Water Engineering

Planning Policy Guidance Note 25
Development and Flood Risk

Sequential Test

PPG25 requires developers to carry out a Sequential Test to categorise a development site into one of three 'Flood zones', depending on the site's individual risk of flooding. Local planners are requested to give priority to allocating and permitting sites within the lower flood risk zones.

Policy

Susceptibility of land to flooding is a material planning consideration.
Development should not increase the risk of flooding elsewhere.

Flood Zone 1

Risk Rating - Little or no risk

Annual probability of flooding:
River tidal & coastal < 0.1% (i.e. 1 in 1000 year)

Appropriate Planning Response

No constraints due to river, tidal or coastal flooding

Flood Zone 2

Risk Rating - Low to medium risk

Annual probability of flooding :
River 0.1 - 1.0%, Tidal & coastal 0.1 – 0.5%

Appropriate Planning Response

Suitable for most development. Flood Risk Assessment appropriate to the scale & nature of the development is required. Warning & evacuation procedures should be considered.

Flood Zone 3

Risk Rating - High Risk

Annual probability of flooding, with flood defences where they exist:
River 1.0% or more, Tidal & Coastal 0.5% or more.

Appropriate Planning Response – depends on location:

Flood Zone 3 A - Developed areas

Suitable for residential, commercial & industrial development, provided that the appropriate minimum standard of flood defence can be maintained for the lifetime of the development. Suitable evacuation procedures are required.

Flood Zone 3B – Undeveloped & sparsely developed areas

Generally not suitable for residential, commercial & industrial development.
general purpose housing should not normally be considered - limited to job related accommodation (i.e. caretakers & operational staff)

Flood Zone 3C – Functional floodplains

Development should be wholly exceptional & limited to essential transport & utilities infrastructure.

Note: This is an overview of PPG25, and represents our interpretation of the guidelines. Interpretations by individual planners and Environment Agency offices may differ. If any of this affects you or your development, you should contact us or your own professional advisers.

Developments within 'high risk' areas

Where extensive areas of land fall within the higher risk zones, development may be required to avoid social & economic stagnation or blight. Careful consideration throughout the design and construction of such developments can lead to a 'managed' flood risk, acceptable to all parties involved.
Urbanisation increases both the rate and volume of runoff, increasing risk of flooding elsewhere. This can be countered by introducing Sustainable Drainage Systems, which try to mimic natural drainage using infiltration, evaporation and storage with the objective of limiting runoff from the developed site to the pre-development values, or less.

Development in the flood plain, or defence of land which normally floods, often reduces storage of floodwaters which increases the risk of flooding elsewhere and can restrict flow along the floodplain.

The developer has to assess:

Will the development be susceptible to flooding?
Will the development increase flood risk elsewhere?

Climate Change

PPG25 requires consideration of Climate Change
This is expected to cause:

- Rising sea level
- Greater intensity of rainfall
- Greater frequency of rainfall
- Changing distribution of rainfall

More intense storms are associates with lower pressure, which can cause greater storm surge in coastal regions. More intense rainfall means today's 100 yr storm event may one day become be a 10 yr event

Flood predictions are based on historical records, which may prove to be a poor guide to the future.

The Precautionary Principal is applied to defining flood risk, which is inherently uncertain.

Flood Risk Assessment

Is the area liable to flooding?
The probability of flooding occurring, now and in the future?
Any flood defences and their effectiveness?
The likely flood depths and rates of flow?
The effects of climate change?
Effect of runoff from the site?
The effect of the site on floodwater storage or conveyance?

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