

TN 70057187-TN-001

DATE:	21 July 2023	CONFIDENTIALITY:	Confidential
SUBJECT:	330 Gray's Inn Road - Response to London Borough of Camden Comments		
PROJECT:	70057187	AUTHOR:	BB
CHECKED:	NG	APPROVED:	NG

INTRODUCTION

Background

This Technical Note (TN) has been prepared on behalf of 330 Gray's Inn Road Ltd to support the planning application for the updated S73 development at the site located in Kings Cross in the London Borough of Camden (LBC). An FRA and DS report has separately been prepared by WSP to support the application (70057187-RP-002), and the purpose of this TN is to address comments made on the FRA/DS by LBC officers.

The site is located at 330 Gray's Inn Road, London, WC1X 8DA and is located adjacent to the existing railway track. The track is located at a lower level of approximately +9.0mAOD.

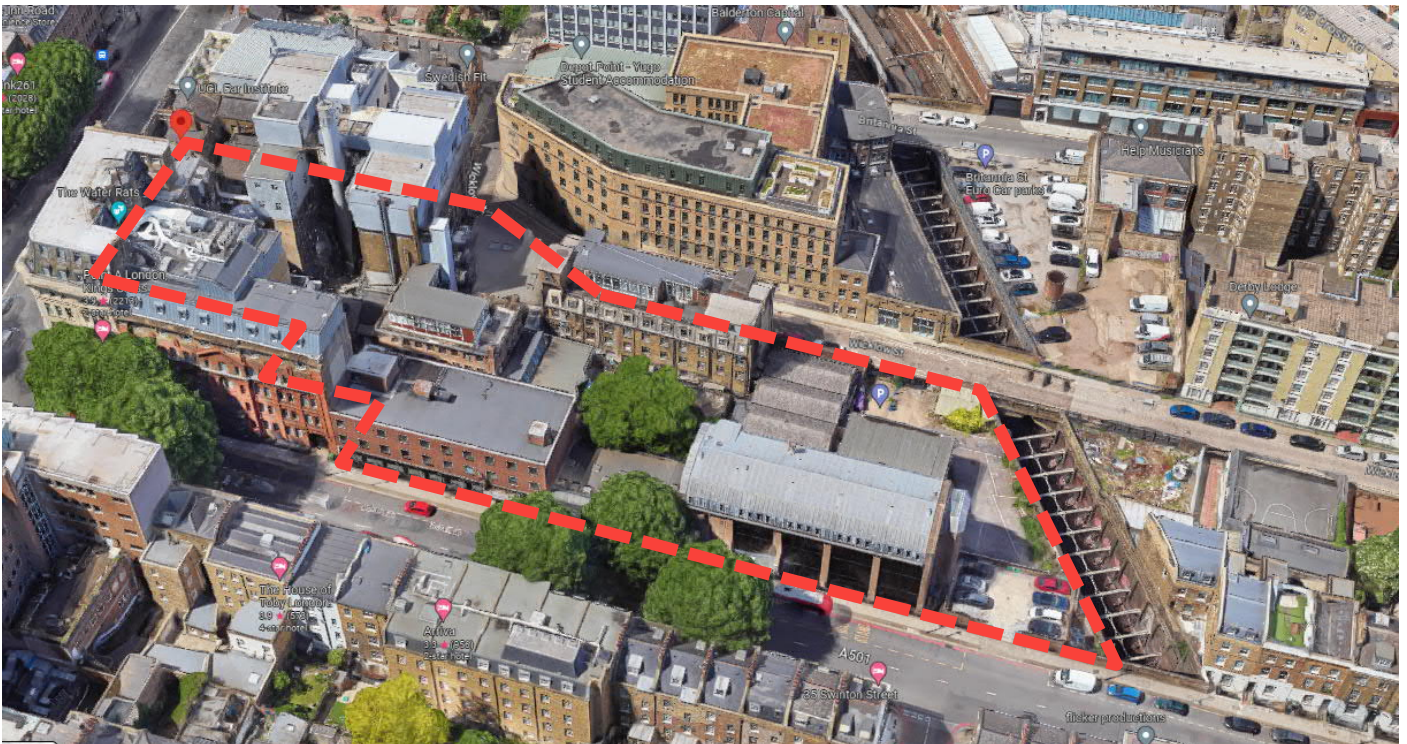


Figure 1. Aerial View of 330 Gray's Inn Road with Site Boundary (Red)

London Borough of Camden Comments

WSP has been provided with comments made by LBCs planning department, summarised as the following:

- i) *“The applicant has not provided further analysis and detail into the consideration of the basement being within a LFRZ considering the extent of predicted flooding at this location.”*
- ii) *The applicant has not demonstrated that exceedance flows are suitably managed within the courtyard area located at ground floor.*

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RESPONSE TO COMMENT (I)

WSP acknowledges that the site is located within a CDA Group3_003 and partially within the North Swinton Street Local Flood Risk Zone (LFRZ) (Figure 2).



