



Section 75W Application

Approved Concept plan and Staged Project Application for
the Nepean Hospital Precinct (Barber Avenue), corner of
Parker St and the Great Western Highway, Kingswood

Prepared on behalf of Aesthete No.3 Pty. Limited by TRAFFIX traffic & transport planners
Ref: 12.137 S75W Report v03 September 2012

traffix
traffic & transport planners

po box 1061
potts point nsw 1335
t: +61 2 8324 8700
f: +61 2 9380 4481
w: www.traffix.com.au
abn: 66065132961



contents

1. introduction	1
2. location and site	2
3. existing traffic conditions	5
3.1 road hierarchy	5
3.2 general description of road environment	8
3.3 public transport	9
3.4 existing site generation	11
3.5 existing intersection performances	11
4. description of proposed changes	16
5. transport management and accessibility	18
5.1 introduction	18
5.2 bus services	18
5.3 rail services	19
5.4 pedestrian and bicycle linkages	19
5.5 pedestrian safety	20
5.6 taxi services	20
5.7 site access arrangements	20
5.8 parking requirements	20
5.9 servicing	22
5.10 transport access guide	23
5.11 internal design aspects	23
5.12 demolition and construction impacts	23
5.13 traffic impacts	24
6. Conclusions	26



1. introduction

TRAFFIX was previously commissioned by Aesthete No. 3 Pty. Limited to undertake a Transport Management Accessibility Plan (TMAP) study of a proposed Concept Plan Application for The Nepean Hospital Precinct located at the corner of The Great Western Highway and Parker Street, Kingswood (MP 09_0197). This was the subject of the TMAP report prepared by TRAFFIX dated October 2009, which also included an assessment of a Stage 1 Project Application (MP 09_0220). A TMAP addendum report was subsequently submitted in support of the Preferred Project Application (PPA).

The Concept Plan was subsequently approved. This report has been prepared in support of proposed changes to the Stage 1 Project Application, in response to the Director General's Environmental Assessment Report (EAR) dated August 2011, which provides guidance in relation to several aspects of the Stage 1 Project Application that have implications in terms of the traffic and transport planning aspects of the proposal.

This report documents the findings of our further investigations in response to the EAR and in support of the Section 75W Application that is now sought. As with the previous assessments, the amended development, being located within the Penrith City Council LGA, has been assessed under that council's controls; with regard also given to the RTA's Guidelines and relevant standards.



2. location and site

The site is located within the Nepean Hospital Precinct on the south-eastern corner of the intersection of The Great Western Highway and Parker Street, at Kingswood. The site adjoins the Nepean Private Hospital and is currently occupied by an at-grade car park; and a Baptist Church and church residence with a combined area of approximately 9,571m². It is generally 'L' shaped in configuration and has frontages to The Great Western Highway, Parker Street and Barber Avenue.

The site is currently serviced by five separate accesses, four of which are situated on the Barber Avenue frontage with the remaining one situated on The Great Western Highway frontage. No access is available to Parker Street due the relatively short frontage and the close proximity to the major intersection of Parker Avenue with the Great Western Highway.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**.



