



Vipac Engineers and Scientists Ltd
279 Normanby Rd, Port Melbourne, VIC 3207, Australia
Private Bag 16, Port Melbourne, VIC 3207, Australia
t. +61 3 9647 9700 | e. melbourne@vipac.com.au
w. www.vipac.com.au | A.B.N. 33 005 453 627 | A.C.N. 005 453 627

TSA Management
Level 15, 207 Ken Street,
Sydney, NSW 2000

9 August 2022
Ref: 30N-21-0300-ADM-39827-0

Dear Alex Lisney,

Greenwich Hospital, NSW

Vipac Engineers and Scientists completed a wind tunnel test and issued a report in March 2022 on the proposed development for the Greenwich Hospital Redevelopment (30N-21-0300-TRP-29254-1). Plans of the updated design were supplied in August 2022 from Bickerton Masters (Hospital wing only). A comparison was made with the findings in the March 2022 report. The observations and findings are as follows:

- i) An Oxygen Store, Generator and Fire Tank have been added on the north of Level 2, however, as these are located under the natural ground line, they are not expected to affect the wind environment (Figure 1);
- ii) The recommended 1.5m high solid windscreens on the Level 4 Play Area have not been included in the updated plans, and the location and extent of the Play Area has shifted to the west (Figure 2). As such the recommended windscreens are still required to achieve the target sitting comfort criterion. Figure 3 shows the updated windscreen locations to reflect the latest plans;
- iii) An entrance has been introduced between the Play Area and Outdoor Café on Level 4 (Figure 2). However, with the proposed colonnades on either side of the entrance and the 1.5m high solid windscreens recommended above, the wind speeds at this location are expected to be within the recommended standing comfort criterion;
- iv) The recommended 1.5-1.8m high raised planter on the Level 5 terrace in the southeast has not been included in the updated plans (Figure 4). In consideration of the proposed wires and vines/climbers at this location, Vipac expects these to have a similar effect. However, they are recommended to be extended further along the southwest (Figure 5);
- v) Courtyards have been added on the north of Level 5 in the updated plans (Figure 4), and are represented by test locations 57, 59 and 60 in the March 2022 wind tunnel test. Wind tunnel test data shows that these locations measured wind speeds well within the recommended walking comfort criterion. As such, no recommendations for wind amelioration are provided;
- vi) The extent of the northern terrace on Level 6 has increased in the updated plans, and harbour structures have also been added (Figure 6). Wind speeds at this location are not expected to be significantly different from what was measured in the March 2022 wind tunnel test; and
- vii) The extent of the northern terrace on Level 7 has been reduced (Figure 7). Wind speeds are not expected to be significantly different from what was measured during the March 2022 wind tunnel test.

Vipac has reviewed the updated drawings and determined that the changes listed above are in line with the wind tunnel test results carried out in March 2022.

In conclusion, the August 2022 design of the proposed development (Hospital Wing) is expected to fulfil:

- The safety wind criterion at all test locations;
- The recommended standing comfort criterion at building entrance areas;
- The recommended sitting comfort criterion at the ground floor alfresco dining areas / play area **with recommendations**; and
- The recommended walking comfort criterion at the communal and rooftop terrace areas **with recommendations**.

As there were no other significant massing changes to the updated design, Vipac makes no further recommendations for wind amelioration to the August 2022 plans.

