Table 4-1. Planning Application and Development Requirements for Major Developments (Flood Zones 1, 2, 3a and 3b)

Requirement Area	Flood Zone 3b	Flood Zone 3a	Flood Zone 2	Flood Zone 1
Planning Permission and Permitted Developments	Planning permission is required if the work being carried out meets the Section 55 of the Town and Country Planning Act 1990 definition of a 'development'. Section 57 of the Town and Country Planning Act 1990 states that all work falling under this statutory definition of 'development' requires planning permission unless it meets permitted development criteria.			
Documentation Requirements and Considerations	The information supplied in a site-specific FRA and / or drainage strategy for any development should be proportionate to the identified flood risks and appropriate to the scale, nature and location of the development. Major developments are large in scale so all flood risk assessment documentation should reflect their size and impact.			
Sequential and Exception Tests ***(Refer to Section 4.2 for guidance on application of these at the strategic and site-specific scales)***	The undeveloped Functional Floodplain should be protected. Redevelopment may be supported if there is a net flood risk reduction. Proposed redevelopment should not be permitted if the change results in an intensification of use or places the development in a higher PPG vulnerability category, unless allocated through a development plan. No form of new development should be permitted unless it is water-compatible development or essential utility infrastructure, as defined by the PPG. Development may also be permitted if it is within the curtilage of a developed site and would not increase (but ideally reduce) flood risk as part of a wider development. This is applicable for sites where there is no overall increase in the total area of footprint of structures within what would otherwise be functional floodplain. Paragraph 15 of the PPG states: *"If an area is intended to flood, then this should be safeguarded from development and identified as functional floodplain, even though it might not flood very often." Development can only be permitted following application of the Sequential Test, and a successful application of the Exception Test."*	Developments within Flood Zone 3a can only be considered following applications of the Sequential and Exception Tests. Developments classified as 'Highly Vulnerable' should not be permitted under any circumstances.	Developments within Flood Zone 2 can only be considered following applications of the Sequential and Exception Tests.	The Sequential Test only needs to be applied for development proposals in Flood Zone 1 if the SFRA and accompanying Web Map indicates there may be existing flood issues from other sources (refer *Table 4-4*) or flood issues in the future. This information may also come from other sources.
Site-specific FRA	The Flood Risk Vulnerability and Flood Zone Compatibility table in the PPG highlights that only 'Essential Infrastructure' and 'Water Compatible' developments may be granted planning permission. Site-specific FRAs in Flood Zone 3b must also demonstrate that: - Infrastructure will remain safe and operational for users during flood periods. - The development will not impede flowing water. - There will be no net loss of floodplain storage (see the 'Flood Compensation Storage' section in this table). - Flood mitigation measures will reduce the overall flood risk of the site. Flood risk from all sources should be assessed, including the potential impacts of climate change over the developments lifetime. The EA's 2016 climate change allowances must be used when assessing peak river flows, sea level rises and peak rainfall intensities.	The Flood Risk Vulnerability and Flood Zone Compatibility table in the PPG highlights that 'Highly Vulnerable' land uses should not be permitted in this Flood Zone. Site-specific FRAs in Flood Zone 3a must also demonstrate that there will be no net loss of floodplain storage (see the 'Flood Compensation Storage' section in this table). Flood risk from all sources should be assessed, including the potential impacts of climate change over the developments lifetime. The EA's 2016 climate change allowances must be used when assessing peak river flows, sea level rises and peak rainfall intensities.	Assessment needs to demonstrate the reduction of flood risk at the site through various mitigation techniques. Flood risk from all sources should be assessed, including the potential impacts of climate change over the developments lifetime. The EA's 2016 climate change allowances must be used when assessing peak river flows, sea level rises and peak rainfall intensities.	Flood risk from all sources should be assessed, including the potential impacts of climate change over the development's lifetime. The EA's 2016 climate change allowances must be used when assessing peak river flows, sea level rises and peak rainfall intensities.
	Where a site-specific FRA is required, predicted flood depths should be analysed and appropriately mitigated. Mitigation may include (but not be limited to) flood resistance measures (where predicted flood depths are less than 0.3m) or flood resilience measures (where predicted flood depths are greater than 0.6m). Predicted flood depths between 0.3m and 0.6m should be analysed on a case-by-case basis to determine if resistance measures are sufficient. Design plans should show floor levels (relative to Ordnance Datum) and predicted flood depths.			
