Site Name: 25-81 Greenwich High Road

Site ID:	G5	**Site Address:**	Greenwich	**Area (ha):**	0.49
Current Use:	Bookers warehouse and former petrol station	**Proposed Use:**	Light industry, offices, small business units (B1)	**Vulnerability Classification:**	Less Vulnerable

Tidal Source:

Flood Zone 1 (<0.1% AEP): 0%	**Flood Zone 2 (0.1% AEP):** 100%	**Flood Zone 3 (1% AEP):** 73%	**Flood Zone 3b (5%AEP):** 0%	**Area Benefiting from Defences:** 38.64%

Flood Zones and Flood Defences

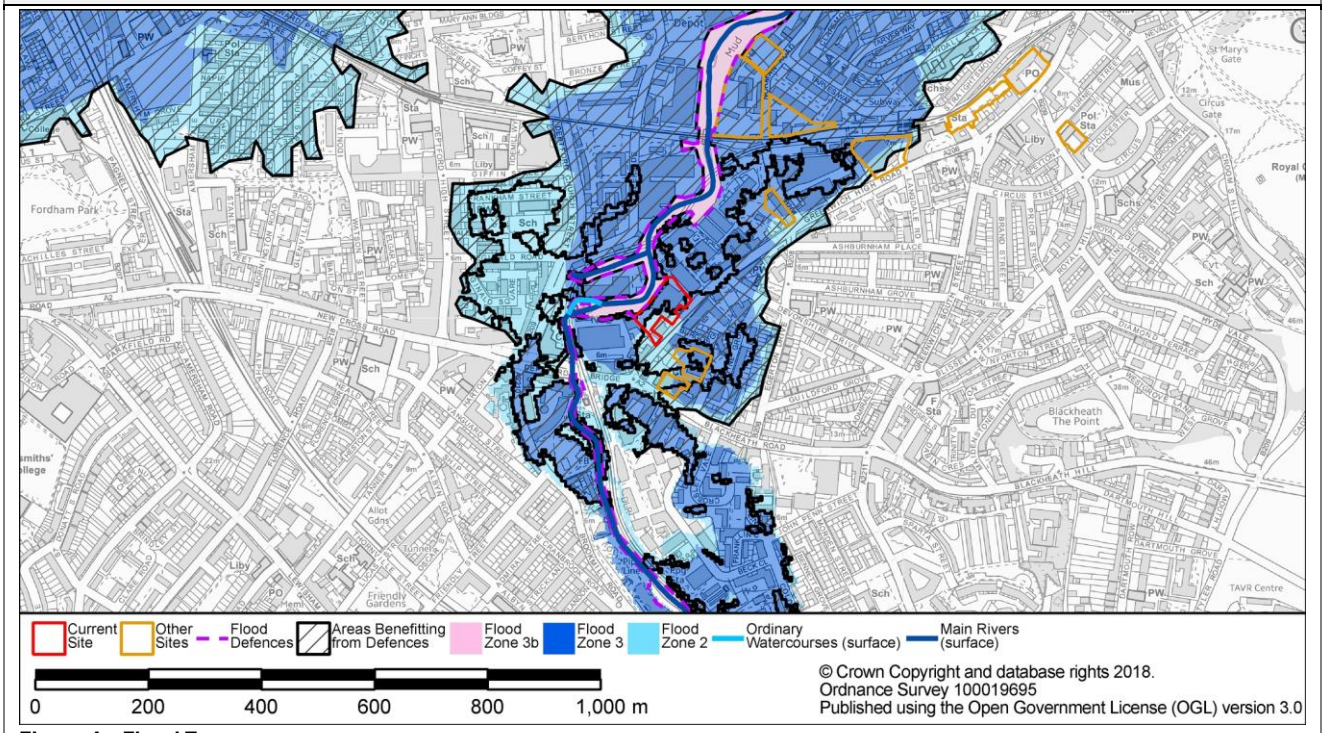
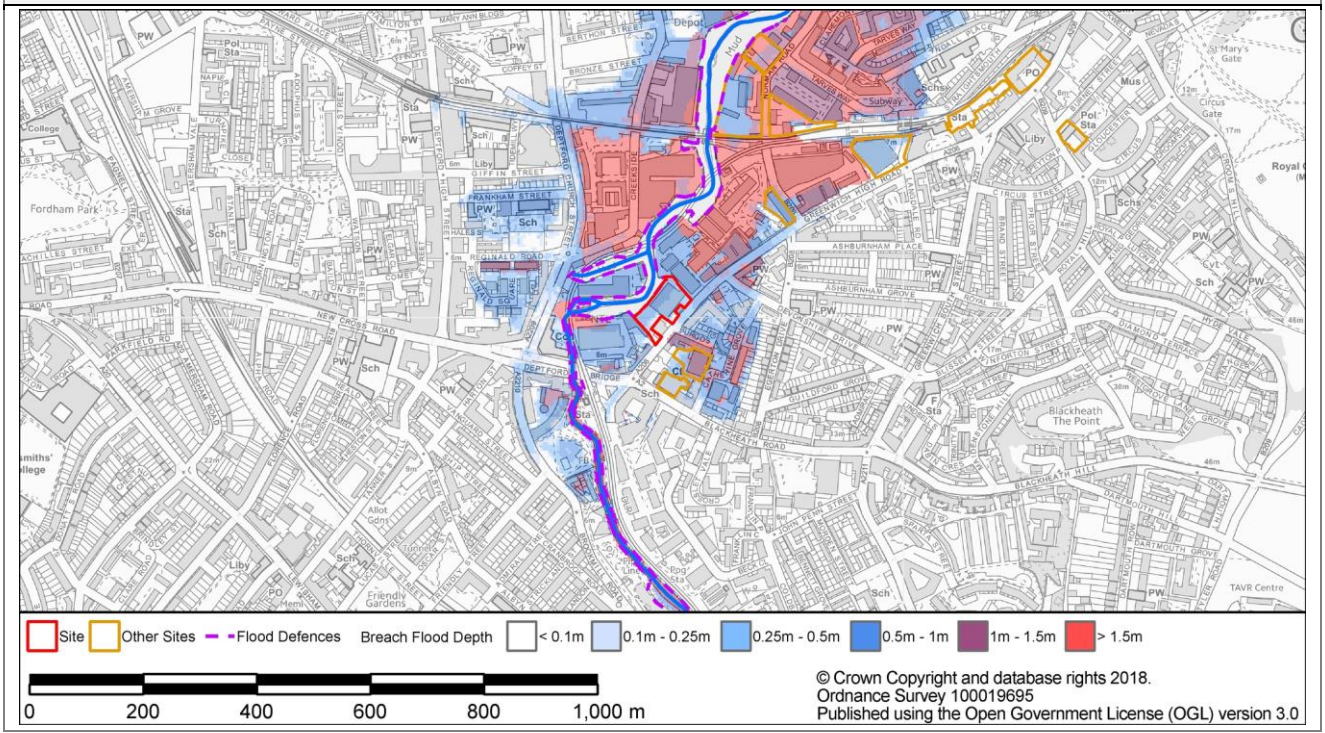