Figure 2. Extract from LBC SFRA

As defined by the LBC SFRA, a CDA is defined as an area where multiple sources of flood risk may cause flooding in one or more Local Flood Risk Zones during severe weather. The LBC SFRA notes that *“a specific area within a CDA is not necessarily at higher risk from surface water than an area outside of a CDA”*, and indeed, that the majority of the borough is located within a CDA. The LFRZs are defined as *“the actual spatial extent of predicted flooding in a single location”*.

The LBC SFRA confirms that the most up to date surface water modelling available for the borough (the uFMfSW), shows that surface water flood extent follows the natural topography of the borough and also man-made features such as roads and rail-lines. This is particularly pertinent to the proposed development site due to its location next to a low-lying rail line.

An extract from Figure 3i of the LBC SFRA is provided in Figure 4 below. The areas of medium-high flood risk are located exclusively at the track level, which is outside of the site boundary and at a significantly lower topography than the site itself. It is considered that there is no method of surface water from the track level entering the basement levels as the entrance to the site is located at Wicklow Street, some 4m higher than track level (Figure 3).

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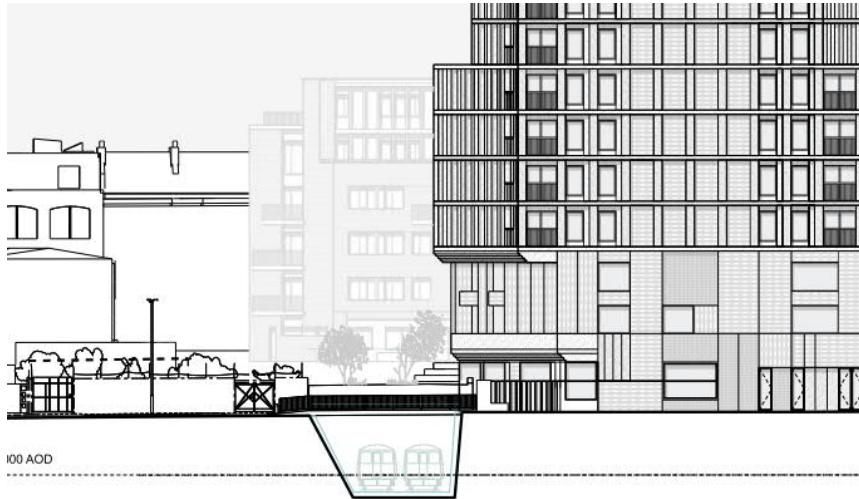


Figure 3. Track Level Compared with Proposed Development

Wicklow Street to the north-east of the site is noted partially at Low risk, equivalent to risk of flooding in the 1 in 1000-year storm event. Based on this mapping, it is evident that the surface water flow path in this area is directed away from the development site towards the north-east low-lying Kings Cross Road, at the edge of the LBC boundary. The proposals for the development do not seek to make changes to the local topography and this flow route away from the development will be retained post-development.

