

Subject The Sutherland Hospital - Response to submissions on traffic issues

Date 28 July 2015

Job No/Ref 235554

Arup response to issues raised in the SSD report are outlined below.

| Issue raised                                                                                                                                                                                                                                                                                                                                                                                                                          | Arup response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>NSW Planning &amp; Environment – 19 June 2015</b>                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>The proposed reliance on on-street car parking to accommodate the car parking demand generated by the proposed expansion to the hospital is unacceptable. This is particularly concerning given the current private vehicle mode split for staff of approximately 95 per cent, a significant proportion of which live within the local government area. New car parking demand generated be accommodated on-site, if possible.</p> | <p>To confirm the level on site parking utilisation a recent parking count was undertaken on 26 June 2015. There are currently 972 parking spaces provided on site (see attached survey data).</p> <p>Car park occupancy surveys undertaken on this day indicate a 59% occupancy rate with 394 spaces available during the afternoon peak period. This is consistent with site observations over the last 9 months following completion of the new multi-deck car park.</p> <p>At the completion of the proposed development there will be 982 car parking spaces on-site.</p> <p>The future peak parking demand for car parking determined by the Arup parking model represents an additional 103 car movements at 2.30pm, which can be accommodated on-site given the available car parking indicated by the recent surveys.</p> <p>The new multi-deck car park was recently completed and opened in September 2014. This new car park provided a net increase of 296 on-site car parking spaces to cater for both current and future demand. It is considered that there is sufficient parking on site to cater for the use proposed in this application.</p> <p>Nonetheless sustainable travel options are being reviewed that would further reduce parking demand on site.</p> |
| <p>Should additional on-site car parking not be able to be provided, it should be demonstrated that appropriate on-site end-of-trip facilities are provided/available, and a sustainable travel plan be prepared and implemented to encourage alternative travel modes such as walking and cycling and public transport.</p>                                                                                                          | <p>Sustainable travel options were identified in the report including promotion of public transport, carpooling and active travel modes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| RMS – 27 May 2015                                                                                                                                                                                                                                                                                                               |                                                                                                                                  |
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| The layout of the proposed car parking areas associated with the subject development (including, driveways, grades, turn paths, sight distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2890.1- 2004, AS2890.6-2009 and AS 2890.2 - 2002 for heavy vehicle usage. | All new car parking areas and circulation roads have been design in accordance with the relevant Australian Standards.           |
| All demolition and construction vehicles are to be contained wholly within the site and vehicles must enter the site before stopping. A construction zone will not be permitted on The Kingsway.                                                                                                                                | Acceptable.                                                                                                                      |
| A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to the Principal Certifying Authority prior to the issue of a construction certificate.                                                         | A Construction Traffic Management Plan would be prepared – the SSD Traffic Report included an outline of issues to be addressed. |

| Sutherland Shire Council – 19 June 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| The traffic and parking assessment undertaken by Arup concludes (p.14) that the "total additional demand is therefore 91 staff+ 12 patient/visitor= 103 spaces. It is unclear however, how these figures have been arrived at. The proposal results in a loss of 10 existing spaces and the Arup report states that the additional 140 spaces approved under a previous development application and currently under construction will cater for the demand created by the additional demand generated by the current proposal. However, the graphs comparing the existing and future parking profiles for the site (Figures 7 and 8) indicate that the new development will cause peak parking demand to exist parking availability between the hours of 10am and 4pm. | <p>Arup modelled both the existing and future activity profiles to determine the likely change in car parking demand for the future growth predictions for staff, patients and visitors. The model is based on a profile of attendance over a typical day with a vehicle mode share and car occupancy applied to determine the number of car trips and hence car parking spaces required.</p> <p>The modelled parking demand for existing conditions indicates a peak parking accumulation of 989 vehicles at 2.30pm. A future peak parking demand of 1,092 was determined on a busy day which occurs at 2.30pm coinciding with the nursing shift changeover. This represents an additional 103 car movements at this particular (and limited) time.</p> <p>The recent car park surveys indicate that existing demand is less than has been modelled, with 394 spaces available during the afternoon peak period. This is more than the additional 103 spaces determined as the future increase in demand.</p> <p>At the completion of the proposed development there will be 982 car parking spaces on-site. This indicates that only at this peak changeover time (and on a very busy day) that there may be a need for street parking to be used (however this assumes the Hospital's parking is at</p> |

