



7 February 2013

Mr Cameron Sargent
A/ Director Metropolitan and Regional Projects North
as delegate for the Director General
Major Projects Assessment
23 Bridge Street
Sydney, NSW 2000

Dear Mr Sargent,

RE: UNSW Materials Science and Engineering Building (MSEB)

We have reviewed comments received from NSW Planning & Infrastructure and Randwick Council regarding the above proposed development particularly associated with the parking issues. Accordingly, the following points on car parking demand are provided in support of the development application:

1. The Traffic and Parking Report (URaP/TTW, 2012) suggests that the ultimate development of the site would generate an additional parking demand of some 30 spaces. This demand however will be met by the steady decrease of parking demand as the result of consistent increase of active and public transport usage. This is based on the following extract from the above report:

The parking demand for an additional 24 staff on the site would only result in a maximum 10 spaces (0.41x24). This is on the basis that the 2012 travel survey as shown in Appendix B (UNSW) showed that 41% of staff travelled to the campus as car drivers and the remaining 59% were either car passengers, travelled by motorbike, public transport, walked or cycled. (Note: Table 3.1 provides overall travel mode to the Campus by students and staff, while the Table "Travel Trends" in Appendix B provides information on staff and students separately).

*It is anticipated that the proposed building will accommodate some **144 additional** persons at its final completion (initially 24 staff with a parking demand of 6 to 10 spaces and a further shell population of 120 staff, please see section 3.1).*

The additional parking demand for additional 144 staff of the site could only result in a maximum 30 spaces. This is on the basis that the 2012 travel survey (UNSW) showed that 41% of staff travelled to the campus by car and the remaining 59% were either car passengers, travelled by motorbike, public transport, walked or cycled i.e. 59% created no demand for parking. In 5 years' time (see clause 6 of the DCP Transport Strategy) when the Building would be at its full capacity it could reasonably be argued that the 41% would decrease further – say to a conservative 35% (based on survey data "Travel Trends" that shows a reduction of 14% car driver mode among staff from 53.5% in 2007 to 41.4% in 2012, see Appendix B – in fact a more realistic figure would be 30% car driver as mode of travel among staff for a 5 year period but as conservative rate of 35% has been used instead).

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*It could therefore be reasonably assumed that 50 of the additional 144 staff that to be accommodated in the Building would then be drivers (i.e. 35% x 144). Calculation of their parking requirement would be based on the 60% of staff attending at the 11am peak period using the DCP transport strategy. Therefore 60% of 50 additional staff equates to **30** additional parking spaces. As it is illustrated in Table 3.1, the demand for car use has consistently been decreased by the University users from some 29.13% motor vehicle use in 2007 to 18.2% in 2012 (considering that public transport use has increased from 49% to 58% during the same period). Therefore this steady decrease in car parking demand could easily accommodate the additional 30 parking spaces, if it would be required, within the University Campus (i.e. as less people would be using their car, more parking spaces within the campus becomes available).*

2. The submissions on the development application argue that a total of some 63 car parking spaces would be needed as the result of proposal while 84 parking spaces will be lost as well. This is shown as part of the Randwick Council's submission stating that:

The accompanying traffic and parking study states that the new building will accommodate up to 700 staff but claims a majority of these will be relocated from elsewhere within the Campus. Only 24 additional staff will initially result increasing to 144 at its final completion. On what basis is this calculation determined is not explained in the Environmental Impact Statement. It is also claimed the building will not contribute to additional student numbers.

The parking study has calculated the expected parking demand generated to be in the order of 30 spaces based on the decreasing trend of staff travelling to work by motor vehicle to 35% and 60% of staff attending the 11am peak based on the transport Strategy for the DCP. The parking study has misinterpreted the findings of the DCP Transport Strategy in that it assumes that 60% of staff arriving by car will be at the 11am peak. This is not what the transport study is indicating and it is actually indicating that 60% of the staff arriving at the 11am peak travel by private vehicle. The error results in the study significantly underestimating the amount of parking required.

