



Doc Ref: WC510-05F01(rev0)- WS Memo

Date: 14 April 2016

To: Atlas Page Kirkland

Address: The Podium Building,
1 Market Street
Sydney NSW 2000

From: Trong Thien Huynh

**RE: CAMPBELL'S STORES, SYDNEY HARBOUR
PEDESTRIAN WIND STATEMENT MEMO**

This technical memo comments on the City of Sydney response to the development application for the redevelopment of Campbell's Store, located in Sydney Harbour. A desktop pedestrian wind environment statement has previously been completed for the subject redevelopment by Windtech Consultants Pty Ltd; report reference WC510-04F02(rev0) dated 23rd October, 2015, for the latest architectural drawing set at the time. The outcome of the desktop assessment indicate the wind conditions within several out of the outdoor trafficable areas around the subject development may potentially be exposed to adverse wind conditions. A series of in-principle treatments were recommended within the report that were expected to be effective in ameliorating these adverse wind effects.

Since the time of the desktop assessment, further architectural changes have been made to the design of the subject development as per the latest drawing set received April 2016. The primary amendment is the reduced height of Bay 12. The City of Sydney has undertaken a review of the report and has made the following requests:

- Confirmation of the effectiveness of the recommended planter beds and retractable screens along the eastern side of the awnings.
- Removal of the recommended umbrellas and portable screens.

A desktop review has been carried out and we can confirm the recommended planter beds and retractable screens are expected to be effective in enhancing the localised wind conditions of the subject development. The planter beds and retractable screens act as an effective wind mitigating element, capturing the up-stream north-easterly winds and reducing the intensity of the wind effect before it reaches the outdoor seating areas of the subject development. It should be noted the planter bed are recommended to be populated with densely foliating shrubs or hedge planting.

With regards to the removal of the recommended umbrellas and portable screens within and around the subject development site, a review of the architectural drawings indicate the intended use of the outdoor trafficable areas as part of the redevelopment will be identical to its current use. Hence the recommended umbrellas and portable screens along the pedestrian thoroughfares on Level 1 can be omitted as the wind conditions within these outdoor trafficable areas are expected to remain similar to existing conditions with the inclusion of the proposed changes to the subject development. The proposed outdoor seating area directly under the north-western perimeter edge of the awning adjacent to Bays 1 to 5 may experience relatively higher wind effects from the existing north-easterly winds travelling over the open waters of Campbell's Cove. As the north-easterly winds occur most frequently during the warmer months of the year, the wind breezes are usually welcomed within outdoor areas since they are typically not as strong as the southerly or westerly winds. The patron comfort level is expected to be reasonable without need of additional protection, and a review of the wind roses by the Bureau of Meteorology; attached within the appendix of this memo, indicates the wind occurrence is limited to the months of October-March, and typically during the afternoon periods of the day.

DOCUMENT CONTROL

Date	Revision History	Non-Issued Revision	Issued Revision	Prepared By (initials)	Instructed By (initials)	Reviewed & Authorised by (initials)
April 14, 2016	Initial.	-	0	TH	TR	TH

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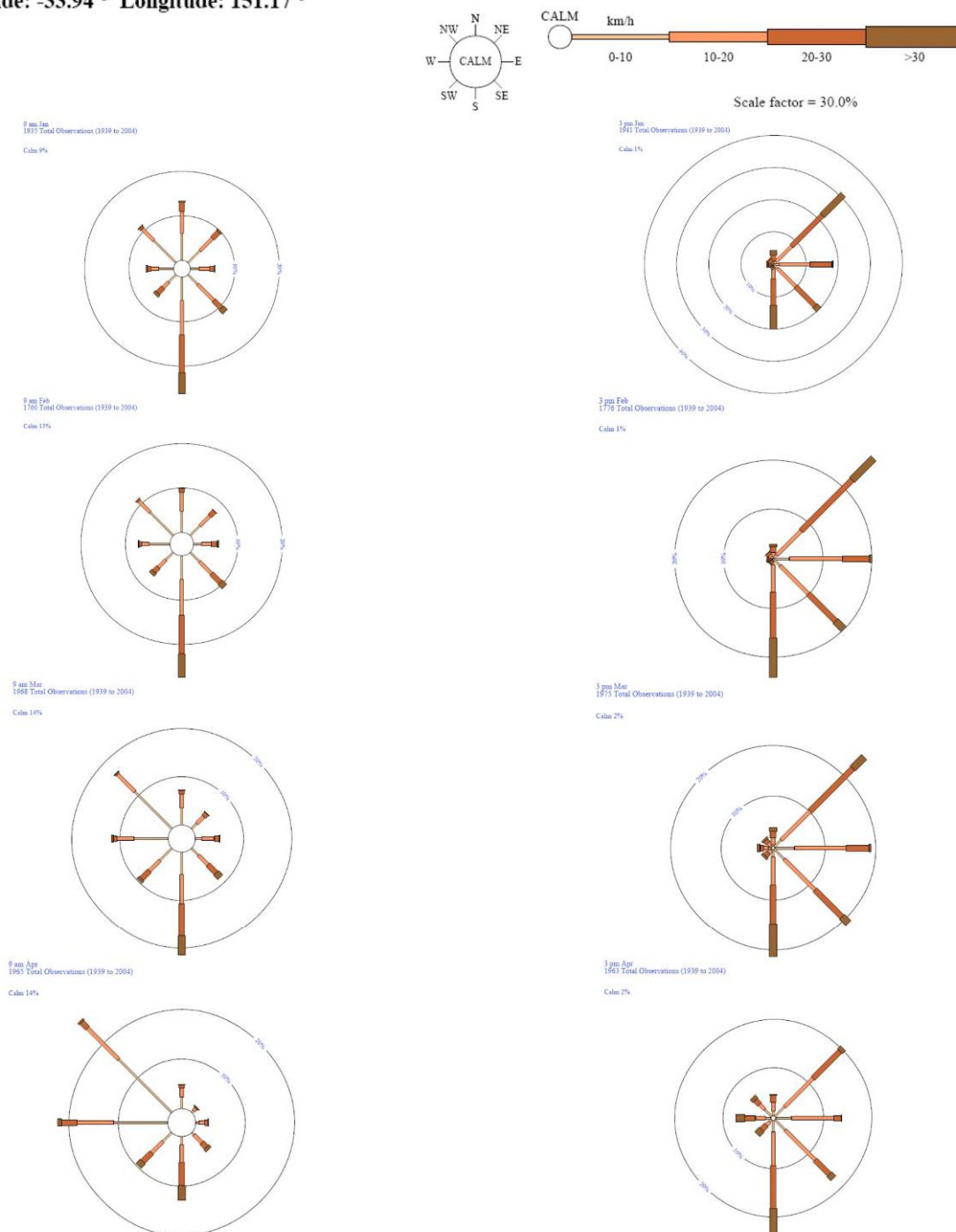
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APPENDIX - WIND ROSES