Yours sincerely,

Vipac Engineers & Scientists Ltd



Rumman Islam
Consulting Engineer



Eric Yuen
Wind Team Leader

Attachments

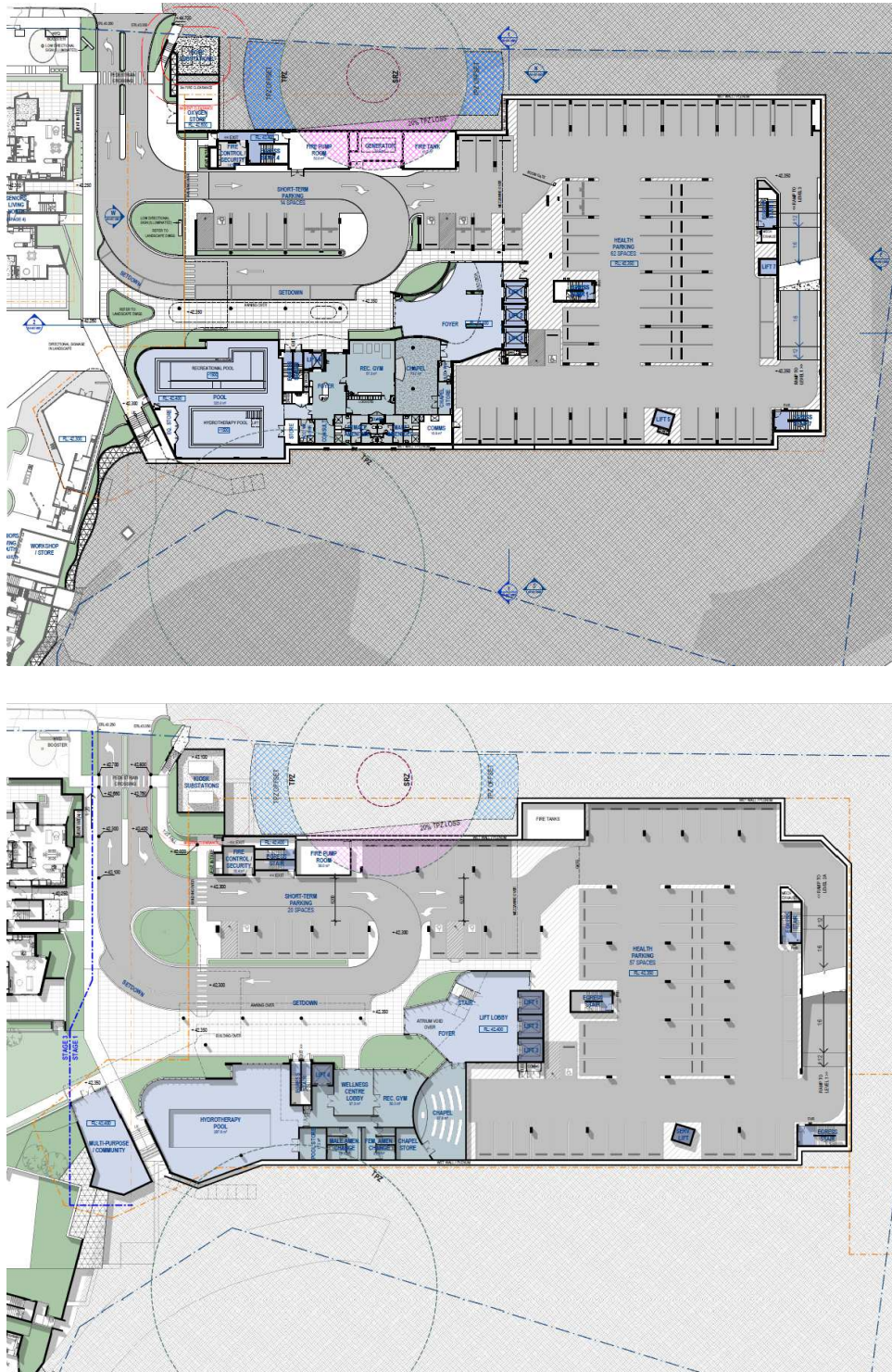


Figure 1: Comparison of Level 2 plans (Top – August 2022; bottom – March 2022).

