

## SUBMISSION VALIDITY CHECKLIST

Planning application reference .....

Site name .....

Check	Justification for check	Response from Applicant (example text shown below, remove and replace)	Comment from LLFA
Design philosophy			
<p>Have flow routes through the site been identified? This should include the management of flow routes from offsite. (FRA should identify potential flow routes from offsite)</p>	<p>Mitigate risk of onsite flooding to properties/infrastructure and downstream features <u>Adopted</u> London Plan: 5.13 Sustainable Drainage; Haringey: SP5 Water management and flooding <u>Emerging</u> Haringey: DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems</p>	<p>Flow routes have been analysed and are shown on DWGxxxx.</p>	
<p>Does the design adopt the use of Source Control SuDS storage techniques located within subcatchments across the site?</p>	<p>Improved flood resilience. Ensure adequate provision of attenuation. Reduce pressure on sewer capacity.  DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems</p>	<p>3 subcatchments are identified within the management train with storage in each. Source control techniques are identified as permeable pavement and swales. Flow controls have been used within subcatchments to fully utilise storage throughout the site.</p>	
<p>Is SuDS storage located outside Q100 floodplain? (FRA should identify flood extents)</p>	<p>If the floodplain is in use there will be no storage for runoff.</p>	<p>Yes</p>	

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	<p><u>Adopted</u> London Plan: 5.13 Sustainable Drainage; Haringey: SP5 Water management and flooding</p> <p><u>Emerging</u> Haringey: DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems</p>		
How is exceedance of design catered for?	<p>To prevent on site and downstream flooding. Provide safe exit routes from the site.</p> <p><u>Adopted</u> London Plan: 5.13 Sustainable Drainage; Haringey: SP5 Water management and flooding</p> <p><u>Emerging</u> Haringey: DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems DM21 Sustainable Design, Layout and Construction</p>	The flow route analysis demonstrates that if one SuDS component overtops, flows will simply cascade to the next feature.	
Has the potential for infiltration been investigated.	<p>Consideration to be given to infiltration rates, SPZs, presence of contamination and ground water table level.</p> <p><u>Adopted</u> London Plan: 5.13 Sustainable</p>	The Site investigation identified slow rates of infiltration ( $1 \times 10^{-7}$ m/s). The site control basin will be unlined to allow some losses to the underlying soils. A flow control is provided to drain the system down.	

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	Drainage; Haringey: SP5 Water management and flooding <u>Emerging</u> Haringey: DM24 Managing & Reducing Flood Risk; DM25 Sustainable Drainage Systems DM27 Protecting and Improving Groundwater Quality and Quantity	The SI does identify presence of contaminates, however these are at a low level and are not leachable.  The site does not overlie a SPZ.	
Has the potential for major spillage been considered?	Protecting and enhancing the water environment and catchment  <u>Adopted</u> London Plan: 5.13 Sustainable Drainage; Haringey: SP5 Water management and flooding <u>Emerging</u> Haringey: DM24 Managing & Reducing Flood Risk; DM25 Sustainable Drainage Systems Haringey: DM27 Protecting and Improving Groundwater Quality and Quantity	The proposed SuDS management train will ensure that any spill is kept on the surface. As flows move slowly through the system, there is time for reaction to ensure that spills can be captured. The management plan outlines the spill contingency measures.	
Does the depth of storage in open water features meet health and safety requirements?	Total depth of water should not exceed 1.2m deep. Permanent water should not exceed 0.6m deep. CDM	Open water features are proposed on site. There are no confined spaces proposed. A Hazard Identification and risk assessment is attached.	

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Calculations			
Time taken for 50% of attenuation storage to drain down less than 24 hours?	To ensure adequate capacity is available within the system to accommodate subsequent rainfall events	The half empty time is 18 hours.	
Have critical durations been determined for storage calculations?	Ensure adequate attenuation and Long Term Storage is provided.	A range of rainfall durations are assessed from 15minutes to 2 days. Worst case volume is adopted for design.	
Erosion check	Provide adequate treatment time. Prevent erosion damage to conveyance systems	Swales alignments are at 1 in 60 falls. Calculations for full flow demonstrate velocities less than 1m/s. Side slopes are shallow enough to sustain vegetation. Inlets are protected from erosion. Erosion is not anticipated.	
Is sufficient treatment provided?	Improve water quality and quantity  <u>Adopted</u> London Plan: 5.13 Sustainable Drainage;	Calculations are attached. Calculations completed in line with the guidance provided by the Updated SuDS manual.	

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	<p>Haringey: SP5 Water management and flooding  <u>Emerging</u>  Haringey: DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems  <u>Emerging</u>  Haringey: DM27 Protecting and improving groundwater quality and quantity</p>		
<p>Are structural calculations undertaken?  <i>Note; BBA certification does not exempt structural design requirements of geocellular storage structures.</i></p>		<p>The design includes areas of permeable pavement. The design statement outlines design parameters used. The design approach is in adherence with BS7533-13</p>	
Detailing			
<p>Does the storage volumes calculated match the provision made on drawings?</p>	<p>To achieve the requirements of the Technical Assessment process.</p>		
<p>Are levels suitable to ensure that storage is not compromised.</p>	<p>Some storage within permeable pavement and swales may be ineffective whenever placed on a slope.</p>	<p>Top water levels are identified and only effective storage volumes are factored into storage calculations.</p>	
<p>How has the design ensured that flow controls they are protected to minimise risk of blockage.</p>	<p>Flow controls and opening are prone to blockage, design should consider silt and floating debris.  Improved flood resilience.</p>	<p>The flow controls are placed within a chamber. The orifice is at one end of a perforated riser. Flows move at slow velocity through the system encouraging silts to drop out.</p>	

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	<p><u>Emerging</u>  Haringey: DM24 Managing &amp; Reducing Flood Risk; DM25 Sustainable Drainage Systems</p>	<p>Floating debris is restricted from entering the flow control chamber through the placement of a rock filled gabion basket over the inlet.</p>	
<p>Potential for clogging with siltation</p>	<p>To ensure long term performance.   DM25 Sustainable Drainage Systems</p>	<p>A drainage management plan is provided which demonstrated how surface runoff will be managed during construction.  Source control techniques ensure that site is not focused to specific locations. Permeable pavement is likely to required dedicated maintenance after 10-15 years (detailed in management plan).</p>	