

## Guidance

# Preparing a flood risk assessment: standing advice

Find out if you need to follow standing advice when completing a flood risk assessment and what to do.

From: **Environment Agency** ([/government/organisations/environment-agency](https://www.gov.uk/government/organisations/environment-agency))

Published 1 April 2012

Last updated 27 August 2025 —

### Applies to England

## Contents

- When to follow standing advice
- Advice for minor extensions
- Standing advice for vulnerable developments
- Sequential and exception tests
- Submit your flood risk assessment

Local planning authorities (LPAs) should use [flood risk standing advice for local planning authorities](https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities) (<https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities>) to check when to consult the Environment Agency or use standing advice.

Planning applicants should start by referring to [flood risk assessments if you're applying for planning permission](https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications) (<https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>), to check that this standing advice applies to their development.

Planning applicants and LPAs should use this guide to make sure flood risk assessments (FRAs):

- contain the correct information
- follow the standing advice

If your site is in Flood Zone 1 but the LPA's strategic flood risk assessment (SFRA) or the [flood map for planning](https://flood-map-for-planning.service.gov.uk/) (<https://flood-map-for-planning.service.gov.uk/>) show it will be at increased risk of flooding from rivers or the sea in future, you should:

- complete a flood risk assessment (FRA)
- apply this guidance as if the site were in Flood Zone 2

You should also check the LPA's strategic flood risk assessment (SFRA) for further information on future flood risk from rivers and sea.

## When to follow standing advice

Follow [standing advice for vulnerable developments](https://www.gov.uk/guidance/flood-risk-assessment-standing-advice#standing-advice-for-vulnerable-developments) (<https://www.gov.uk/guidance/flood-risk-assessment-standing-advice#standing-advice-for-vulnerable-developments>) for developments (including change of use) in Flood Zone 2 that have a [vulnerability classification](https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification) (<https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification>) of:

- ‘more vulnerable’ - except for landfills, waste facility sites, caravan or camping sites where the Environment Agency should be consulted
- ‘less vulnerable’ - except for waste treatment sites, mineral processing sites, water treatment plants and sewage treatment plants where the Environment Agency should be consulted
- ‘water compatible’

Follow [standing advice for vulnerable developments \(https://www.gov.uk/guidance/flood-risk-assessment-standing-advice%22%20%2F%20%22standing-advice-for-vulnerable-developments\)](https://www.gov.uk/guidance/flood-risk-assessment-standing-advice%22%20%2F%20%22standing-advice-for-vulnerable-developments) in Flood Zone 3 for:

- change of use to ‘water compatible’
- change of use where the vulnerability classification will reduce or remain unchanged as ‘less vulnerable’ or ‘water compatible’

You should use the [advice for minor extensions \(https://www.gov.uk/guidance/flood-risk-assessment-standing-advice#advice-for-minor-extensions\)](https://www.gov.uk/guidance/flood-risk-assessment-standing-advice#advice-for-minor-extensions) to complete an assessment for a minor extension in Flood Zone 2 or 3. A minor extension is a householder or non-domestic extension with a floor space of no more than 250 square metres.

Also follow local flood risk standing advice for development (including change of use) if your site is in an [area with critical drainage problems \(https://data.gov.uk/dataset/d10fb8e5-f3af-48c1-a489-8c975b0165de/areas-with-critical-drainage-problems\)](https://data.gov.uk/dataset/d10fb8e5-f3af-48c1-a489-8c975b0165de/areas-with-critical-drainage-problems). These are currently only designated in [Devon \(https://www.devon.gov.uk/floodriskmanagement/planning-and-development/\)](https://www.devon.gov.uk/floodriskmanagement/planning-and-development/) and [Cornwall \(https://www.cornwall.gov.uk/environment/countryside/flood-risk/suds-for-cornwall-guidance/#CriticalDrainageAreas\)](https://www.cornwall.gov.uk/environment/countryside/flood-risk/suds-for-cornwall-guidance/#CriticalDrainageAreas). Contact the LPA for a copy of the local standing advice.