Figure A - Flood Zones

Flood Defence Source:	tidal	**Upstream of Thames Barrier?**	Yes
Flood Defence Type:	wall	**Standard of Protection:**	1000
Flood Warning Area	Tidal Thames from Woolwich Arsenal to Deptford Creek (100% Overlap), Ravensbourne at Deptford (84% Overlap)	**Emergency Rest Centre**	Greenwich West Community and Arts Centre

Residual Tidal Flood Risk



Site Name: 25-81 Greenwich High Road

Figure B - Maximum Flood Depth (Upriver Breach Assessment, MLWL 2100)

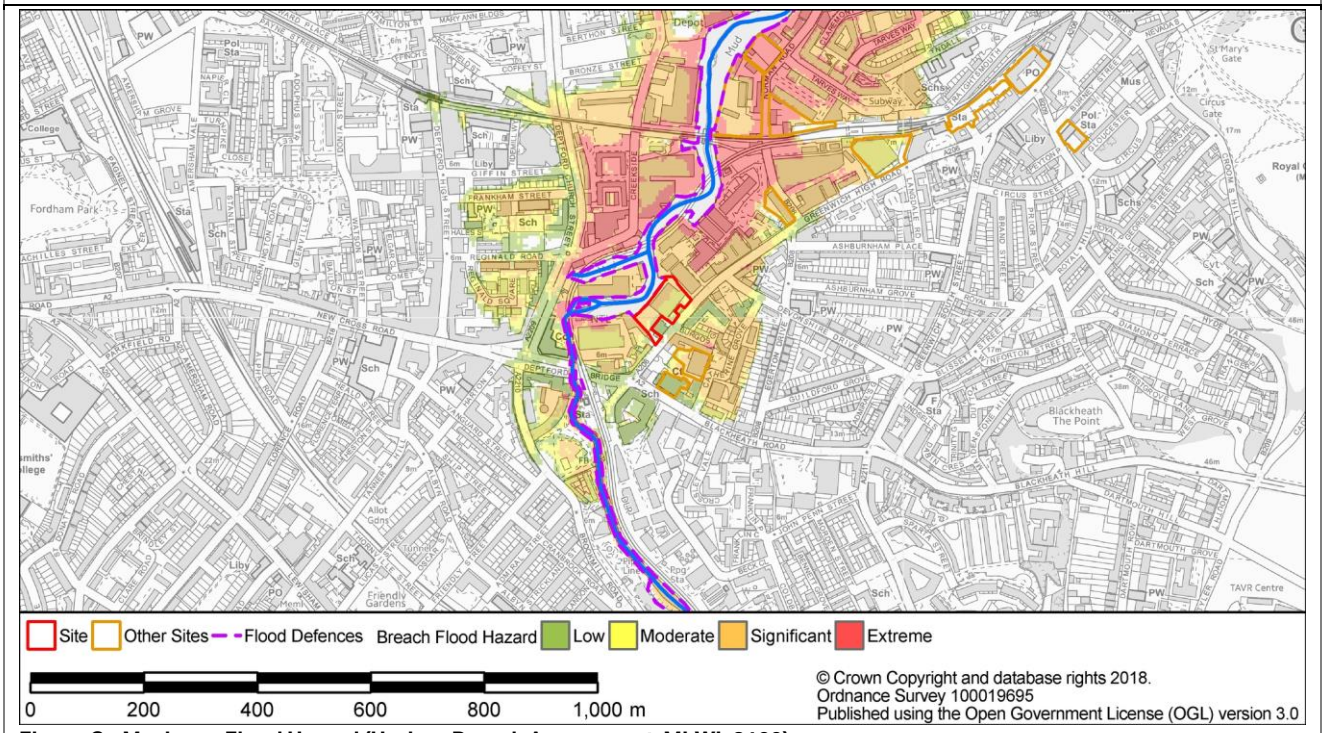


Figure C - Maximum Flood Hazard (Upriver Breach Assessment, MLWL 2100)