Figure 1: Location

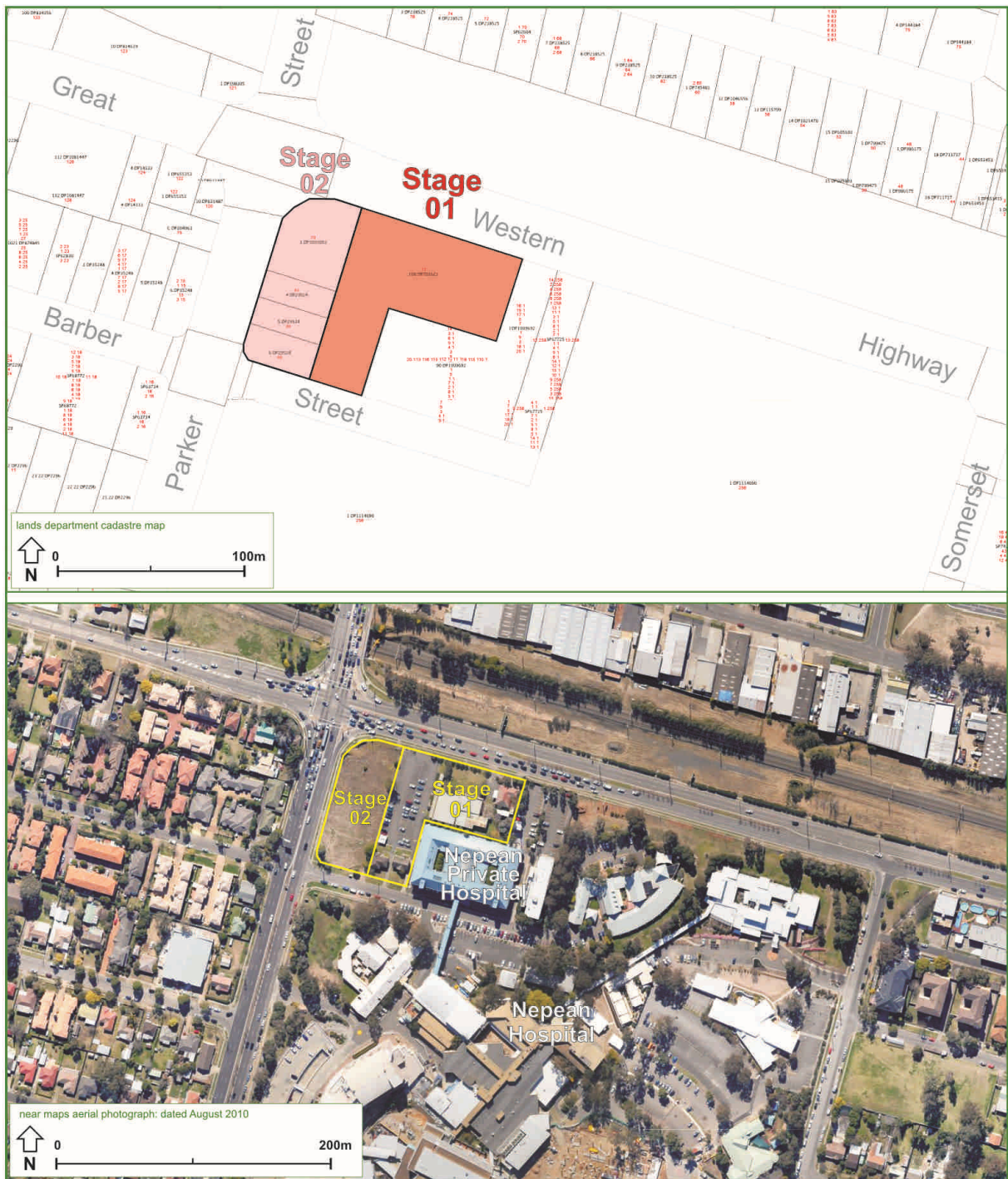


Figure 2: Site



3. existing traffic conditions

3.1 road hierarchy

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- | | |
|--------------------------------------|--|
| ➡ The Great Western Highway: | an RTA state road (SR 5) that runs in an east west direction forming a primary arterial link between Sydney's Western suburbs and the city. It carries approximately 32,000 vpd in the vicinity of the site; |
| ➡ Parker Street (The Northern Road): | an RTA main road (MR 154) that generally runs in a north south direction between Camden Valley Way at Narellan in the south and Richmond Road at Bligh Park in the north. It carries about 40,000 vpd in the vicinity of the site; |
| ➡ Somerset Street: | a local road that runs in a north south direction between The Great Western Highway at its northernmost extent and Jamison Road at its southernmost extent and carries about 5,000 vpd in the vicinity of the site; |
| ➡ Derby Street | a local road that runs in an east west direction to the south of site connecting Jamisontown in the west with Claremont Meadows in the east; and |
| ➡ Barber Avenue | a local road that runs in an east west direction extending east from Parker Street and terminating within the Nepean Hospital Precinct. This provides the primary access to the subject site. |



It can be seen from **Figure 3** that the site is conveniently located with respect to the arterial and local road systems serving the region. It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts. The major constraint to site accessibility is the concentration of traffic activity via Barber Avenue, which is restricted to left-in/left-out movements at Parker Street. This underscores the importance of obtaining an exit onto the Great Western Highway (as currently available), especially in view of the high concentration of travel demand to/from the west.

