

Geocon

8 March 2022

Ref: 30N-22-0022-GCO-28900-1

Level 4, 16-18 Mort Street, Canberra

Dear Sean Smith,

70 Allara Street, City, Canberra, ACT

Vipac has conducted a preliminary review of the concept design of the development at 70 Allara Street, Canberra, ACT in regard to the likely wind environment at ground level and adjacent areas to the development. Plans were provided to Vipac in March 2022 and the interaction of the wind with the proposed design was then assessed. Taking into account the wind climate at the site (see Figure 1) and the surrounding developments. No detailed analysis has been conducted at this stage. Vipac recommends that a wind tunnel test be conducted to determine the wind levels at ground level in the detail design stage to confirm our predictions.

The proposed development consists of three buildings of 8-9 storeys, approximately 25 m roof height (see Figure 2), with a landscaped pedestrian thoroughfare at the ground floor surrounding the 3 buildings. A café is proposed at northwest of Building 2 along London Circuit and a roof terrace is proposed on Building 1.

Vipac has reviewed the proposed design and makes the following comments.

#### **Ground Level**

Direct winds from west and northwest could create uncomfortable wind conditions at the outdoor seating areas of Building B. Funnelling winds causing adverse effects are expected at the pedestrian thoroughfare between the three buildings. Additionally, the squared corners of Building 1 may cause some adverse corner accelerations at the building corner.

However, the proposed design has several wind mitigations features to ameliorate the aforementioned adverse wind behaviours. These are inclusive but not limited to the following:

- Sunken outdoor seating area that is shielded by a >1.5m high landscaped wall and windscreens (Figure 3).
- Extensive landscaping at strategic locations to reduce funnelling and corner acceleration effects (Figure 3, Figure 4).

With these features, the publicly accessible areas are expected to be within the recommended walking comfort criterion; main building entrances are expected to be within the recommended standing comfort criterion; and the alfresco dining areas at the café are expected to be within the recommended sitting comfort criterion.

#### **Roof Terraces on Building 1**

Due to the height of the terraces are higher than the surrounding buildings for most of directions, direct winds, especially from west, south and east, are expected to flow over the terraces to cause uncomfortable wind conditions. However, the 1.8m high windscreens proposed are expected to provide sufficient shielding to this area (Figure 5). Such that this amenity area is expected to meet the more stringent standing comfort criterion; suitable for outdoor recreation.

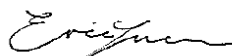
These recommendations are based on a preliminary review of the design and the surrounding developments. No detailed analysis or empirical calculations have been carried out. Vipac recommends that a wind tunnel test be conducted to determine the wind environment in adjacent ground level pedestrian areas.