Fluvial Flood Hazard, Depth and Velocity

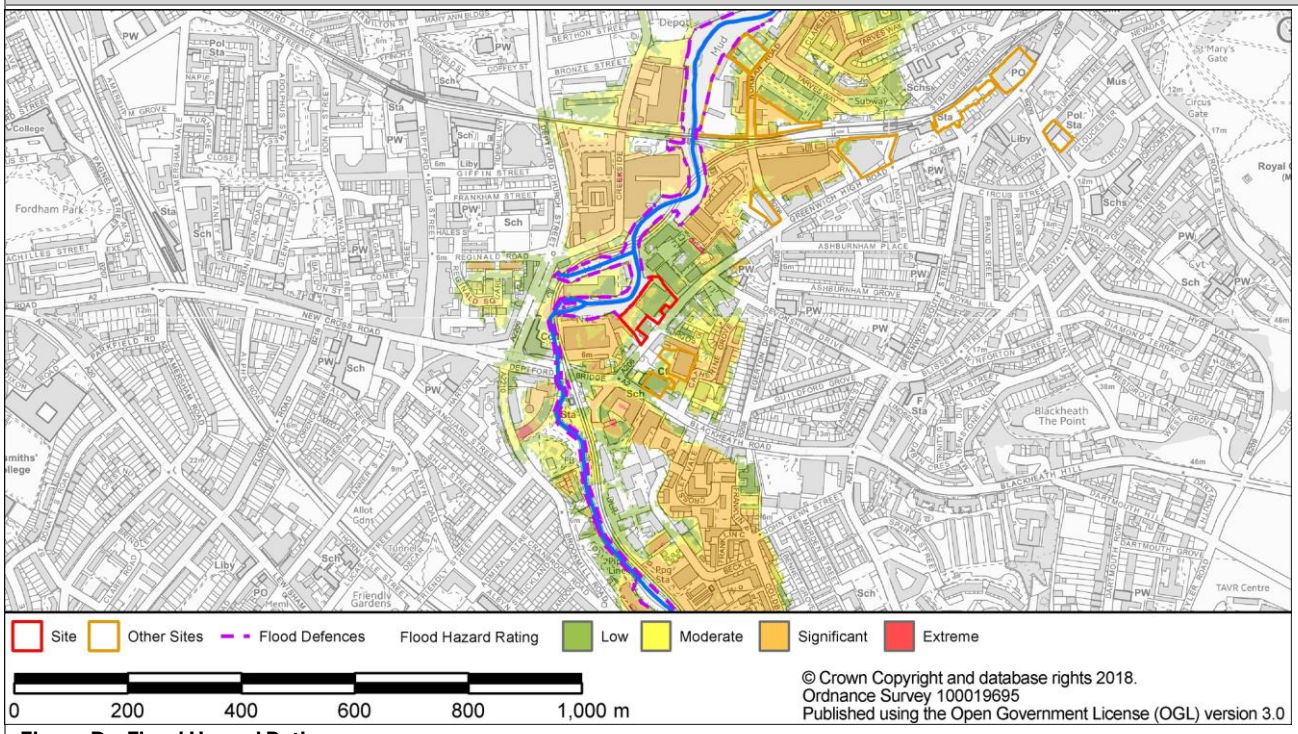


Figure D – Flood Hazard Rating

Site Name: 25-81 Greenwich High Road

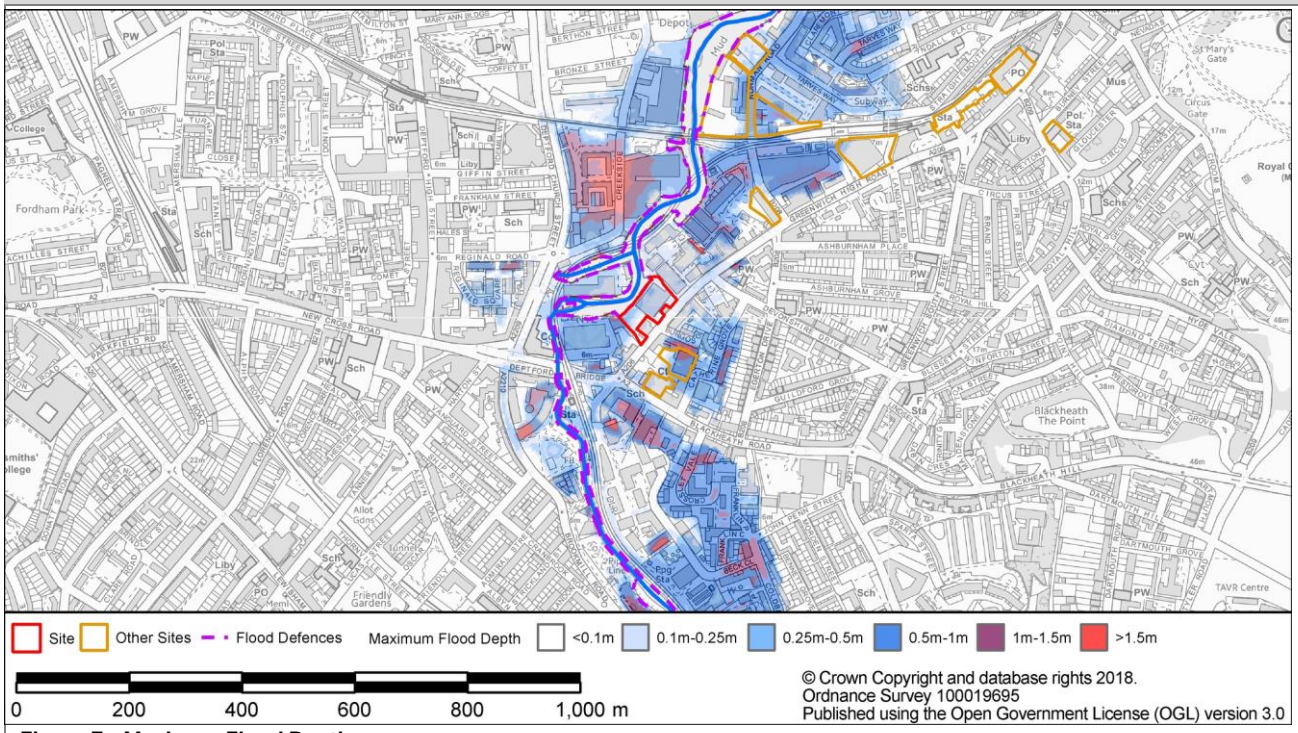


Figure E – Maximum Flood Depth

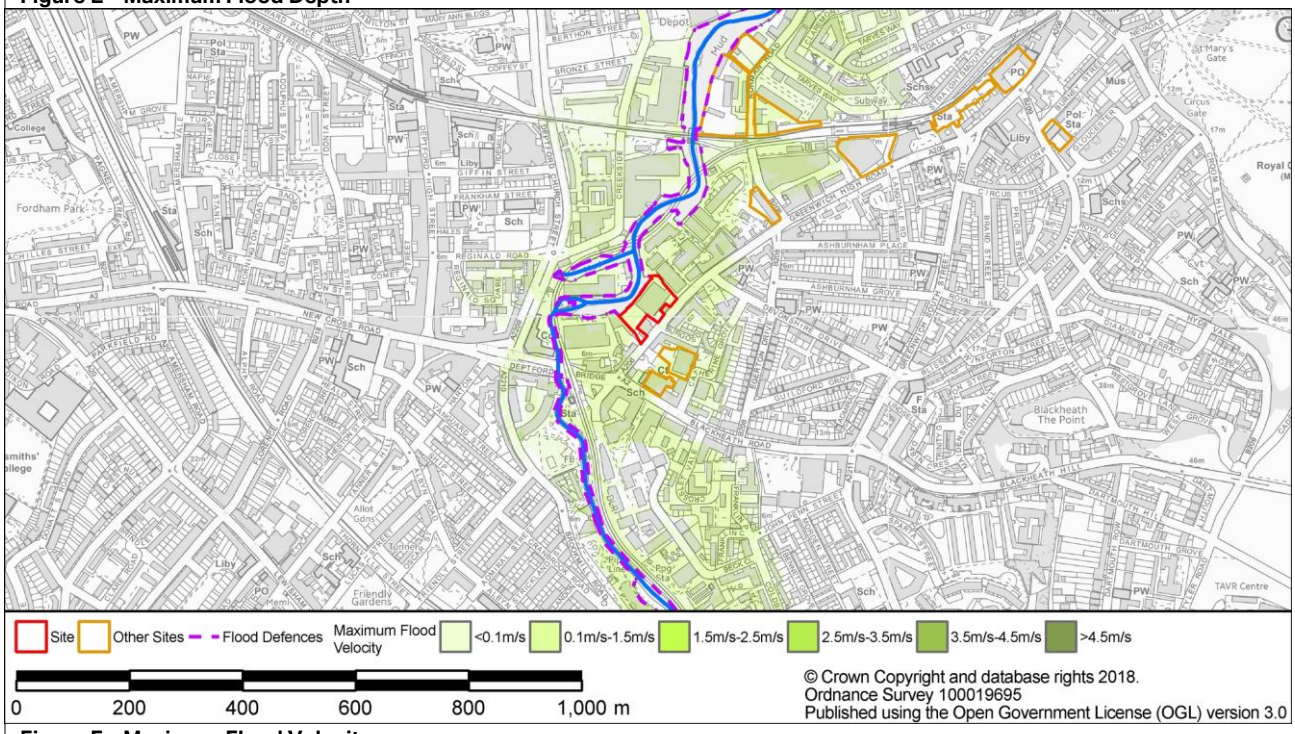


Figure F – Maximum Flood Velocity

Surface Water Source	