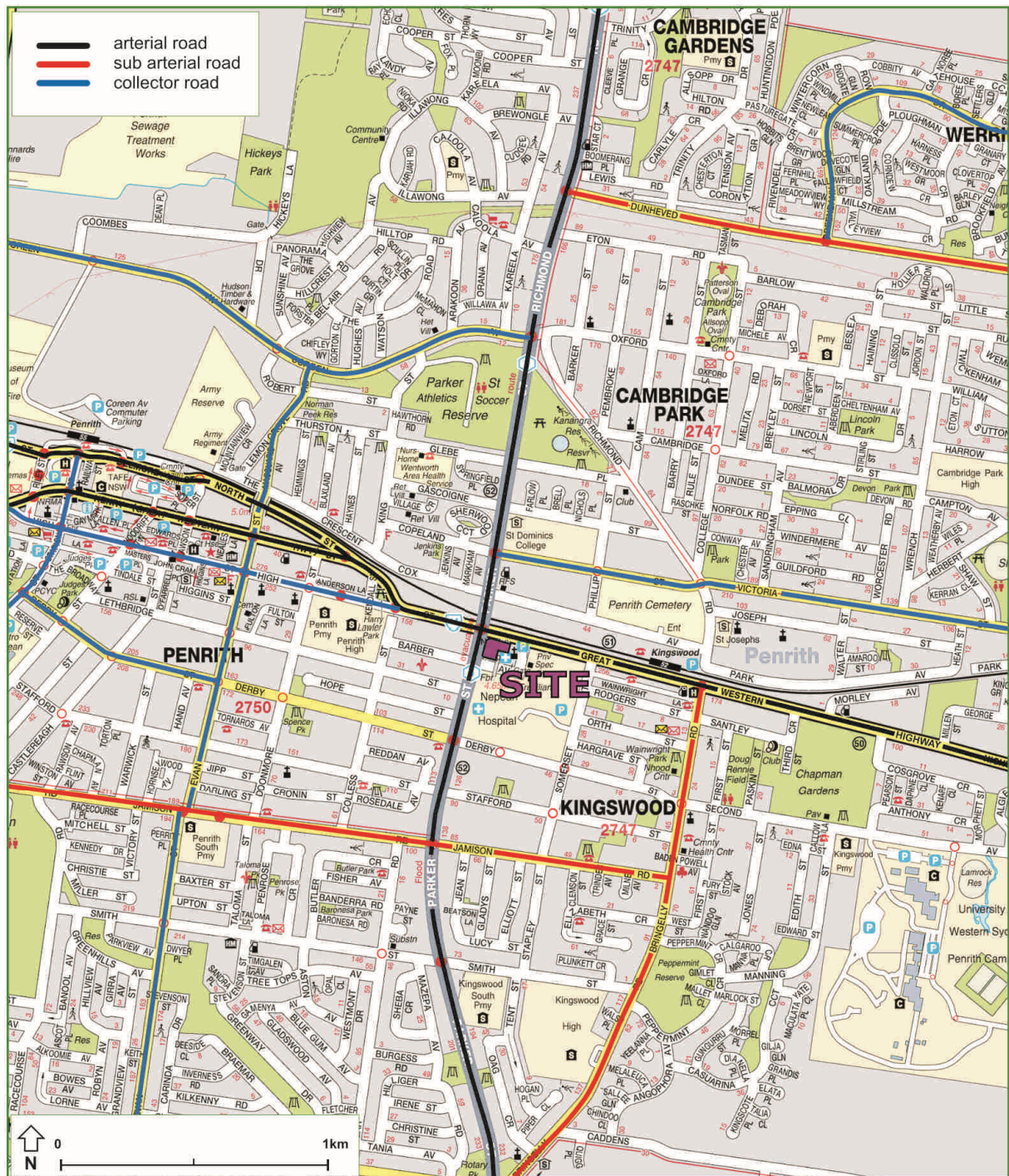


Figure 3: Road Hierarchy



3.2 general description of road environment

The Great Western Highway is constructed with a 23 metre divided carriageway and generally carries three lanes of traffic in either direction. To the immediate north-west of site is the major signal-controlled intersection of Parker Street with the Great Western Highway. Approaching this intersection from the east the Highway comprises three lanes of through traffic, with a 120 metre right turn lane and a 20 metre left turn slip lane. Approaching from the west the road comprises two lanes of through traffic, an 80 metre right turn lane and a 70 metre left turn slip lane. The speed zoning on The Great Western Highway is 60 km/hr. 'No Stopping' controls apply on both sides of The Great Western Highway in the vicinity of the site.

Parker Street, also known as The Northern Road, is constructed with a 22 metre wide divided carriageway and generally carries two through lanes of traffic in either direction. Approaching its intersection with The Great Western Highway from the north, Parker Street consists of two lanes of through traffic, a 115 metre right turn lane and a 115 metre left turn slip lane. From the south Parker Street comprises a left turn slip lane and a right turn lane both of length 100 metres.

Parker Street also forms the northern and southern approaches to a 4-way signalised intersection with Derby Street to the south of the subject site. Both of these approaches consist of two lanes of through traffic, with short opposing right turn lanes of length 44 metres and 36 metres. The speed zoning on Parker Street is 70km/hr.