The cater for the 11am peak, parking would actually have to be provided at the rate of $60\% \times 144 = 86$ spaces which is significantly above the 30 spaces calculated by the parking study.

Council does recognise the decreasing trends in staff arriving to campus by motor vehicle and notes the findings of the 2012 travel survey which indicate that 44% of staff will be arriving by private vehicle. Based on this rate:

Number of parking spaces required: $0.44 \times 144 = 63$ spaces.

The lack of any parking for staff or visitors is not supported by Council. In addition the total of only 24 additional staff increasing to 144 is questionable. Additional parking demand may be greater than the 63 spaces calculated.

No basement parking is proposed, contrary to DCP 2020.

DCP 2020 requires 100 short-term parking to be located in lower campus with access from High Street over time as new visitor parking for the Campus. The loss of 84 spaces is not consistent with this requirement.

The proposal will create a total parking deficiency of 147 spaces which takes into account the existing 84 spaces removed by the proposal as well as the 63 spaces generated by the proposed development. This is grossly excessive and will lead to a chronic parking shortfall on lower campus and increase the impact on on-street parking in High Street.

It is acknowledged that the future light rail extension recently announced by NSW Government will contribute to reducing the parking

demand but this is a number of years away and would not compensate enough to consider the parking deficiency acceptable.

3. The level of car use among staff is shown in 2012 UNSW Survey - Travel Trends (see Appendix B as part of Traffic and Parking Report) and it clearly indicates that 41.1% of staff arrive or depart to/from the university as car drivers. The rate of 44% that council has used includes car passengers and motorbikes which is not applicable/appropriate.
4. It is evident that there would be an initial maximum car parking demand of some 8 spaces for the new MSEB as the result of 24 additional staff ($41\% \text{ drive car} \times 24 \times 0.80 \text{ staff attendance} = 8 \text{ spaces}$).
5. The parking demand for 144 possible future staff could be analysed by considering the following:
The immediate parking demand: $41\% \times 144 = 60$ spaces; however not all these spaces will be required at one time as not all staff will be on site at any one time (due to staggered working day and hours, holidays, sickness, seminar at other places – this is a standard practice for large organisations as UNSW DCP has used a rate of 60%). A more conservative figure would be 80% (supported by survey data) which would result a parking demand of 48 spaces (vs to Council estimation of 63 spaces).
6. However, the above assessment could only be valid if such demand would occur immediately. In fact, ultimate development of the site and its ultimate parking demand may not occur at all or it would be in 5 to 10 years' time. Therefore, it is only appropriate to use a travel trend of staff during such period to estimate a realistic car parking demand. This methodology has been employed in Traffic and Parking Report as part of the Development Application. On this basis a reduction of more than 12% has been experienced among staff car drivers between 2007 and 2012 (see Travel Trends in Appendix B of Traffic and Parking Report). Therefore, the future parking demand for additional future 144 staff would be $144 \times 35\% = 50$ spaces. This is further reduced by availability of all staff on site i.e. $80\% \times 50 = 40$ spaces. Note: the rate of 35% indicates a reduction of 6% (instead of using 12%) from the current 41% car use.
7. The above assessment shows that the future staff parking demand would be 50 spaces at a maximum level or 40 spaces during normal operational hours. As indicated in the report such demand is progressively reduced by improving public transport facilities such as light rail and promotion of active transport among staff. However, the required parking spaces are met within the campus which appropriate within the national and state initiatives on health by way of active transport as all these spaces would be within 800m walking distance to the site.
8. At the completion of the Materials Science and Engineering Building in 2014 there will be a net gain of 19 car parking space on the campus in comparison to its initial parking spaces in 2011 (the net gain takes into account the 84 spaces lost and others gained during the course of MSEB's development – see Kensington Campus Parking: Summary of Increases and Decreases 2011 to 2014). Therefore, the immediate parking demand of 8 spaces for the site is met by such parking provision. The attached table provides information on parking situation/management measures within the Campus.
9. Considering that the ultimate additional parking demand would be in order of 40 spaces, a theoretical parking deficiency of some 21 spaces ($40-19=21$) could be experienced. However, due to the long term implementation of the ultimate expansion and consistent increase of public transport use among staff, such provision may not be required. The introduction of a light rail near the Campus will significantly reduce such parking demand. Therefore, it is viable to provide appropriate level of parking instead of over provision, particularly at a climate when such resources are scarce and endeavours are made to meet environmental challenges.