If your development is not covered by the standing advice in this guide:

- read [flood risk assessment for planning applications \(https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications\)](https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications) and the [flood risk assessment check-list \(https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist\)](https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist)
- consider asking the Environment Agency for pre-application advice on flood risk

LPAs should also consult the Environment Agency as set out in the [flood risk assessments: standing advice for local planning authorities \(https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities\)](https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities) guidance.

## Advice for minor extensions

For all relevant minor extensions (see when to follow standing advice), you should follow the standing advice for:

- what to include in your FRA
- floor levels
- extra flood resistance and resilience measures
- other permissions or consents

### What to include in your FRA

You can increase the chances of including the right information in your FRA by using the Environment Agency’s [FRA template and guidance \(https://www.planningportal.co.uk/permission/commercial-developments/understanding-and-assessing-flood-risk/your-flood-risk-assessment\)](https://www.planningportal.co.uk/permission/commercial-developments/understanding-and-assessing-flood-risk/your-flood-risk-assessment).

Your FRA should be:

- appropriate to the scale, nature and location of the development
- proportionate to the degree of flood risk

Your FRA should appraise the suitability of the flood risk datasets it has used. This should take account of:

- when the dataset was produced
- why the dataset was produced
- the limitations of the dataset

Your FRA should contain the information set out in the [site-specific flood risk assessment check-list \(https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist\)](https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist).

For all development covered by this standing advice, your FRA should include:

- your site address
- a description of your development
- the estimated flood level for your development, taking into account the impacts of climate change over its lifetime
- details of the finished floor levels
- details of your flood resistance and resilience plans
- any supporting plans and drawings
- any other information the relevant standing advice tells you to include

The estimated flood level is the depth of flooding anticipated on your development site.

For a river flood, this is a 1 in 100 annual probability event plus an [allowance for climate change \(https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances\)](https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances). For a tidal flood, this is a 1 in 200 annual probability event plus an [allowance for climate change \(https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances\)](https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances).

You may be able to request the estimated flood level and information about residual risks through the Environment Agency's [flood map for planning \(https://flood-map-for-planning.service.gov.uk/\)](https://flood-map-for-planning.service.gov.uk/). If not, you will need a flood risk specialist to calculate this for you.

You should state all levels in your assessment in relation to Ordnance Datum (the height above average sea level). You may be able to get this information from the [Ordnance Survey \(http://www.ordnancesurvey.co.uk/\)](http://www.ordnancesurvey.co.uk/). If not, you will need to get a land survey carried out by a qualified surveyor.

Check with the LPA to see if your minor extension is in an area with increased flood risk because of multiple minor extensions. If it is, you need to include an assessment of the off-site flood risk.

Check [table 2 of the planning practice guidance \(https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2\)](https://www.gov.uk/guidance/flood-risk-and-coastal-change#table2) if your proposed minor extension is in Flood Zone 3b (functional floodplain). It states that development should not be permitted in Flood Zone 3b if its [vulnerability classification \(https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification\)](https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification) is:

- 'highly vulnerable'
- 'more vulnerable'
- 'less vulnerable'

## Floor levels

We recommend floor levels are set at least 600 millimetres (mm) above the estimated flood level. You will also need to use flood resistant materials up to at least 600mm above the estimated flood level.

You may be able to reduce this to 300mm if there is a high level of certainty about your estimated flood level. If there is a particularly high level of uncertainty it may need to be increased.

Flood water can put pressure on buildings, causing structural issues. If your design aims to keep out a depth of more than 600mm of water, you should get advice from a structural engineer.

If you cannot raise the floor levels in this way, you will also need to include extra flood resistance and resilience measures. These measures should protect the property to at least 600mm above the estimated flood level.

Your plans also need to show how you are going to make sure the development is not flooded by surface water or groundwater.