Drainage Strategy & SuDS	The drainage strategy requires information on the proposed SuDS and surface water runoff discharge destination in line with Policy 5.13 of the London Plan. It also requires supporting calculations on the greenfield and proposed development's peak discharge rates and water storage volumes for different rainfall events. These calculations need to ensure that proposed developments are designed to the Non-statutory technical standards for sustainable drainage systems. Where the SuDS Suitability Mapping indicates that infiltration based SuDs are potentially suitable or uncertain, the drainage strategy must investigate the use of infiltration techniques through site-specific infiltration testing or bore hole records. This level of evidence must be provided to justify use of any non-infiltration based surface water management techniques. A Drainage Strategy Submission Checklist and SuDS / Drainage Assessment Form where appropriate (as described in *Section 4.2.4*) should be provided with the application. SuDS need to be designed with the landscape features of the development site in mind, maximising additional benefits including, but not limited to, environmental, water quality and amenity enhancement. Permission to connect to the local sewer network and pipes should be sought from the relevant Water and Sewerage Company. Evidence demonstrating that an agreement in principle for any proposed new sewer connections has been reached must be provided as part of the drainage strategy. Failure to do so could impact the detailed design and overall drainage strategy for the site.			

Requirement Area	Flood Zone 3b	Flood Zone 3a	Flood Zone 2	Flood Zone 1
Basements	Basements should not be permitted in Flood Zone 3b.	Basement dwellings are categorised as "Highly vulnerable" infrastructure by the PPG and therefore should not be permitted in Flood Zone 3a. Other new basement developments are restricted to Less Vulnerable / Water Compatible uses only. All basement rooms must have internal access and egress to a higher floor above the design flood level which can be utilised as part of emergency evacuation procedures. As part of any assessment, evidence needs to be submitted to confirm the local water table level.	If both criteria of the Exception Test are satisfied, "Highly vulnerable" new basement dwellings may be permitted for development in Flood Zone 2. The same rule applies to basement dwelling redevelopment works such as extensions and conversions. All basement rooms must have internal access and egress to a higher floor above the design flood level which can be utilised as part of emergency evacuation procedures. As part of any assessment, evidence needs to be submitted to confirm the local water table level.	Where there is evidence of flood risk from surface water, groundwater and / or sewer flooding in the area, a site-specific FRA is required for new and existing basement dwelling proposals (refer *Table 4-4*). Flood mitigation measures for these sites are required to demonstrate that the development will not be impacted by flooding, or have any adverse impacts on flooding locally during a 1 in 100 year event. As part of any assessment, evidence needs to be submitted to confirm the local water table level.
Flood Compensation Storage	If permissible development decreases the volume of a fluvial floodplain or surface water flood area, flood storage compensation needs to be provided. The compensatory storage provided must equal or exceed the storage lost to ensure there will be no net loss of flood storage. Where developments are proposed within Flood Zone 3a (surface water), floodplain compensation must account for predicted flood depths for the 1 in 30yr and 1 in 100yr RoFSW mapping or depths predicted by site specific modelling.		N/A	N/A
Emergency Planning	Flood Warning and Emergency Plans need to feature measures to manage flood risk before, during, and after a flood, reducing the potential human impact of any flood event and making developments as resilient to flooding as possible. These plans need to be detailed and up-to-date, addressing the risks local to the site. The PPG highlights several important considerations, helping to define some key requirements including: - Details of all the flood risk sources present at the site development site. - Adequate flood warning procedures for people accessing the development. - Potential mitigation measures following an assessment of the risks, including appropriate flood resistance or resilience measures to address predicted flood depths. - Information regarding safe access and egress points across the site, ensuring that they remain so during flooding. These points need to be maintained over the development's lifetime. - Suitable evacuation plans that consider the impact of climate change. These evacuation plans need to feature adequate routes and refuge areas for people to be taken to, accounting for the potential length of time of the evacuation. Where the site is encircled (on a 'dry island' surrounded by flooding) but not necessarily at high risk itself, an emergency plan must still address this risk and provide appropriate management measures. If the planning application is permitted, the onus to train, test and implement the stated measures become the responsibility of the applicant and ultimately the building owner or management company.			
	PPG defined 'Essential Infrastructure' needs to remain operational and safe in times of flood. Emergency Plans need to reflect this as these structures may assist in flooding evacuations.	-	-	
Residual Risk	As part of the second criteria of the Exception Test, there is a requirement to show that proposed developments are safe and that any residual risks can be satisfactorily overcome. Residual risk should be mitigated through flood resilient / resistant designs and emergency planning to make sure the proper measures are in place to offer protection.			
Main River Buffer Zone	Developments sites within specified distances of main rivers may require a flood risk activity permit in addition to planning permissions. For non-tidal main rivers, flood risk activity permits may be required if development sites are within 8 metres of a river, flood defence structure or culvert. For tidal main rivers, flood risk activity permits may be required if development sites are within 16 metres of a river, flood defence structure or culvert. Further details on flood risk activity permits are available from the Environment Agency.			
Ordinary Watercourse Buffer Zone	Development sites within specified distances of ordinary watercourses may require an approved ordinary watercourse consent in addition to planning permissions. The consent, a variation of Section 23 of the Land Drainage Act 1991, is regulated and work enforced by LLFAs and distances tend to vary by Borough. Further details on ordinary watercourse consents are available from LLFAs.			