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**Project:** Phase 1 Flood Risk Assessment (FRA)  
**Prepared for:** Arcademy  
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## Document Issue Record

**Project:** Phase 1 Flood Risk Assessment

**Prepared for:** Arcademy

**Reference:** 2839

**Site Location:** 258 Old Kent Road, London, SE1 5UB

**Proposed Development:** Demolition of the existing building and redevelopment to create a new residential development consisting of 9 apartments.

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## 1. Summary

- 1.1 Ambiental Technical Solutions Limited has been appointed by Arcademy to undertake a National Planning Policy Framework (NPPF) compliant Flood Risk Assessment (FRA) for the demolition of the existing building at the rear of 258 Old Kent Road, London, SE1 5UB, and its redevelopment to create a new residential development consisting of 9 apartments.
- 1.2 The proposed development is located at the rear of 258 Old Kent Road/ Madron Street, London, SE1 5UB.
- 1.3 With reference to the NPPF and the Environment Agency (EA) standing advice on development and flood risk, as well as the low detail, national-scale flood mapping created on behalf of the EA, the proposed site is located within Flood Zone 3a (High Risk; >0.5% chance of annual tidal flooding) and is considered to be a "More Vulnerable" development.
- 1.4 The site currently benefits from the presence of defences (including the Thames Barrier) which act to protect to the 1:1000 year standard. Analysis of the EA defence data has shown the site will remain protected to the 1:1000 year level of protection until at least 2100.
- 1.5 The EA data provided for this assessment has demonstrated that the site is located outside modelled breach extents for the 2014, 2065 and 2100 epochs.
- 1.6 The EA have provided upstream inundation modelling which shows that if the site did not benefit from the presence of defences it would be inundated for 2065 and 2100 flood events (based on minimum topographic levels; finished floor levels are above flood levels), however the site benefits from the presence of defences to the 1 in 1000 year standard of protection and the scenario in which this defence was not present is very unlikely.
- 1.7 As such, and given that:
  - a) the proposed development is for the demolition of the existing mixed use building and redevelopment to create a residential building consisting of 9 apartments and should not significantly alter the impermeable surface area at the site;
  - b) the access/egress to the site is located outside the present day, 2065 and 2100 breach flood event, and as such safe refuge and egress can be achieved at the site, and;
  - c) the site lies within an existing developed area which is defended to the 1:1000 year standard, and will remain so until at least 2100
  - d) The scenario whereby all linear defences along the Thames are removed is unlikely

following the guidelines contained within the NPPF, the proposed development is considered **to be suitable** assuming appropriate mitigation (including adequate warning procedures) can be maintained for the temporary lifetime of the development.

Development Description	Existing	Proposed
Development Type:	Mixed use	Demolition of the existing building and redevelopment to create a residential development containing 9 apartments
(Number of Bedrooms):	N/A <sup>1</sup>	9 (5x 1 bed apartments, 4x 2 bed apartments)
EA Vulnerability Classification:	Less Vulnerable	More Vulnerable
Ground Floor Level:	N/A <sup>1</sup>	FFLs of 4.251mAOD to 4.537mAOD
Level of Sleeping Accommodation:	N/A <sup>1</sup>	Ground (FFLs of 4.251mAOD to 4.537mAOD) and first floor
Impermeable Surface Area:	Approximately 260m <sup>2</sup> (based on entire site being impermeable)	Attenuate to London Plan, Approximately 260m <sup>2</sup> with a negligible change
Surface Water Drainage:	N/A <sup>1</sup>	Attenuate to London Plan
Site Size:	Approximately 260m <sup>2</sup>	No change
Risk to Development	Summary	Comment
EA Flood Zone:	3a	1 in 200 year tidal
Flood Source:	Tidal	River Thames
Present day extreme water level	4.80mAOD and 4.78mAOD	EA data Nodes 2.36 and 2.37 respectively
2065 to 2100 Design water level	5.30mAOD and 5.27mAOD	
From 2100 Design water level	5.77mAOD and 5.76mAOD	
Recorded Flood Events in Area:	Yes	River Thames, surface water, groundwater, sewer
Recorded Flood Events at Site:	No	
SFRA Available:	Yes	London Borough of Southwark Strategic Flood Risk Assessment (2008) and Southwark Surface Water Management Plan (August 2011)
Management Measures	Summary	Comment
Ground floor level above extreme flood levels:	No	Site benefits from Thames Barrier and therefore defended to the 1:1000 year event
Safe Access/Egress Route:	Yes	Places of refuge to south west (Place of Worship and School)
Flood Resilient Design:	Yes	
Site Drainage Plan:	N/A <sup>1</sup>	It is recommended that the developer attenuate runoff and net volume in accordance with the London Plan drainage policy
Flood Warning & Evacuation Plan:	Yes	EA Flood Warning Service
Offsite Impacts	Summary	Comment
Displacement of floodwater:	N/A <sup>1</sup>	Site lies in area of tidal flood risk
Increase in surface run-off generation:	None	Attenuate to London Plan
Impact on hydraulic performance of channels:	None	

Table 1: Summary of flood risks, impacts and proposed flood mitigation measures.

N/A<sup>1</sup> not required for this assessment; N/A<sup>2</sup> data not available.