WIND FREQUENCY ANALYSIS (in km/h)

SYDNEY AIRPORT AMO STATION NUMBER 066037

Latitude: -33.94 ° Longitude: 151.17 °



Wind directions are divided into eight compass directions. Calm has no direction.

An asterisk (*) indicates that calm is less than 1%.

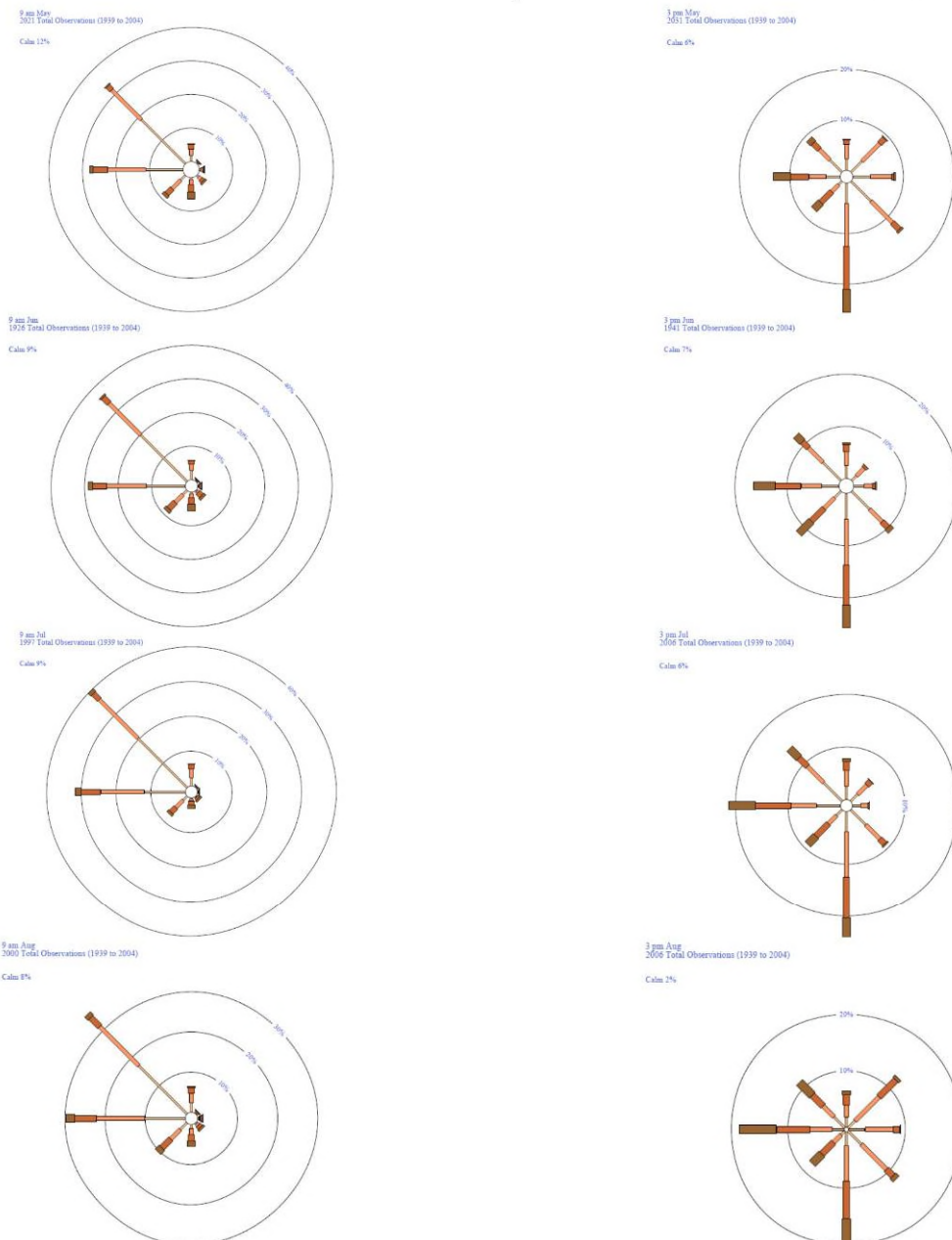
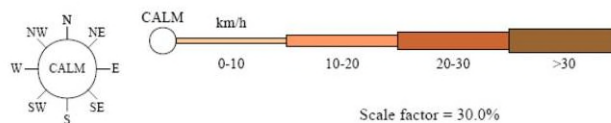
An observed wind speed which falls precisely on the boundary between two divisions (eg 10km/h) will be included in the lower range (eg 1-10 km/h). Only quality controlled data have been used.