This could be by:

- diverting water away from buildings but safely managing it within the site
- raising floor levels above the estimated flood depths of surface and groundwater flooding

## Extra flood resistance and resilience measures

Follow the guidance in this section where you cannot raise the finished floor levels to the required height. Your building design should:

- prioritise excluding flood water where possible
- speed recovery in case water gets in

Make sure your flood resilience plans follow the guidance in the [Construction Industry Research and Information Association \(CIRIA\) Code of Practice for Property Flood Resilience](https://www.ciria.org/ItemDetail?iProductCode=C790F&Category=FREEPUBS) (<https://www.ciria.org/ItemDetail?iProductCode=C790F&Category=FREEPUBS>).

Standards are available for:

- the installation and retrofit of resistance measures - [British Standard 851188-1:2019+A1:2021](https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard) (<https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard>)
- speeding the recovery of buildings after a flood - [British Standard 85500:2015](https://shop.bsigroup.com/products/flood-resistant-and-resilient-construction-guide-to-improving-the-flood-performance-of-buildings/standard) (<https://shop.bsigroup.com/products/flood-resistant-and-resilient-construction-guide-to-improving-the-flood-performance-of-buildings/standard>)
- dealing with and preventing water from the surrounding ground entering below ground structures such as basements - [British Standard 8102:2022](https://knowledge.bsigroup.com/products/protection-of-below-ground-structures-against-water-ingress-code-of-practice?version=standard) (<https://knowledge.bsigroup.com/products/protection-of-below-ground-structures-against-water-ingress-code-of-practice?version=standard>)

## Other permissions or consents

You may need a separate permit or consent if the development or any associated works such as site preparation or construction:

- is [within 20 metres of a main river](https://environment.data.gov.uk/dataset/246c6321-9f56-49ce-8022-d36c29078f49%20after%2027%20August%202025) (<https://environment.data.gov.uk/dataset/246c6321-9f56-49ce-8022-d36c29078f49%20after%2027%20August%202025>) (including culverted main rivers), a flood defence or flow control structure
- directly affect a watercourse that is not a main river
- involve activity in the floodplain of a main river which could divert or obstruct floodwaters, damage any river control works or affect drainage, and potential impacts are not controlled by a planning permission
- are covered by regional flood defence and land drainage byelaws, where these are applicable

[Check if you need permission to do work on a river, flood defence or sea defence](https://www.gov.uk/permission-work-on-river-flood-sea-defence) (<https://www.gov.uk/permission-work-on-river-flood-sea-defence>). Do this as soon as possible to make sure you can get the necessary permissions.

You can check if your development activity and location are covered by regional flood defence and land drainage byelaws by referring to this [statutory guidance](https://www.gov.uk/government/publications/regional-flood-defence-and-land-drainage-byelaws/regional-flood-defence-and-land-drainage-byelaws-activities-and-locations-covered-by-the-byelaws) (<https://www.gov.uk/government/publications/regional-flood-defence-and-land-drainage-byelaws/regional-flood-defence-and-land-drainage-byelaws-activities-and-locations-covered-by-the-byelaws>).