Risk of Flooding from Surface Water (RoFSW)	Medium

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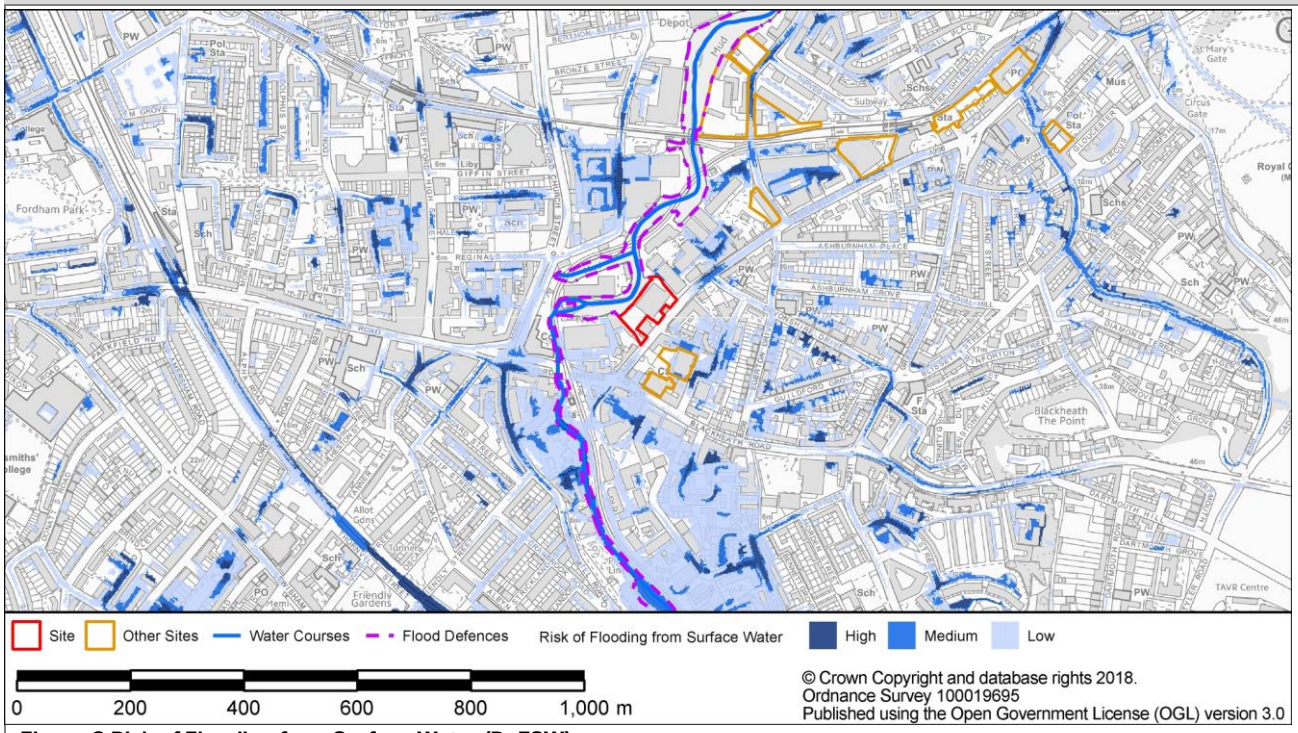

Figure G Risk of Flooding from Surface Water (RoFSW)

Critical Drainage Area	N/A

Groundwater Source

Bedrock Geology	Thanet Sand Formation	**Superficial Geology**	Alluvium - Clay, Silty, Peaty, Sandy
Bedrock Aquifer Designation	Secondary A (100% Overlap)	**Superficial Aquifer Designation**	Secondary (undifferentiated) (100% Overlap)
Potential Groundwater Flooding Zone	Zone A		

Other Sources

Sewer Flooding (within 4 digit postcode)	Internal Flood Incidents: 4 External Flood Incidents: 0
Artificial sources	