Somerset Street is constructed with a 12 metre wide carriageway and carries a single lane of traffic in either direction. It forms a priority controlled 'T-junction' with The Great Western Highway to the east of site, with a right turn bay in the Highway of length 58 metres. Right turn movements out of Somerset Street are prohibited by local channelization.

Barber Avenue is constructed with an 8.8 metre wide undivided carriageway and carries a single lane of traffic in either direction. Directly adjacent to the site Barber Avenue forms the stem of a priority controlled 'T-junction' with Parker Street, with only left-in and left-out movements permitted due to the continuous median within Parker Street. Approximately 70 metres east of this intersection the road width tapers to 7.3 metres, and about 100 metres beyond this point the road terminates at the Hospital.



3.3 public transport

The journey to work data available from Transport NSW for the subject locality (Travel Zone 1856) indicates that 64% of people drive into this zone to work (with a very small sample of only 375 persons travelling); while 79% of people drive to work outside the zone (with 2,235 persons travelling). This is a high level of car dependency and this presents a challenge for the subject site, with measures required to reduce this situation and promote alternate travel modes as discussed further below.

The existing bus services that operate in the locality are shown in **Figure 4**. It is evident that the site benefits from good access to the public transport system with buses travelling along the Great Western Highway and Parker Street immediately adjacent to the site; as well as along Derby Street which lies only 350 metres to the south of the site. In addition, Kingswood Railway Station lies 700 metres to the east of the site which is within the usual 800 metres walking distance for employees.