If there is a watercourse (including culverted watercourses) on or next to your site, read [owning a watercourse](https://www.gov.uk/guidance/owning-a-watercourse) (<https://www.gov.uk/guidance/owning-a-watercourse>) and [your watercourse: rights and roles](https://ehq-production-europe.s3.eu-west-1.amazonaws.com/60be7028d088638be2b813145cd8aec822f22f8d/original/1722000825/69223679a64b750a3821ce1bf70a3623>Your%20watercourse%20rights%20and%20roles.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIJHZMYNPA%2F20250410%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-Date=20250410T103911Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=6483abc593610ad98a522a8a12d7dbb6b74941e4bf12ae30529fdc8244b50a35) ([https://ehq-production-europe.s3.eu-west-1.amazonaws.com/60be7028d088638be2b813145cd8aec822f22f8d/original/1722000825/69223679a64b750a3821ce1bf70a3623>Your watercourse rights and roles.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIJHZMYNPA%2F20250410%2Feu-west-1%2Fs3%2Faws4\\_request&X-Amz-Date=20250410T103911Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=6483abc593610ad98a522a8a12d7dbb6b74941e4bf12ae30529fdc8244b50a35](https://ehq-production-europe.s3.eu-west-1.amazonaws.com/60be7028d088638be2b813145cd8aec822f22f8d/original/1722000825/69223679a64b750a3821ce1bf70a3623>Your%20watercourse%20rights%20and%20roles.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIJHZMYNPA%2F20250410%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-Date=20250410T103911Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=6483abc593610ad98a522a8a12d7dbb6b74941e4bf12ae30529fdc8244b50a35)). They will help you understand your responsibilities and the rules you need to follow. A culvert is an underground structure that water can flow through.

Flood risk permits or consents are often needed as well as planning permission. Getting planning permission does not guarantee you will also get a flood risk permit or consent.

## Standing advice for vulnerable developments

For all relevant vulnerable development (see when to follow standing advice), you should follow the standing advice for:

- what to include in your FRA
- sequential and exception tests
- floor levels
- extra flood resistance and resilience measures



- access and escape
- surface water management
- other permissions or consents

## What to include in your FRA

Your FRA should be:

- appropriate to the scale, nature and location of the development
- proportionate to the degree of flood risk

Your FRA should appraise the suitability of the flood risk datasets it has used. This should take account of:

- when the dataset was produced
- why the dataset was produced
- the limitations of the dataset

Your FRA should contain the information set out in the [site-specific flood risk assessment check-list \(https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist\)](https://www.gov.uk/guidance/flood-risk-and-coastal-change#site-specific-flood-risk-assessment-checklist). You can increase the chances of including the right information in your FRA by using the Environment Agency's [FRA template and guidance \(https://www.planningportal.co.uk/permission/commercial-developments/understanding-and-assessing-flood-risk/your-flood-risk-assessment\)](https://www.planningportal.co.uk/permission/commercial-developments/understanding-and-assessing-flood-risk/your-flood-risk-assessment).

For all development covered by this standing advice, your FRA should include:

- your site address
- a description of your development
- an assessment of the flood risk from all sources of flooding for your development, plus an allowance for climate change
- the estimated flood level for your development, taking into account the impacts of climate change over its lifetime
- an assessment of the residual risks resulting from the breach or overtopping of any flood defences
- details of the finished floor levels
- details of your flood resistance and resilience plans
- any supporting plans and drawings
- any other information the relevant standing advice tells you to include

The estimated flood level is the depth of flooding anticipated on your development site in a:

- river flood with a 1 in 100 annual probability plus an [allowance for climate change \(https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances\)](https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances)
- tidal flood with a 1 in 200 annual probability plus an [allowance for climate change \(https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances\)](https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances)

You may be able to request the estimated flood level and residual risk information from the Environment Agency using the [flood map for planning \(https://flood-map-for-planning.service.gov.uk/\)](https://flood-map-for-planning.service.gov.uk/). If not, you will need a flood risk specialist to calculate this for you.

You should follow guidance in [Using modelling for flood risk assessments \(https://www.gov.uk/guidance/using-modelling-for-flood-risk-assessments\)](https://www.gov.uk/guidance/using-modelling-for-flood-risk-assessments) to check:

- when you may need to use modelling
- what standards to follow
- how to get modelling advice
- what information you need to provide

## Sequential and exception tests

Before you start a FRA, check if your development needs to satisfy the [sequential test \(https://www.gov.uk/guidance/flood-risk-and-coastal-change#para27\)](https://www.gov.uk/guidance/flood-risk-and-coastal-change#para27). The sequential test steers development to areas with the lowest flood risk. It compares your proposed site with other available sites to show which one has the lowest flood risk. The LPA may refuse planning permission if other, lower risk sites are identified.