Yours sincerely

**Vipac Engineers & Scientists Ltd**

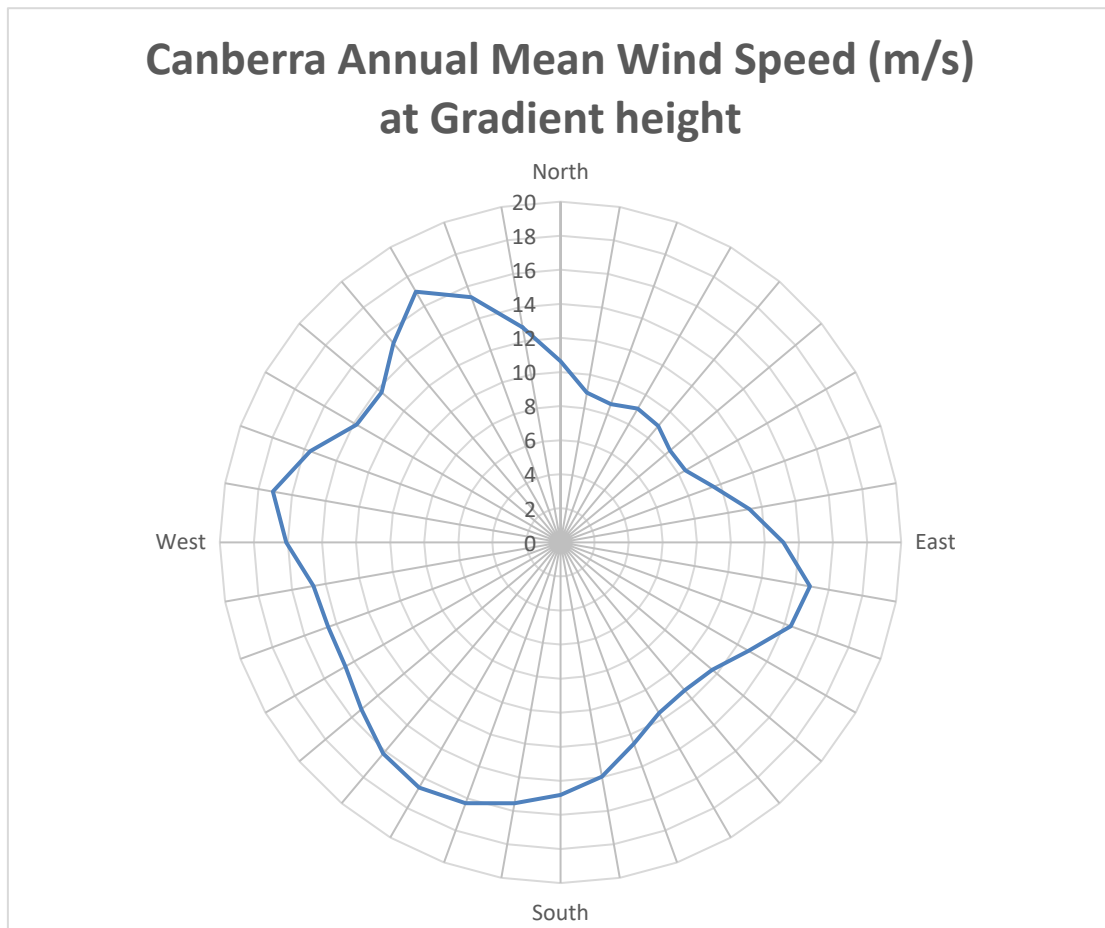


Zhuyun Xu  
Senior Wind Consultant

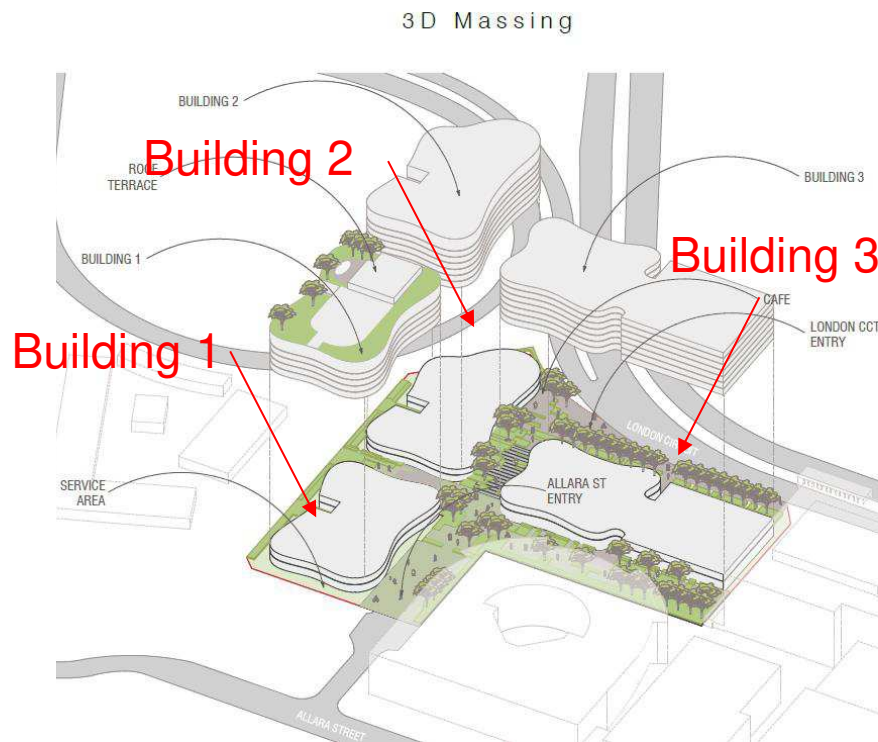


Eric Yuen  
Wind Group Leader

**Attachments:**



*Figure 1: Directional Distribution of Annual Return Period Mean Hourly Wind Velocities (m/s) at Gradient Height for Canberra.*



