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TECH NOTE

DATE:	2019-08-21	RWDI REFERENCE #: 1300492E
TO:	Camilla Lesser	EMAIL: camillal@essentialliving.co.uk
FROM:	Jeniffer Lowther	Email: jeniffer.lowther@rwdi.com
	Gary Clarke	Email: gary.clarke@rwdi.com
RE:	100 Avenue Road Tech Note London, UK	

Dear Camilla,

Introduction

RWDI was retained to conduct a wind tunnel analysis on the proposed 100 Avenue Road development in 2013. The latest report, which discussed the assessment of the wind tunnel results, was issued February 27th, 2014 for the baseline (no landscaping) results. The east side of the Site (receptor 7), adjacent to Hampstead Theatre, had strong winds exceeding Beaufort Force 7 for 1.2 hours per annum. Such strong winds could impede walking; therefore, mitigation measures were suggested for this location.

The Inspectors Decision requires the confirmation of mitigation measures at the penthouse terrace (identified and agreed as an increase in balustrade height to 1.8m), and in the area of the eastern site boundary near the Hampstead Theatre (what was represented by receptor 7 in the wind assessment). All other locations were agreed as suitable for the intended use.

This Tech Note assesses the proposed landscaping measures for receptor 7 only, to confirm the mitigation near the Hampstead Theatre. The assessment is based on the plans received August 14th, 2019:

- "SC-CAM-00-GF-DR-L-0111";
- "SC-CAM-00-GF-DR-L-0112 (003)"; and
- "SC-CAM-00-GF-DR-L-0252".



Landscaping and Likely Effects

Strong winds in excess of Beaufort Force 7 for 1.2 hours per year was reported to occur at receptor 7 (intended for thoroughfare use). This exceeds the strong winds threshold of 1 hour per year by a marginal amount, and therefore it is likely that localised mitigation measures would result in suitable conditions without any safety exceedances.

The report issued February 27th, 2014 suggested “Localised mitigation along the west side of Hampstead Theatre... (e.g. planters with evergreen trees/shrubs or vertical screens).” Including porous elements within this space would diffuse the strong winds from the south west (the prevailing wind direction). The effectiveness of the trees is dependent on their size (height and crown size) as well as the “fullness” of the tree. Evergreen trees are particularly useful for wind mitigation, as the strongest winds tend to occur during winter, where deciduous trees would no longer be in full leaf.

Planting has been included in Theatre Lane to the west of Hampstead Theatre, running parallel to the café facade. The proposed planting includes a planter of 0.7m height with low-level evergreen planting of 0.45m height (1.15m total height low level planting). In addition, a 4-5m tree (at the time of planting) which is of an evergreen variety is located to the west of receptor 7. Three deciduous trees of 2.5m height will also be planted within the planter, one to the south of the evergreen tree and two to the north.

We support the use of the proposed planter as mitigation given the results of the 2014 report at this thoroughfare location. The use of evergreen trees and planting is particularly beneficial.



Planting location as shown in "SC-CAM-00-GF-DR-L-0111.pdf" received August 14th, 2019

Planting heights as shown in "SC-CAM-00-GF-DR-L-0112 (003).pdf" received August 14th, 2019



Conclusions

We would conclude, based on professional opinion and experience of similar projects, that the addition of the planter in Theatre Lane would mitigate the marginal Beaufort Force 7 strong winds at receptor 7, and therefore wind conditions would be suitable for thoroughfare use. Therefore, no further mitigation is required.

Yours truly,

A handwritten signature in black ink that reads 'Jeniffer Lowther'.

Jeniffer Lowther, M.Sc
Project Engineer