## When the sequential test is needed

A [sequential test](https://www.gov.uk/guidance/flood-risk-and-coastal-change#sequential-approach) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#sequential-approach>) is required for major and non-major development (refer to [check the development class](https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities#check-the-development-class) (<https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities#check-the-development-class>) if any proposed building, access and escape route, land-raising or other vulnerable element will be:

- in Flood Zone 2 or 3 – see the [flood map for planning](https://flood-map-for-planning.service.gov.uk/) (<https://flood-map-for-planning.service.gov.uk/>)
- in Flood Zone 3b and your development is not incompatible
- within ‘Flood Zones plus climate change’, showing it is at increased risk of flooding from rivers or sea in future – see the [flood map for planning](https://flood-map-for-planning.service.gov.uk/) (<https://flood-map-for-planning.service.gov.uk/>)
- with Flood Zone 1 and the [flood map for planning](https://flood-map-for-planning.service.gov.uk/) (<https://flood-map-for-planning.service.gov.uk/>) shows it is at risk of flooding from surface water
- in Flood Zone 1 and the LPA’s SFRA shows it will be at increased risk of flooding during its lifetime
- subject to sources of flooding other than rivers or sea

A development is not exempt from the sequential test just because a FRA shows it can be made safe throughout its lifetime without increasing risk elsewhere. See [what is the aim of the sequential approach?](https://www.gov.uk/guidance/flood-risk-and-coastal-change#para23) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#para23>).

## When development is exempt from the sequential test

Development is exempt from the sequential test if it is a:

- householder development like residential extensions, conservatories or loft conversions
- small non-domestic extensions with a footprint of less than 250 square metres
- change of use (except changes of use to a caravan, camping or chalet site, or to a mobile home or park home site)

Development is also exempt from the sequential test if it is a development on a site allocated in the development plan through the sequential test and:

- the proposal is consistent with site’s allocated use
- there have been no significant changes to the known level of flood risk to the site, now or in the future, which would have affected the outcome of the test

You may not need a sequential test if development can be laid out so that only elements such as public open space, biodiversity and amenity areas are located in areas at risk of any source of current or future flooding.

## How to apply the sequential test

You should speak to the LPA early to discuss the sequential test and to determine an appropriate area of search for the test. The LPA should consider whether the test is passed, with reference to the information it holds on land availability.

Also include information with your application to identify any other ‘reasonably available’ sites not already identified by the LPA within the area of search. This should include sites such as those currently available on the open market. The LPA may also require you to check on the current status of alternative sites to determine if they can be considered ‘reasonably available’. Refer to guidance on [Applying the sequential test to individual planning applications](https://www.gov.uk/guidance/flood-risk-and-coastal-change#para27). (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#para27>)  
Speak to the LPA to find out what further information may be needed on the sequential test.

If the sequential test is satisfied you need to check if the [exception test](https://www.gov.uk/guidance/flood-risk-and-coastal-change#the-exception-test) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#the-exception-test>) also needs doing.

## When the exception test is needed

The exception test is needed for development with a [vulnerability classification](https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification) (<https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification>) of:

- ‘highly vulnerable’ in Flood Zone 2
- ‘more vulnerable’ in Flood Zone 3a
- ‘essential infrastructure’ in Flood Zone 3a or 3b

If it does, you need to satisfy both elements of the exception test before the LPA can permit the development.

## Floor levels

You need to provide the:

- average ground level of your site
- ground level of the access road(s) next to your building
- finished floor level of the lowest room in your building

Finished floor levels should be a minimum of whichever is higher of 600mm above the:

- average ground level of the site
- adjacent road level to the building
- estimated river or sea flood level

Where there is a high level of certainty about your estimated flood level, it may be appropriate to reduce this to 300mm. If there is a particularly high level of uncertainty it may need to be increased.

You should also use construction materials that have low permeability up to at least the same height as finished floor levels.

