence and policy test being applied, and whether a safer layout, revised capacity, improved drainage hierarchy, alternative outfall or additional land and rights can provide a realistic solution.

## A focused flood risk and drainage strategy should address:

- Current and future risk from all relevant sources, including flood extent, depth, velocity, hazard and climate change
- Development vulnerability, sequential layout, safe access and escape, floor levels, flood storage and residual risk
- Topography, off-site inflows, watercourses, ditches, culverts, groundwater, sewers and existing drainage systems
- The runoff destination hierarchy, infiltration tests, outfall levels, discharge rates, receiving capacity and land rights
- SuDS storage, everyday rainfall, extreme events, water quality, amenity, biodiversity, exceedance and maintenance
- Permits, consents, ownership, land take, adoption, phasing, whole-life cost, construction controls and monitoring

## Do not rely on Flood Zone 1 or the nearest sewer

Flood Zone 1 does not establish that the land is free from surface-water, groundwater, sewer or future flood risk. Equally, a visible ditch, watercourse or sewer does not prove that a legal, hydraulic and environmentally acceptable discharge is available. The official mapping, local evidence, current national SuDS standards and site-specific investigations should be read together.

**A flood or drainage concern should be defined precisely and tested against a safer layout, proportionate evidence and a deliverable surface-water strategy.**



# How Flood Risk and Drainage Affect Capacity and Land Value

Flood risk and drainage can unlock or constrain the development opportunity. A robust strategy may support allocation, planning permission and purchaser confidence, while unresolved flooding, an unsafe access route or an uncertain outfall can reduce capacity, delay the programme or prevent development.

The value effect remains site-specific. Flood probability, depth and hazard, climate change, site levels, drainage destination, ground conditions, sewer or watercourse capacity, third-party land, SuDS land take, abnormal works, planning obligations and maintenance all influence the residual value and sale terms.

## Flood risk and SuDS define the usable development opportunity

Built development may need to avoid floodplain, surface-water flow routes, buffers and low areas. SuDS basins, swales, ponds, wetlands, permeable surfaces, access routes and maintenance strips also require land. Designed positively, those features can create green infrastructure, biodiversity and amenity rather than simply reducing capacity.

## Infrastructure, outfall and whole-life obligations affect the net receipt

Hydraulic modelling, floodplain compensation, land raising, culvert works, attenuation, pumping, sewer reinforcement, watercourse improvements, easements, permits, monitoring and long-term management can create substantial cost and delay. The sale or promotion strategy should identify who funds the work, when it is delivered and how the obligations affect net proceeds.

**The strongest strategy directs vulnerable development to the safest land while securing a maintainable drainage system, environmental benefits and a realistic route to delivery.**

**Find Out What Your Land May Be Worth**

# How Value My Land Can Help

Value My Land can undertake a free initial review of the site, planning context and apparent flood and drainage constraints before the owner commits to major technical expenditure, a sale or long-term agreement. We can identify the matters that require specialist input and ensure that flood risk, drainage, access, ecology, landscape, infrastructure, capacity and value are considered together.

|                                                                                                                                                                                                             |                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Free Flood &amp; Drainage Review</b><br>We review the site location, flood mapping, planning context, apparent flow routes and likely drainage constraints before major expenditure or terms are agreed. | <b>Mapping, Site &amp; Outfall Review</b><br>We identify the evidence, land, watercourses, sewers, ditches, ground conditions and third-party rights relevant to a credible drainage destination. |
| <b>Flood Risk Strategy</b><br>We help define the questions for a flood risk consultant and ensure that vulnerability, safe layout, access, climate change and residual risk are addressed.                  | <b>Drainage &amp; SuDS Strategy</b><br>We consider runoff hierarchy, infiltration, storage, treatment, exceedance, maintenance and the land required for an integrated surface-water solution.    |
| <b>Technical Team Management</b><br>Where evidence is proportionate, we can coordinate engineers, surveyors, flood specialists, ecologists, planners and other consultants as one strategy.                 | <b>Promotion Route &amp; Next Steps</b><br>Where appropriate, we can discuss funded promotion and identify the plans, evidence, agreements and independent advice needed before commitment.       |

## Our Promotion Agreement Route

Where appropriate, Value My Land can fund and manage the agreed planning and promotion process at our own cost and risk. This can include appointing and coordinating flood risk, drainage, civil engineering, topographical, ground, ecology and planning specialists needed to test the site and support allocation or a planning application.

If the agreed planning outcome is not secured, the promotion costs are written off in accordance with the agreement. Following planning success, the land is normally marketed to competing third-party purchasers. Our remuneration is linked to the sale proceeds achieved, while the landowner retains ownership until sale.

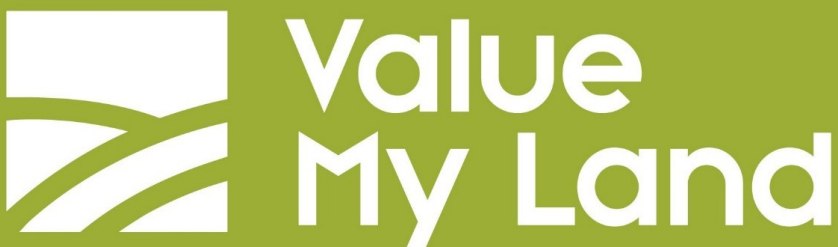
[Request a Free Flood Risk and Drainage Review](#)



# Can Flood Risk and Drainage Be Managed?

Send Value My Land the site location, approximate boundary and any plan, flood map, council assessment, drainage information, sewer enquiry or consultant advice available. We can provide a free, no-obligation initial review of the development opportunity and identify the flood, outfall, SuDS and evidence issues that should be considered next.

**Telephone: 0800 061 4006**  
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**[www.valuemyland.com](http://www.valuemyland.com)**



## Delivering Sustainable Development

Further reading: [Flood Risk and Drainage Guide](#) | [Flood Map for Planning](#) | [Call for Sites Guide](#) | [Local Plan Allocation Guide](#)  
[valuemyland.com/flood-risk-and-drainage-development-land](http://valuemyland.com/flood-risk-and-drainage-development-land)

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