As it is demonstrated above, the proposal meets its parking demand and will have no adverse impact on operation of car parking activities. Any possible future additional parking demand as the result of future expansion of the site would be minimal and will be met by current strategies and parking management measures. This is aligned with UNSW DCP strategy where use of active and public transport is highly encouraged.

Considering that parking demand within the UNSW Campus is always subject to constant change and the rate of staff car drivers is more likely be reduced to 30% instead of 35% (as it is employed as part this analysis) a lower car parking demand would be expected for the proposed site. Therefore, the proposed development is supported in terms of its traffic and parking requirements.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'K Tara', with a stylized, cursive script.

DR KAM TARA

Director
URaP-TTW Pty Ltd

KENSINGTON CAMPUS PARKING: SUMMARY OF INCREASES & DECREASES 2011 -2014

Approval Process	Location	Works	Completion Date	Resulting Increase/Decrease	Total Campus Parking *
UNSW - parking audit	Kensington campus	Audit of existing parking on the campus	Various		2,670
Randwick City Council - DA/168/2011	Western campus	Demolition of Building G2 and associated surface parking	2011	-26	2,644
Randwick City Council - DA/259/2011	Western campus	Reconstruction of surface car park	2011	163	2,807
Randwick City Council - DA/385/2011	Lower campus	Gate 2 Housing early works - demolition of surface parking	2011	-126	2,681
Randwick City Council - DA/494/2011	Lower campus	Gate 2 Housing main works - construction of basement car park	2012	77	2,758
Randwick City Council - DA/739/2011	Middle campus	Kensington Colleges early works - demolition of surface parking	2011	-25	2,733
Randwick City Council - DA/748/2011	Middle campus	Kensington Colleges main works - construction of basement car park	2013	107	2,840
UNSW - Infrastructure SEPP - REF	Lower campus	Demolition of Petroleum Engineering building and surface parking	2012	-50	2,790
UNSW - Infrastructure SEPP - REF	Lower campus	Lower campus development enabling works - demolition of surface parking	2012	-35	2,755
Department of Planning & Infrastructure - SSD 5373	Lower campus	Materials Science & Engineering building - demolition of surface parking	2014	-84	2,671
UNSW - exempt development	Lower campus	Construction of 11 spaces adacent to Tyree Energy Technologies Building & 7 spaces adjacent to Building D7	2012	18	2,689
				Net increase since 2011	19

* Excludes loading bays & motor cycle parking

Commentary

As the above table shows, due to the UNSW construction program, at any particular time there is a loss or gain in the number of available car spaces on the campus.

There is also a loss or gain of available spaces from time to time due to internal management of parking needed at short notice for student graduations, VIP visits and special events on the campus.