Your plans also need to show how you are going to make sure the development is not flooded by surface water or groundwater. This could be by:

- diverting water away from buildings but safely managing it within the site
- raising floor levels above the estimated flood depths of surface and groundwater flooding

Standards for the installation and retrofit of resistance measures are available in [British Standard 851188-1:2019+A1:2021](https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard) (<https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard>).

State in your assessment all levels in relation to Ordnance Datum (also known as height above average sea level). You may be able to get this information from the [Ordnance Survey](http://www.ordnancesurvey.co.uk/) (<http://www.ordnancesurvey.co.uk/>). If not, you will need to get a land survey carried out by a qualified surveyor.

If you cannot raise floor levels to meet the minimum requirement, you will need to:

- raise them as much as possible
- consider moving vulnerable uses to upper floors
- include extra flood resistance and resilience measures

Internal flooding of new vulnerable development like residential dwellings is unlikely to be considered appropriately flood resistant and resilient.

When considering the height of floor levels, you should also consider any additional requirements set out in the SFRA. Flood water can put pressure on buildings causing structural issues. If your design aims to keep out a depth of more than 600mm of water, you should get advice from a structural engineer. They will need to check the design is safe.

## Extra flood resistance and resilience measures

Follow the guidance in this section where you cannot raise the finished floor levels to the required height. Your building design should:

- prioritise excluding flood water where possible
- speed recovery in case water gets in

Make sure your flood resilience plans for the development follow the guidance in the [CIRIA Property Flood Resilience Code of Practice](https://www.ciria.org/ItemDetail?iProductCode=C790F&Category=FREEPUBS) (<https://www.ciria.org/ItemDetail?iProductCode=C790F&Category=FREEPUBS>). Note that the code of practice uses the term 'recovery measures'. In this guide we use 'resilience measures'.

Only use resistance measures that will not cause structural stability issues during flooding. It may not be possible to safely exclude the full estimated flood level. If this is the case, you will need to exclude it to the structural limit then allow additional water to flow through the property. The design should be appropriately flood resistant and resilient by:



- using flood resistant materials that have low permeability to at least 600mm above the estimated flood level
- making sure any doors, windows or other openings are flood resistant to at least 600mm above the estimated flood level
- using flood resilient materials (for example lime plaster) to at least 600mm above the estimated flood level
- raising all sensitive electrical equipment, wiring and sockets to at least 600mm above the estimated flood level
- making it easy for water to drain away after flooding such as installing a sump and a pump
- making sure there is access to all spaces to enable drying and cleaning
- making sure that soil pipes are protected from back-flow such as by using non-return valves

Standards are available for:

- the installation and retrofit of resistance measures - [British Standard 851188-1:2019+A1:2021](https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard) (<https://shop.bsigroup.com/products/flood-resistance-products-building-products-specification-1/standard>)
- speeding the recovery of buildings after a flood - [British Standard 85500:2015](https://shop.bsigroup.com/products/flood-resistant-and-resilient-construction-guide-to-improving-the-flood-performance-of-buildings/standard) (<https://shop.bsigroup.com/products/flood-resistant-and-resilient-construction-guide-to-improving-the-flood-performance-of-buildings/standard>)
- dealing with and preventing water from the surrounding ground entering below ground structures such as basements - [British Standard 8102:2022](https://knowledge.bsigroup.com/products/protection-of-below-ground-structures-against-water-ingress-code-of-practice?version=standard) (<https://knowledge.bsigroup.com/products/protection-of-below-ground-structures-against-water-ingress-code-of-practice?version=standard>)

You will also need to comply with relevant Building Regulations in [Part P](https://www.gov.uk/government/publications/electrical-safety-approved-document-p) (<https://www.gov.uk/government/publications/electrical-safety-approved-document-p>). They set minimum and maximum heights for certain electrical infrastructure.