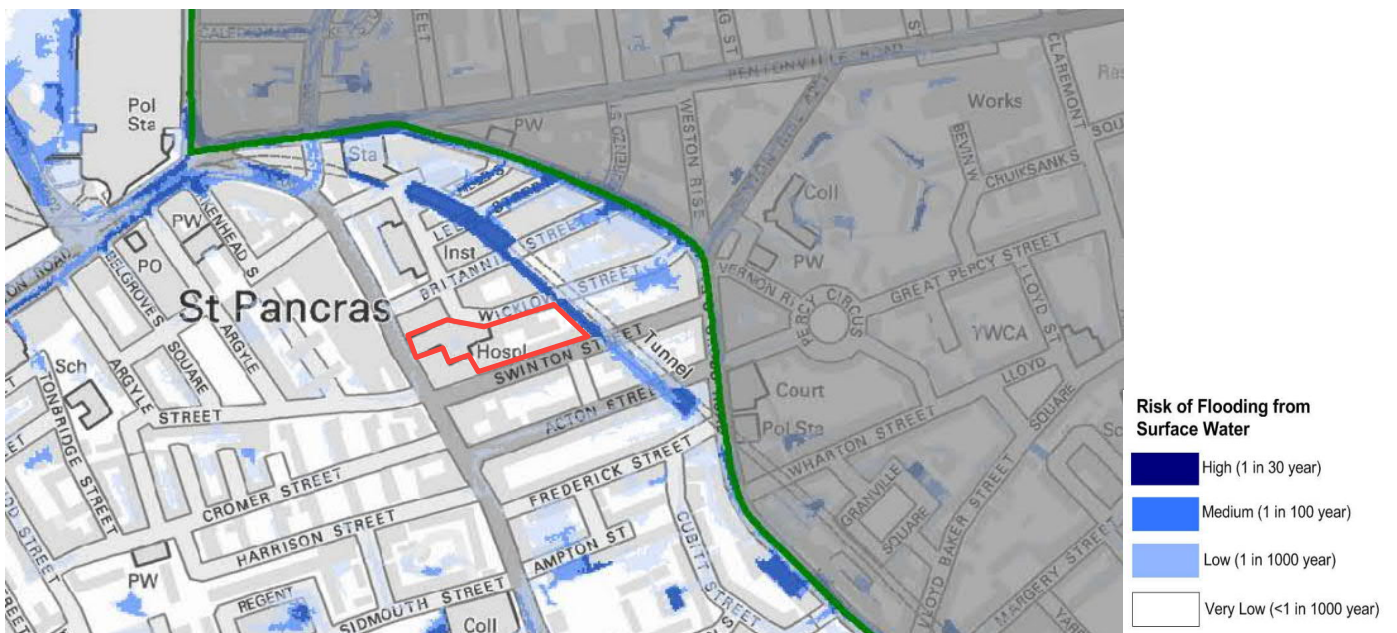


Figure 4. Extract from Figure 3i LBC SFRA

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WSP also notes that a review of the Previously Flooded Streets list, provided by LBC, does not list any of the streets adjacent to the proposed development (Wicklow Street, Swinton Street and Grays Inn Road) as having flooded during the major 1975, 2002 and 2021 historic surface water flood events in the borough.

Gov.uk guidance (<https://www.gov.uk/guidance/flood-risk-and-coastal-change#taking-flood-risk-into-account-in-preparing-plans>) states that the design flood for surface water should be taken as “surface water flooding likely to occur with a 1% annual probability (a 1 in 100 chance each year)”. The design flood event for the site (the 1 in 100-year event) does not result in any flooding at the development site.

This assessment of the flood risk can be further cross referenced against the Gov.uk Long Term Flood Mapping service, which highlights no flooding on Wicklow Street for the Medium Event (1%-3.3%AEP), only flooding at the track level which is outside of the site boundary and cannot access the site.

On this basis and that described above, it is above what is considered reasonably practicable to preclude basement development on the basis of flooding in the 1 in 1000-year event which in the event of its occurrence has a flow path away from the proposed development due to local topography.



Figure 5. Extract from Gov.uk Long Term Flood Map for Planning (1%-3.3%AEP)

The entrances to the buildings along Wicklow Street, both pedestrian and vehicular are located on the edge of the existing pavement. The pavement itself is outside the site boundary and any entrances require a level threshold for equal accessibility. Increasing the height of the thresholds into the development would be counter to accessibility or would require the resurfacing of the road and pavements to raise the kerb line which is disproportionate to the likelihood of a storm event. Further measures could be developed post-planning in conjunction with LBC to ensure that suitable flood protection and mitigation measures are in place for the lifetime of the development.

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RESPONSE TO COMMENT (II)

WSP understands that LBC have concerns regarding the flow exceedance routes within the ground floor courtyard garden. This area is located above the podium slab and as a result, surface water drainage for this area will be designed to ensure that there is no flooding within the 1 in 100 year +40% climate change event. The drainage strategy proposed for this area would seek to positively drain the catchment towards the basement tank via outlets through the podium slab. The courtyard would be laid to falls towards the outlets, which are proposed to be located within the centre of the courtyard. This would ensure that in the unlikely event of a drainage system failure for maintenance reasons or other, the surface water would pond within the centre of the courtyard and not enter the building at GF level. The inclusion of multiple outlets reduces the risk of any ponding as a result of maintenance failure.