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| Sutherland Shire Council – 19 June 2015                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                                                                                                                                                                                                                                                                                                                                                              | <p>capacity which has <u>not</u> been recorded since opening of the new multi-deck over 9 months ago).</p> <p>From the site survey on 26 June 2015, and observations over the last 12 month period, on street parking is used by staff, visitors, and workers and customers of surrounding visitors. There is however sufficient parking on site to cater for hospital staff patients and visitors.</p> <p>The new 140 space on-grade car park is a replacement car park for those spaces that will be displaced when the works to the hospital expansion commences.</p> <p>There is sufficient car parking on the site for current and future levels of demand however sustainable travel options could reduce car demand. These measures are described in the report.</p> |
| <p>Given the above inconsistencies, Council requests that the Department clarify the parking demand generated by the proposal and assured itself that the level of on-site parking is commensurate with the demand given the pressure on street parking in the residential areas around the Sutherland Hospital and the nearby Kareena Private Hospital.</p> | <p>As mentioned above, additional on-site car parking is not required. The business case for the recently constructed multi-storey car park was based on future campus growth, in particular this current expansion recognised that there will always be staff and visitors who choose to park on-street whilst there is an on-site parking fee.</p> <p>The additional 140 car parking spaces constructed in the north east corner were justified as they replaced spaces lost due to construction of the new building.</p>                                                                                                                                                                                                                                                 |

| Transport for NSW – 25 June 2015                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p>TfNSW encourages the hospital to increase the number of bicycle parking spaces, along with end of trip facilities. This could be focussed on good bicycle parking options at a number of nodes across the campus to make them accessible to staff who choose to ride.</p> | <p>The hospital currently has 2 bicycle parking areas which are underutilised:</p> <ul style="list-style-type: none"><li>• Killara entrance has a purpose built under-cover rack for 5 bikes. This bicycle rack is rarely used and there is no historic evidence that it has not catered for bicycle parking demand at any point in time.</li><li>• The Main Entrance has an undercover rack for 5 bikes which will be reinstalled as part of the new design. This bicycle rack is infrequently used and there is no historic evidence that it has not catered for bicycle parking demand at any point in time.</li></ul> <p>Current bicycle journey to work mode share for the Sutherland region is 0.7% of total trips. If this can be doubled for the hospital then a 1.4% target for staff would result in up to 18 bicycle movements.</p> <p>The two existing bicycle parking areas will be retained.</p> |

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## Update to Car Parking Utilisation

The existing car parking areas on the site and the streets where there is on-street car parking occurring in the vicinity of the hospital are shown below.





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The on-site and on-street car parking areas were counted on Friday 26 June in the peak afternoon period to determine the current level of utilisation. There were 972 car parking spaces on the campus at the time of the survey. It should be noted that the new 140 spaces at-grade north east car park was not open. This car park will accommodate cars displaced by the TSH redevelopment.

At 1pm there were 578 cars parked on-site which is a 59% occupancy rate. There was very little change to this occupancy level at 3pm. At 1pm there were 408 cars parked on street. The cars parked on-street comprise residents and employees and visitors to Sutherland Hospital, Kareena Private Hospital and a few nearby clinics and small businesses. We estimate that approximately 50% of on-street car parking is associated with Sutherland Hospital which is 200 cars. Therefore at the time of the survey there were approximately 780 cars parked associated with the hospital.

| On-Site Parking Count |            |            |            |
|-----------------------|------------|------------|------------|
| Carpark ID            | Occupied   |            | Capacity   |
|                       | 1pm        | 3pm        |            |
| 1                     | 2          | 3          | 6          |
| 2                     | 1          | 1          | 2          |
| 3                     | 2          | 2          | 3          |
| 4                     | 1          | 1          | 2          |
| 5                     | 1          | 1          | 2          |
| 6                     | 2          | 2          | 2          |
| 7                     | 1          | 2          | 2          |
| 8                     | 6          | 5          | 10         |
| 9                     | 3          | 2          | 4          |
| 10                    | 3          | 5          | 5          |
| 11                    | NA         | NA         | NA         |
| 12                    | 3          | 2          | 3          |
| 13                    | 9          | 5          | 9          |
| 14                    | 1          | 3          | 6          |
| CP1                   | 87         | 70         | 125        |
| CP2                   | 10         | 9          | 57         |
| CP3                   | 19         | 21         | 59         |
| CP4                   | 28         | 27         | 39         |
| CP5                   | 331        | 344        | 566        |
| CP6                   | 5          | 7          | 7          |
| CP7                   | 63         | 63         | 63         |
| <b>Total</b>          | <b>578</b> | <b>575</b> | <b>972</b> |

| On-Street Parking Count          |            |
|----------------------------------|------------|
| Street Name                      | Occupied   |
|                                  | 1pm        |
| Chamberham Avenue                | 40         |
| Beresford Road                   | 7          |
| Carrington Avenue                | 41         |
| Karoola Crescent                 | 24         |
| Kingsway (north of Hosptial)     | 32         |
| Hinkler Ave                      | 51         |
| Taren Road (south of Kingsway)   | 33         |
| Kindilan Place                   | 22         |
| Kareena Road (westo of Hospital) | 16         |
| Kanimbla Road                    | 142        |
| <b>Total</b>                     | <b>408</b> |

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On-site car parks were counted at 1pm followed by the on-street car parking as shown below.





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On-site car parks were also counted at 3pm as shown below.