Temporary or demountable flood barriers are not appropriate for new buildings. Only consider them for existing buildings when:

- there is clear evidence that it would be inappropriate to raise floor levels and include passive resistance measures
- an appropriate flood warning or other appropriate trigger is available

If proposals involve the development of buildings constructed before 1919, refer to [Flooding and Historic Buildings](https://historicengland.org.uk/advice/your-home/flooding-and-older-homes/making-your-home-flood-resistant-and-resilient/) (<https://historicengland.org.uk/advice/your-home/flooding-and-older-homes/making-your-home-flood-resistant-and-resilient/>) guidance produced by Historic England.

## Access and escape

You need to provide details of your emergency access and escape plans if any part of your development is below the estimated flood level. This includes access and escape routes. Follow the [Flood Risk Emergency Plans for New Development guidance](https://www.adeptnet.org.uk/floodriskemergencyplan) (<https://www.adeptnet.org.uk/floodriskemergencyplan>).

Make sure your plans show:

- a safe route of access and escape which is set above the estimated flood level and connects the site to an area away from current or future flood risk
- that any single storey buildings or ground floors without access to upper floors can access a safe refuge above the estimated flood level
- that any basement rooms have clear internal access - for example a staircase to an upper floor above the estimated flood level
- how the development could be evacuated before an extreme flood – this is an event with a 0.1% annual probability of flooding plus an allowance for climate change

You will also need to comply with relevant Building Regulations in [Part B](https://www.gov.uk/government/publications/fire-safety-approved-document-b) (<https://www.gov.uk/government/publications/fire-safety-approved-document-b>). They require you to provide suitable access for the fire service.

## Surface water management

You need to include a sustainable drainage strategy if your application is for development:

- which could affect drainage on or around the site
- in an [area at risk of flooding](https://www.gov.uk/guidance/flood-risk-and-coastal-change#planning-and-flood-risk) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#planning-and-flood-risk>)



If sustainable drainage systems (SuDS) are required but are not included in the development, provide the LPA with evidence of why SuDS would be inappropriate.

Even where the National Planning Policy Framework does not require SuDS, we recommend their consideration on all development types, including changes of use, wherever appropriate.

Your Sustainable Drainage System (SuDS) should be designed in accordance with the [National standards for sustainable drainage systems](https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds) (<https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds>).

More information on multifunctional benefits can be found in [what are sustainable drainage systems and why are they important?](https://www.gov.uk/guidance/flood-risk-and-coastal-change%22%20/%20%22para55) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change%22%20/%20%22para55>)

Your sustainable drainage strategy will need to include all the information set out in [what information on sustainable drainage needs to be submitted with a planning application?](https://www.gov.uk/guidance/flood-risk-and-coastal-change#para59) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#para59>) You can put it in a separate document or in the FRA.

To ensure an acceptable standard of operation for the lifetime of the development, SuDS for major development will need to have:

- appropriate minimum operational standards
- maintenance arrangements

Your plans for the management of surface water need to meet any requirements set out in your local authority's:

- local plan or supplementary planning documents
- local flood risk management strategy
- surface water management plan where available
- SuDS guidance where available
- SFRA

They also need to meet the requirements of the [planning practice guidance](https://www.gov.uk/guidance/flood-risk-and-coastal-change#sustainable-drainage-systems) (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#sustainable-drainage-systems>) and the approved building regulations [Part H: drainage and waste disposal](https://www.gov.uk/government/publications/drainage-and-waste-disposal-approved-document-h) (<https://www.gov.uk/government/publications/drainage-and-waste-disposal-approved-document-h>). Read section H3 rainwater drainage.

Refer to the [National standards for sustainable drainage systems](https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds) (<https://www.gov.uk/government/publications/national-standards-for-sustainable-drainage-systems/national-standards-for-sustainable-drainage-systems-suds>) non-statutory technical standards for guidance on the design, maintenance and operation of SuDS. Further guidance on how to design SuDS to maximise their benefits is in the [CIRIA Suds Manual](https://www.ciria.org/ItemDetail?iProductCode=C753&Category=BOOK&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91) (<https://www.ciria.org/ItemDetail?iProductCode=C753&Category=BOOK&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91>).

