

Ms Wing Lau  
London Borough of Southwark  
Development Control  
PO Box 64529  
London  
SE1P 5LX

**Our ref:** SL/2015/114734/02-L01  
**Your ref:** 15/AP/2721  
**Date:** 21 March 2016

Dear Ms Lau,

**Further information (revised FRA) submitted. RE: Demolition of the existing garages and redevelopment of the site to erect a part 3, part 5 and part 7 storey building to create 27 no. affordable residential (class C3) units comprising a mix of 4 x one bed, 14 x two bed and 9 x three bedroom flats and associated landscaping works and provision of 3 no. car parking spaces.**

**Kipling estate garages, Weston Street, London, SE1 3RL**

Thank you for re-consulting the Environment Agency on the above planning application for which we received further information on 09 March 2016.

We have reviewed the submitted information – including the submitted revised Flood Risk Assessment (FRA) by Katherine Colby / Teakle (dated 07 March 2016 with reference Version 1.0b) – and respond as follows:

#### **Environment Agency position**

We have **no objection** to the planning application as submitted.

#### **Advice to applicant / Local Planning Authority**

We would like to offer the following advice with respect to flood risk, flood mitigation measures and groundwater and land contamination:

#### ***Flood risk***

We note that the site is located in Flood Zone 3 which is defined as having a 'high probability' of river and sea flooding by the ['flood risk and coastal change' section](#) of the national [Planning Practice Guidance](#) (PPG) ([Table 1: flood zones](#) of the [flood zone and flood risk tables](#) – Paragraph 065, Reference ID 7-065-20140306). We further note that the site is within an area benefiting from the River Thames tidal flood defences.

Upon reviewing our updated tidal River Thames flood modelling, we note that the site

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lies within the currently modelled areas at risk of residual flooding, assuming a breach in, or overtopping of, the flood defences at given locations.

We further note that the London Borough of Southwark's [Strategic Flood Risk Assessment](#) (SFRA) indicates that, in the unlikely event of a breach in the defences, the rate of inundation to the site is defined as 'less than six hours' and the flood hazard rating for the site (based on depth and velocity of floodwaters) is designated as 'low' (Figure E).

We also note that the proposed development – namely, residential accommodation – would be classified as 'more vulnerable' by the 'flood risk and coastal change' section of the national PPG ([Table 2: flood risk vulnerability classification](#) of the flood zone and flood risk tables – Paragraph 066, Reference ID 7-066-20140306).

Please note that there may be other sources of flooding which affect this site – such as surface water, groundwater and sewer flooding – which are not within our direct remit, but nevertheless could be important considerations for managing flood risk for the proposed development. Indeed, consideration of other sources of flooding may be necessary to inform suitable mitigation measures to reduce the impact of any such flooding. Under the Flood & Water Management Act 2010, the Lead Local Flood Authority (LLFA) has the lead role in such flooding matters.

### ***Flood mitigation measures***

We strongly recommend that 'more vulnerable' residential accommodation, particularly sleeping accommodation, is located at the first floor level and above or, if the former approach is absolutely not possible, at a minimum of 300mm above the 1 in 200 year flood level. Our recommendation is supported by the spatial planning and development control recommendations within the London Borough of Southwark's SFRA (Section 6.4.4) which are themselves further embodied within the [Sustainable Design and Construction Supplementary Planning Document](#) (SPD) which states that:

- "it is preferable that 'less vulnerable' uses ... are located at ground floor level" within developments in areas at risk of flooding (Section 9.2);
- "no residential development is permitted at ground floor level" for the 'less than six hours' rate of inundation zone (Appendix 5);
- "sleeping areas should not be located below the predicted 1 in 200 year flood level" (Section 9.2).

We understand that 'more vulnerable' residential accommodation, including sleeping accommodation, will be located at the ground floor level and above within the proposed development. We also note the following levels contained within the submitted revised FRA (Sections 3.1.9 to 3.1.22 inclusive and so on):

- finished ground floor levels: from 2.860 to 3.235 metres above Ordnance Datum (mAOD);

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- modelled (breach) flood levels:
  - 2014 epoch: nil return;
  - 2065 epoch: from nil return to 3.27mAOD;
  - 2100 epoch: from 3.20 to 3.39mAOD.

Accordingly, given that the above levels indicate that proposed development may be inundated in the case of a breach flood event, we would like to take this opportunity to reiterate our aforementioned recommendation that finished floor levels are set at a minimum of 300mm above the modelled breach flood level, if at all possible.

We strongly recommend that flood resistant and resilient measures are incorporated in to the design and construction of the development proposals, where practical considerations allow, using guidance contained within the Department for Communities and Local Government (DCLG) document '[Improving the flood performance of new buildings: flood resilient construction](#)', as referred to within the submitted revised FRA (Sections 3.1.30, 3.1.33, 3.2.3, 3.2.4, 3.3.3, 4.0.1, 6.0.8 and so on).

We advise that occupants of the proposed development register with our [Floodline Warnings Direct](#) service, in order that they may prepare themselves in the case of a flood event, as referred to within the submitted revised FRA (Sections 3.1.35 to 3.1.40 inclusive, Sections 4.0.3 to 4.0.8 inclusive and Sections 6.0.10 to 6.0.15 inclusive).

We recommend that a flood response plan (or flood warning and evacuation plan) is prepared and submitted to the Local Planning Authority for approval, as referred to within the submitted revised FRA (Sections 3.1.25, 3.1.26, 3.1.34, 3.1.40, 4.0.2, 4.0.8, 6.0.9 and 6.0.15). Ultimately, the Local Authority's Emergency Planning department should be satisfied that any emergency procedures are appropriate and achievable.

### ***Groundwater and land contamination***

We note that the site is located over a Secondary Aquifer.

However, we do not consider these development proposals to be high risk, therefore, on this occasion, we will not be providing detailed site-specific comments with regards to contamination issues for this site.

Nevertheless, we would appreciate being informed if contamination is subsequently identified that poses a significant risk to controlled waters.

Moreover, if soil and/or groundwater contamination may exist at the site, the developer should address the associated risks to controlled waters by following the requirements of the:

- [National Planning Policy Framework](#) (NPPF);

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- Environment Agency's ['guiding principles for land contamination'](#);
- risk management framework provided in the Environment Agency's document ['Model procedures for the management of land contamination \(CLR11\)'](#);
- Environment Agency's document ['Groundwater protection: principles and practice \(GP3\)'](#);
- national [land contamination: technical guidance](#).

Please note that all investigations of land potentially affected by contamination should be carried out by, or under the direction of, a suitably qualified competent person and in accordance with [British Standard \(BS\) 10175 \(2011\): code of practice for the investigation of potentially contaminated sites](#). We would normally expect the competent person to be a chartered member of an appropriate body – such as the Institution of Civil Engineers (ICE), Geological Society of London, Royal Institution of Chartered Surveyors (RICS), Institute of Environmental Management and Assessment (IEMA) and so on – and also have relevant experience of investigating contaminated sites. Furthermore, the [Specialist in Land Condition](#) (SiLC) qualification provides an accredited status for those responsible for signing off land condition records (LCRs).

#### **Decision notice request**

The Environment Agency requires decision notice details for this planning application in order to report on our effectiveness in influencing the planning process. Please email [kslplanning@environment-agency.gov.uk](mailto:kslplanning@environment-agency.gov.uk) with any decision notice details.

We hope you find our response helpful. Please contact us if you have any questions.

Yours sincerely,

**Miss Kayleigh Wyatt**  
**Planning Advisor**

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cc Katherine Teakle

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