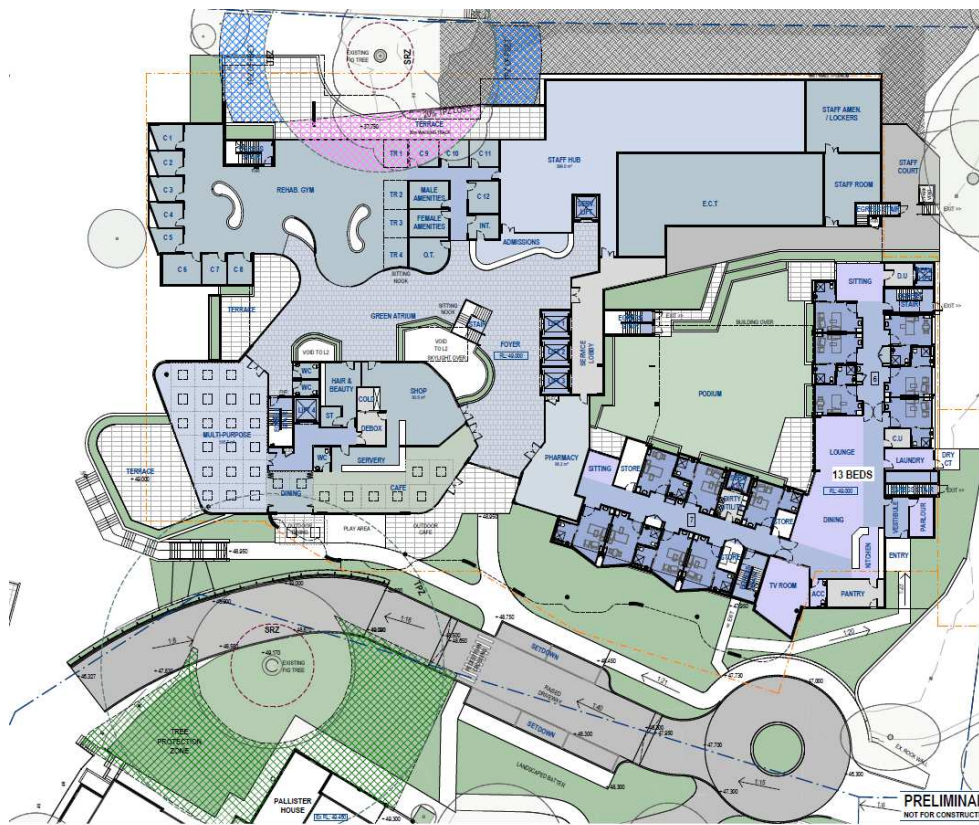
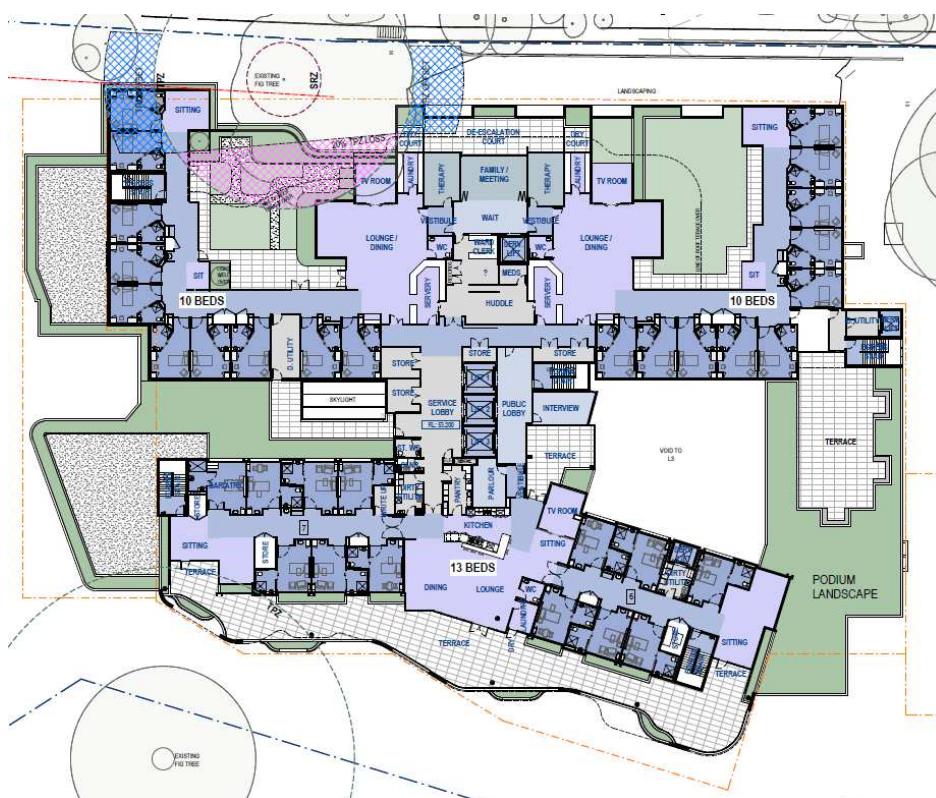


Figure 2: Comparison of Level 4 plans (Top – August 2022; bottom – March 2022).



Figure 3: Level 4 plan (August 2022) with recommended wind control measures overlaid.



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Figure 5: Level 5 plan (August 2022) with recommended wind control measures overlaid.



Figure 6: Comparison of Level 6 plans (Top – August 2022; bottom – March 2022).



Figure 7: Comparison of Level 7 plans (Top – August 2022; bottom – March 2022).