You can follow [Water UK's Design and Construction Guidance](https://www.water.org.uk/sewerage-sector-guidance-approved-documents/) (<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>) to design and construct SuDS. This should make sure they qualify for adoption by the relevant water and sewerage company.

You need [planning permission](https://www.gov.uk/planning-permission-england-wales) (<https://www.gov.uk/planning-permission-england-wales>) to surface more than 5 square metres of a front garden using a non-porous material.

## Other permissions or consents

You may need a separate permit or consent if the development or any associated works such as site preparation or construction:

- is [within 20 metres of a main river](https://environment.data.gov.uk/dataset/246c6321-9f56-49ce-8022-d36c29078f49%20after%2027%20August%202025) (<https://environment.data.gov.uk/dataset/246c6321-9f56-49ce-8022-d36c29078f49%20after%2027%20August%202025>) (including culverted main rivers), a flood defence or flow control structure
- directly affect a watercourse that is not a main river
- involve activity in the floodplain of a main river which could divert or obstruct floodwaters, damage any river control works or affect drainage, and potential impacts are not controlled by a planning permission
- are covered by regional flood defence and land drainage byelaws, where these are applicable

[Check if you need permission to do work on a river, flood defence or sea defence](https://www.gov.uk/permission-work-on-river-flood-sea-defence) (<https://www.gov.uk/permission-work-on-river-flood-sea-defence>). Do this as soon as possible to make sure you can get the necessary permissions.

You can check if your development activity and location are covered by regional flood defence and land drainage byelaws by referring to this [statutory guidance \(https://www.gov.uk/government/publications/regional-flood-defence-and-land-drainage-byelaws/regional-flood-defence-and-land-drainage-byelaws-activities-and-locations-covered-by-the-byelaws\)](https://www.gov.uk/government/publications/regional-flood-defence-and-land-drainage-byelaws/regional-flood-defence-and-land-drainage-byelaws-activities-and-locations-covered-by-the-byelaws).

If there is a watercourse (including culverted watercourses) on or next to your site, read [owning a watercourse \(https://www.gov.uk/guidance/owning-a-watercourse\)](https://www.gov.uk/guidance/owning-a-watercourse) and [your watercourse: rights and roles \(https://ehq-production-europe.s3.eu-west-1.amazonaws.com/60be7028d088638be2b813145cd8aec822f22f8d/original/1722000825/69223679a64b750a3821ce1bf70a3623\\_Your\\_watercourse\\_rights\\_and\\_roles.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIJHZMYNPA%2F20250825%2Feu-west-1%2Fs3%2Faws4\\_request&X-Amz-Date=20250825T161539Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=f149024e60b53a2e7a5b17045ef297394287566c77832fdcf86dc7f5aadcd269d\)](https://ehq-production-europe.s3.eu-west-1.amazonaws.com/60be7028d088638be2b813145cd8aec822f22f8d/original/1722000825/69223679a64b750a3821ce1bf70a3623_Your_watercourse_rights_and_roles.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA4KKNQAKIJHZMYNPA%2F20250825%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-Date=20250825T161539Z&X-Amz-Expires=300&X-Amz-SignedHeaders=host&X-Amz-Signature=f149024e60b53a2e7a5b17045ef297394287566c77832fdcf86dc7f5aadcd269d). They will help you understand your responsibilities and the rules you need to follow. A culvert is an underground structure that water can flow through.

Flood risk permits or consents are often needed as well as planning permission. Getting planning permission does not guarantee you will also get a flood risk permit or consent.

## Submit your flood risk assessment

You should submit your completed FRA with your planning application to your LPA.

The LPA will review your FRA and tell you if it is satisfactory. Planning applications that do not have a satisfactory FRA may be refused.

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Published 1 April 2012  
Last updated 27 August 2025 [+ show all updates](#)