*Figure 2: Perspective 3D massing of the proposed development*



Figure 3: Ground Floor Plan of the proposed development



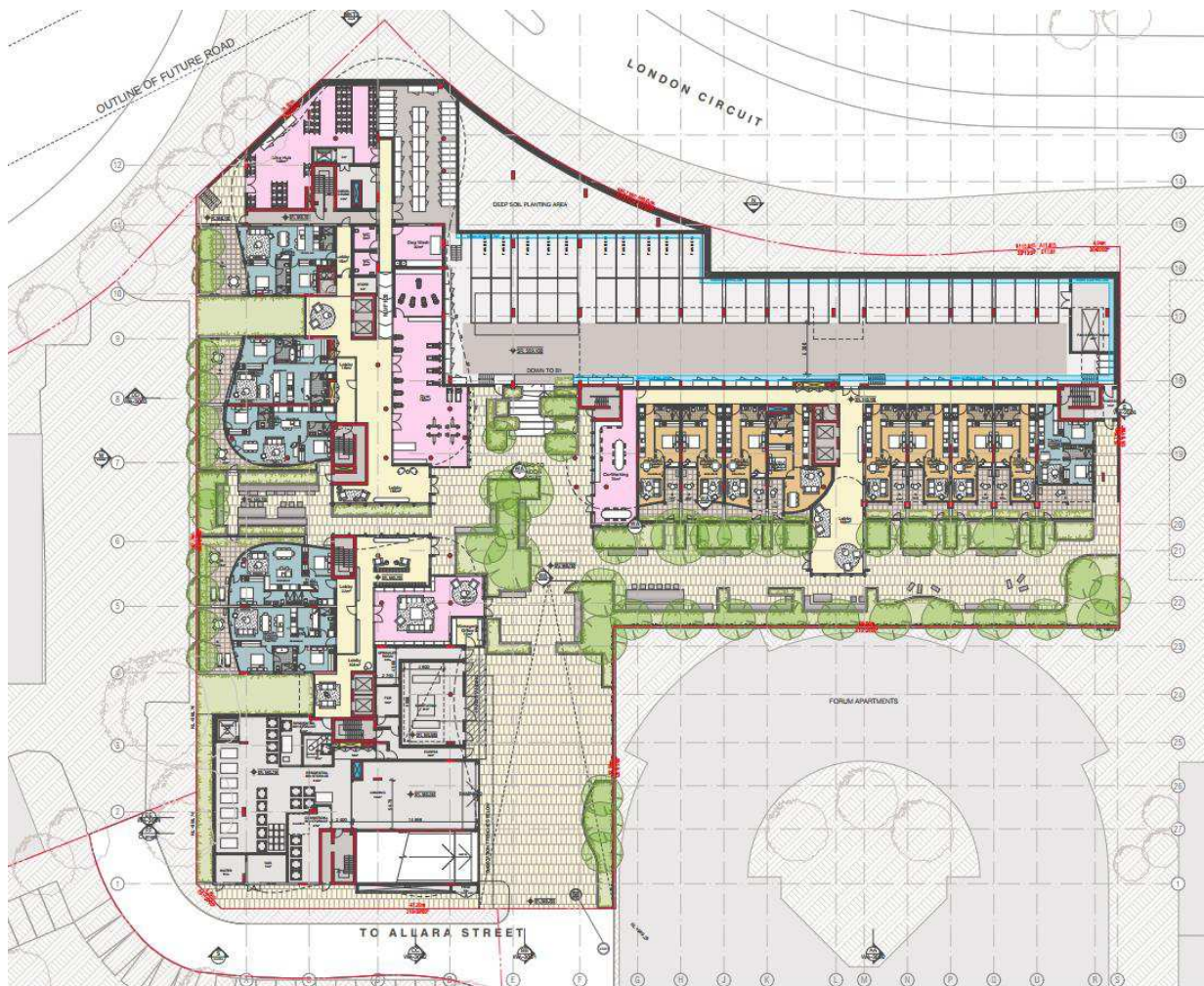


Figure 4: Lower Ground floor plan of the proposed development.

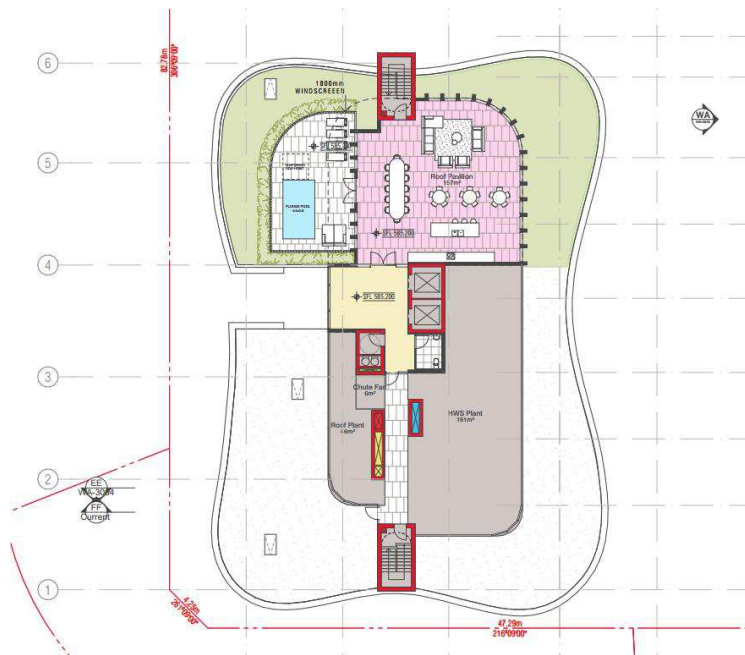


Figure 5: Building 1, Level 7 floor plan of the proposed development.