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WIND FREQUENCY ANALYSIS (in km/h)
SYDNEY AIRPORT AMO STATION NUMBER 066037
Latitude: -33.94 ° Longitude: 151.17 °



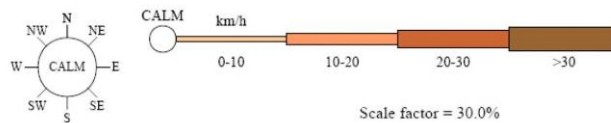
Wind directions are divided into eight compass directions. Calm has no direction.
 An asterisk (*) indicates that calm is less than 1% .
 An observed wind speed which falls precisely on the boundary between two divisions (eg 10km/h) will be included in the lower range (eg 1-10 km/h). Only quality controlled data have been used.



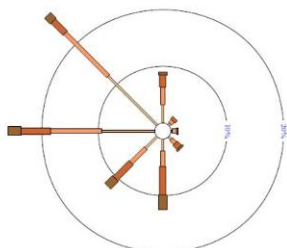
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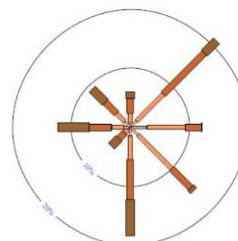
WIND FREQUENCY ANALYSIS (in km/h)
SYDNEY AIRPORT AMO STATION NUMBER 066037
Latitude: -33.94 ° Longitude: 151.17 °



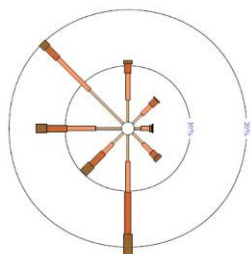
9 am Sep
1934 Total Observations (1939 to 2004)
Calm 7%



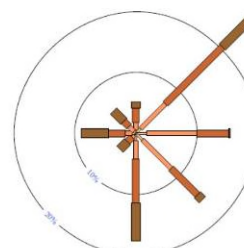
3 pm Sep
1931 Total Observations (1939 to 2004)
Calm 1%



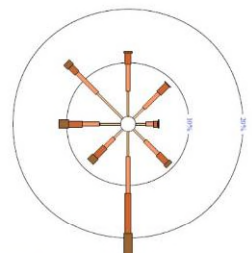
9 am Oct
1993 Total Observations (1939 to 2004)
Calm 6%



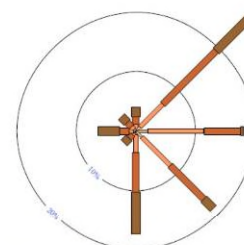
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1997 Total Observations (1939 to 2004)
Calm 1%



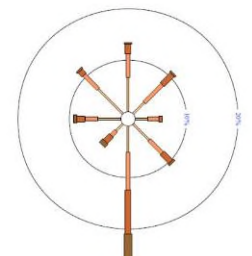
9 am Nov
1997 Total Observations (1939 to 2004)
Calm 7%



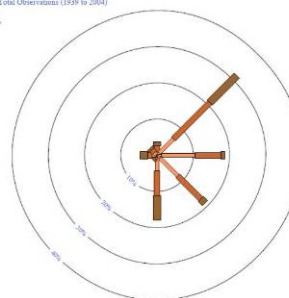
3 pm Nov
1991 Total Observations (1939 to 2004)
Calm 1%



9 am Dec
1937 Total Observations (1939 to 2004)
Calm 7%



3 pm Dec
1939 Total Observations (1939 to 2004)
Calm *



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