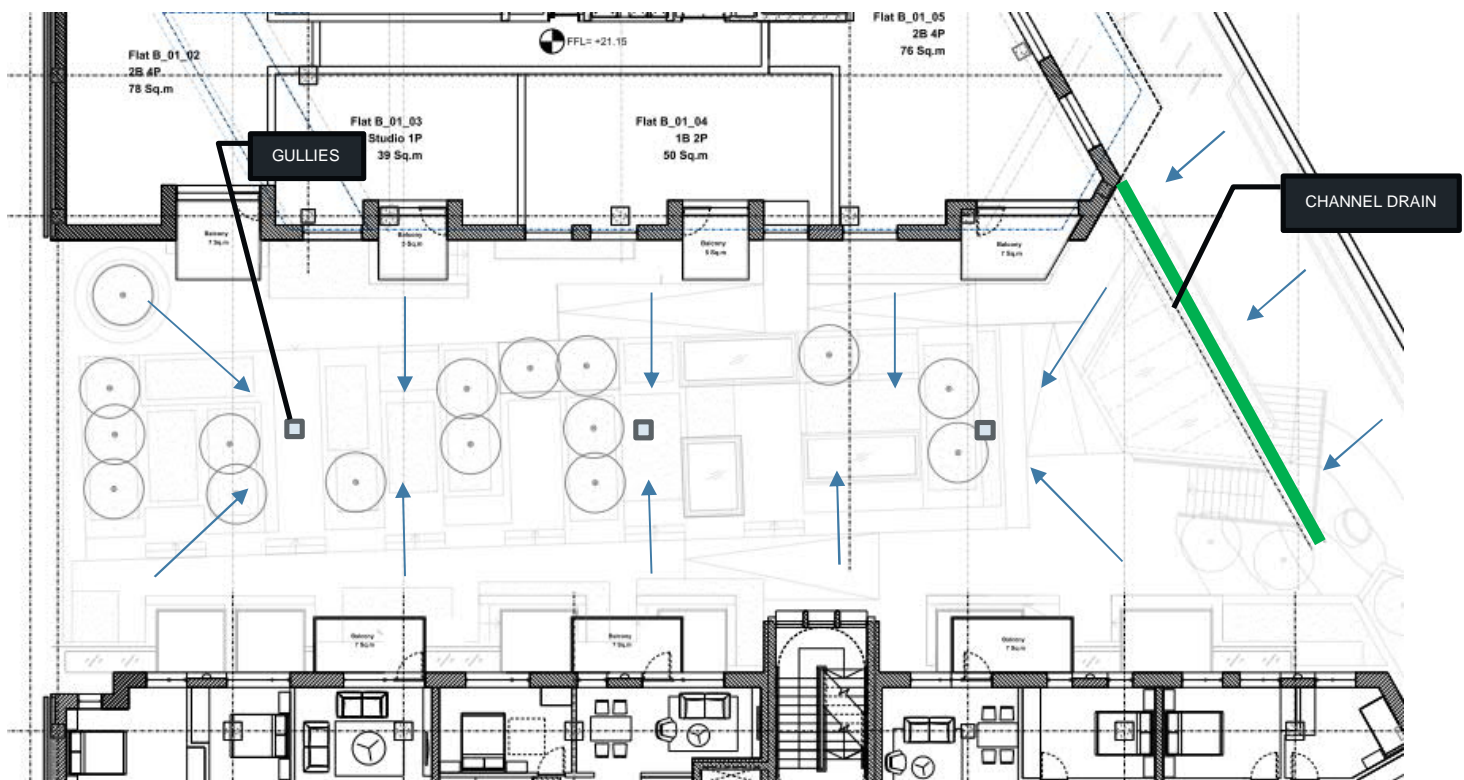


Figure 6. Proposed Arrangement of Courtyard at GF

CONCLUSION

WSP have summarised the responses to LBCs outstanding comments on the risk of surface water flooding to the proposed development and it is our opinion that the risk of surface water flooding to the development should not preclude basement development at the proposed development site. WSP also conclude that there is no risk to people or property as a result of levels design to the GF courtyard. The extent of information available & herewith provided is as much as is reasonable to expect RIBA Stage 2 Design and will be developed later in the design stages.