Site Specific Recommendations

The site is predominantly located within Flood Zone 3. A small proportion of the site is located in Flood Zone 2. A proportion of the site benefits from the presence of defences and is at residual risk of tidal and fluvial flooding. Less Vulnerable uses can be located at ground level. Basements are not permitted within Flood Zone 3 and are discouraged within areas of Flood Zone 2. The EA are a statutory consultee for planning applications where development is within 20m of a main river. Permission is required from the Environment Agency for work activity within 8m of a culvert or main river. The ROFSW map shows that site and surrounding area may be at medium risk of surface water flooding. An assessment of the local surface water flow paths should be made during the development of the site design, to encourage the location of buildings and more vulnerable aspects of the development away from those areas at risk of surface water ponding.

Finished floor levels should be set at whichever level is higher for fluvial or tidal flooding. For Tidal Flooding, Finished Floor Levels should either be: 300mm above the general ground level of the site or 600mm above the estimated sea level for a 1 in 200 year (0.5%AEP) event (including climate change). For Fluvial Flooding, Finished Floor Levels should either be: 300mm above the general ground level of the site or 600mm above the estimated River level for a 1 in 100 year (0.5%AEP) event (including climate change). A number of flood resistance and resilience measures can be implemented into new developments to mitigate potential flooding. Guidance on resilience measures can be found in the document 'Improving the Flood Performance of New Buildings, Flood Resilient Construction' published by The Department for Communities and Local Government (CLG).

Floodplain compensation storage should be provided for the area of the site within Flood Zone 3 associated with fluvial watercourses. Further details are provided in the Developer Guidance.

Potential overland flow paths from surface water should be determined and appropriate solutions proposed to minimise the impact of the development, whilst ensuring that flows are not diverted towards other properties elsewhere. Developers should consider using design for exceedance approaches by using urban areas and infrastructure to help manage local flooding. Flow paths should be assessed to inform the strategic location of SuDS and techniques to route flows around the edge of buildings. Careful consideration should be given to the use of fences and landscaping walls so as to prevent causing obstruction to flow routes.

Unobstructed safe access routes to and from the development should be provided. These should provide access to higher ground that is not at risk from flooding. It is strongly recommended that permanent internal access to upper floors is provided for all users of the site to provide safe refuge in a flood event. Safe egress points would be most appropriately located to the south of the site,along Greenwich High Road. The local area is covered by the 'Tidal Thames from Woolwich Arsenal to Deptford Creek' Environment Agency Flood Warning Area. A Flood Warning and Evacuation Plan (FWEP) must be prepared for the site, detailing how flood warning will be provided as well as how the safety of occupants and access to/from the development will be ensured. Further details of what should be included can be found in the Developer Guidance.

Reference to the SWMP Appendix D Figure D6 identifies that (prior to the completion of a site investigation to determine precise

Site Name: 25-81 Greenwich High Road
local conditions) infiltration of surface water into the ground is uncertain for the site. Site investigations will be required prior to the development of a Drainage Strategy for the site. Development should utilise sustainable urban drainage systems (SUDS) unless there are practical reasons for not doing so. Where an increased risk of surface water flooding exists to surrounding sites, developers need to provide a Drainage Strategy to demonstrate how they intend to address this, by what methods, over what timeframe and how maintenance of such works would be funded over its lifetime.This should include a consideration of SuDS in line with the London Plan 5.13 and Local Plan Policies. Surface water run-off should be managed in line with Royal Greenwich's surface water management requirements, as set out in Chapter 4 of the Developer Guidance.
Summary
The site is within Flood Zone 3, and has a residual risk of tidal/fluvial flooding for part of the site. It also has a medium surface water flood risk. Tidal/Fluvial flood risk mitigation measures should be implemented into the site design to manage flood risk. It is recommended that effective surface water management measures are implemented, including careful site and building layout and the incorporation of SuDS, in order to reduce flooding both on the site and routing of flood water to other areas. Due to the extent of flood risk on the site, a flood warning and evacuation plan should be implemented to ensure access to and from the site. On this basis, it is likely that this site could pass the Exception Test.