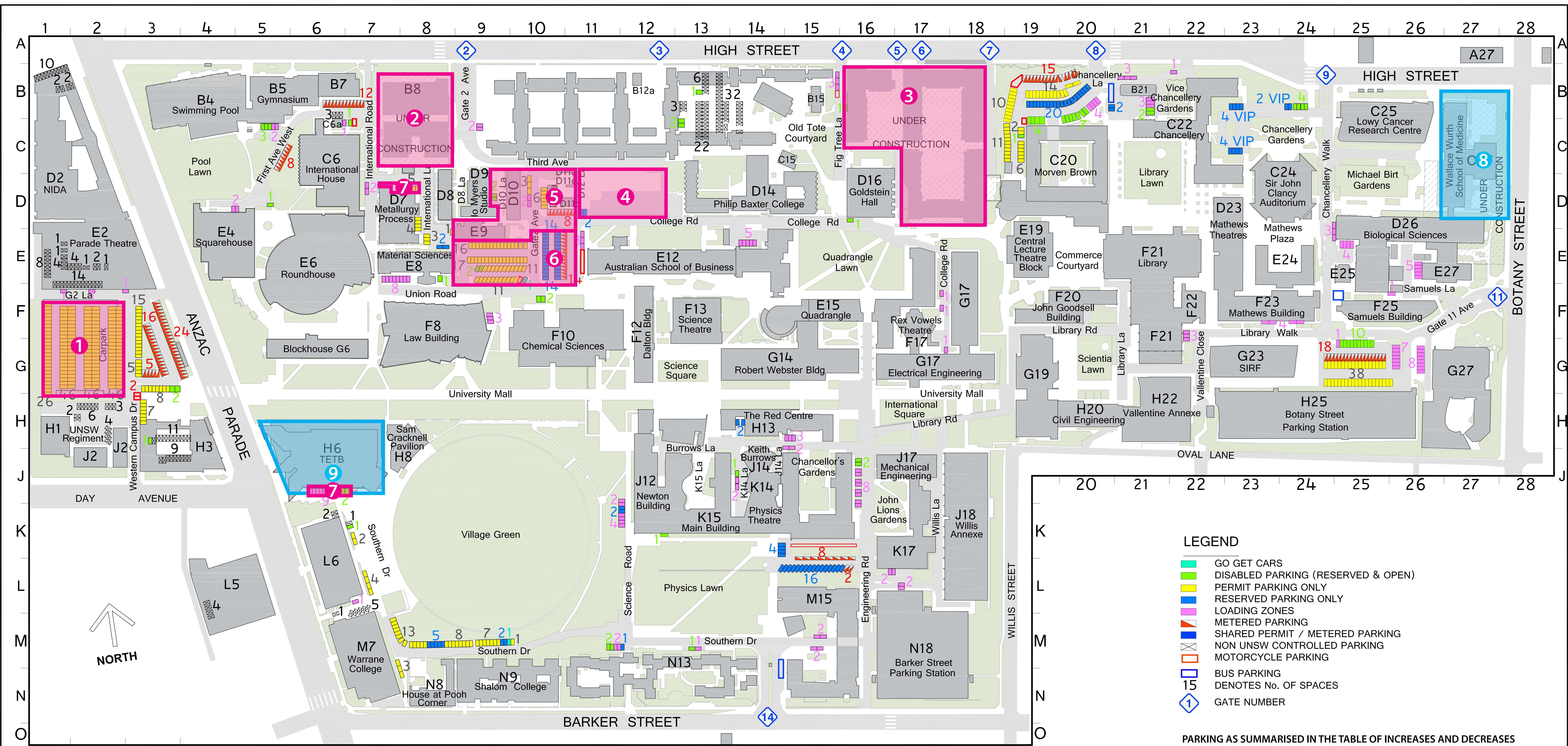
Occasionally, UNSW also constructs and removes a small number of car parking spaces as exempt development works as part of its internal management and campus improvement program.

At the completion of the Materials Science and Engineering Building in 2014 there will be a net gain of 19 car parking space on the campus over that which was available in 2011.

This gain can be offset against the theoretical requirement for car spaces required for the 144 addditional staff within the building of 40 spaces i.e. 35% of staff would be drivers in 5 years time (TTW Report) and only around 80% of staff attend on any one day (UNSW Travel Survey Analysis Summary). Therefore 40 - 19 = 21.

The need for 21 spaces is not a "chronic parking shortfall" as suggested by Council, but represents only 0.8% of total campus car parking and is demand which will easily be absorbed with Light Rail on Anzac Parade.

Previous Major Project Approvals for the campus via MP09-0075 (Wallace Wurth Building) and MP09-0163 (Tyree Energy Technologies Building) for 384 and 100 additional staff respectively, required no provision of additional campus parking.



LEGEND

- GO GET CARS
- DISABLED PARKING (RESERVED & OPEN)
- PERMIT PARKING ONLY
- RESERVED PARKING ONLY
- LOADING ZONES
- METERED PARKING
- SHARED PERMIT / METERED PARKING
- NON UNSW CONTROLLED PARKING
- MOTORCYCLE PARKING
- BUS PARKING
- 15 DENOTES No. OF SPACES
- 4 GATE NUMBER

PARKING AS SUMMARISED IN THE TABLE OF INCREASES AND DECREASES

- 1 DA\168\2011 & DA\259\2011
- 2 DA\385\2011 & DA\494\2011
- 3 DA\739\2011 & DA\748\2011
- 4 REF PETROLEUM ENGINEERING BUILDING
- 5 REF LOWER CAMPUS ENABLING WORKS
- 6 SSD 5373 MATERIALS SCIENCE AND ENGINEERING BUILDING
- 7 EXEMPT DEVELOPMENT

RECENT MAJOR PROJECTS APPROVED WITHOUT A PARKING REQUIREMENT

- 8 MP09 - 0075 WALLACE WURTH BUILDING
- 9 MP09 - 0163 TYREE ENERGY TECHNOLOGY BUILDING

NOT FOR PUBLICATION

BARKER STREET PARKING STATION

TOTAL SPACES 913		
PERMIT PARKING42 LEVEL 1C MOTORCYCLES6 RESERVED PARKING13 PERMIT PARKING70 TOTAL89	PERMIT PARKING41 LEVEL 2C DISABLED PARKING1 PERMIT PARKING88 TOTAL89	PERMIT PARKING41 LEVEL 3C PERMIT PARKING88 LEVEL 3B PERMIT PARKING55 LEVEL 3A
LEVEL 1B MOTORCYCLES2 RESERVED PARKING40 DISABLED PARKING8 TOTAL50	LEVEL 2B PERMIT PARKING55 LEVEL 2A	PERMIT PARKING42 TICKET AND PERMIT PARKING42 LEVEL 5C
LEVEL 1A PERMIT PARKING41 LEVEL 4C PERMIT PARKING85 LEVEL 4B PERMIT PARKING55 LEVEL 4A	TICKET AND PERMIT PARKING87 LEVEL 5B TICKET AND PERMIT PARKING53 LEVEL 5A	

BOTANY STREET PARKING STATION

TOTAL SPACES 1045		
RESERVED PARKING69 DISABLED PARKING8 PERMIT PARKING13 TOTAL90	PERMIT PARKING98	PERMIT PARKING91 MOTOR CYCLES9 TOTAL100
LEVEL 1A	LEVEL 1B	LEVEL 2A
LEVEL 1A/1B	LEVEL 2A/2B	LEVEL 2B
MOTORCYCLE1 PERMIT PARKING95 TOTAL96	MOTORCYCLE1 PERMIT PARKING95 TOTAL96	MOTORCYCLE1 PERMIT PARKING95 TOTAL96
LEVEL 3A	LEVEL 3B	LEVEL 4A
LEVEL 3A/3B	LEVEL 4A/4B	LEVEL 4B
PERMIT PARKING93	TICKET AND PERMIT PARKING91 LEVEL 5B	TICKET AND PERMIT PARKING92 LEVEL 6A
LEVEL 5A	LEVEL 5A/5B	

THE UNIVERSITY OF
NEW SOUTH WALES

FACILITIES MANAGEMENT

CAMPUS: **KENSINGTON**

TITLE: **LOCATION OF PARKING SPACES**

SCALE: 1:1000@A0

LAST UPDATE: 08/10/2012

CAD REF: I:\Drawings\Site services\campus map\kensington\hug\facilities management\kenc - fm parking map.dwg