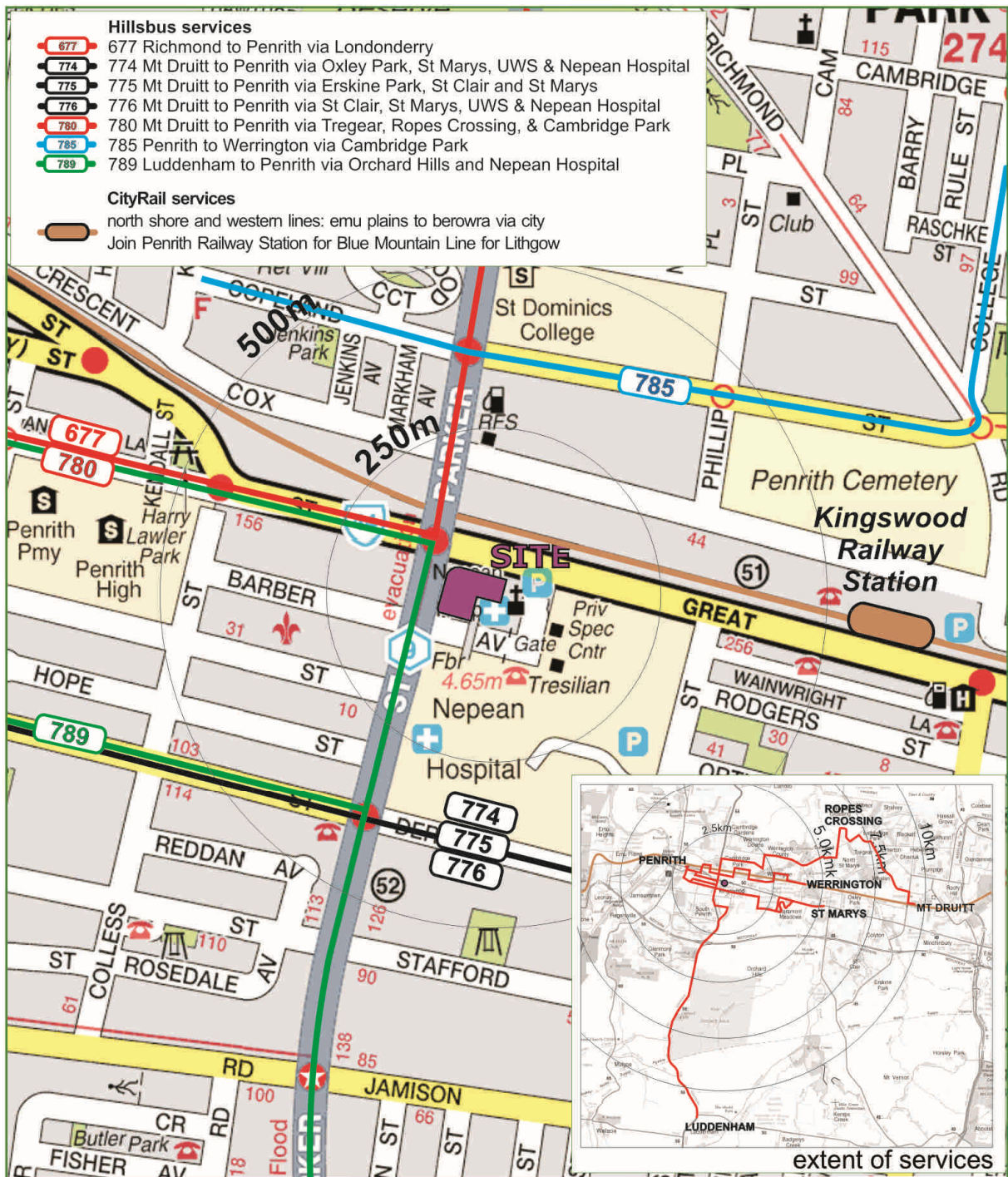


Figure 3: Existing Public Transport Services



3.4 existing site generation

For the purpose of this assessment, no existing site generation has been assumed. That is, the development traffic is a net increase over existing conditions as reported upon below.

3.5 existing intersection performances

For the purposes of the assessment of traffic impacts of this development, surveys were previously undertaken (in 2009) of the most critical intersections in the vicinity. The key intersections in the locality that are of interest and were surveyed and assessed during the AM and PM peak periods are as follows:

- The intersection of Parker Street and The Great Western Highway;
- The intersection of Parker Street and Barber Avenue;
- The intersection of Parker Street and Derby Street; and
- The intersection of Somerset Road with The Great Western Highway;

The results of these surveys are shown in **Figures 5 and 6** which relate to existing conditions at the time of maximum traffic volumes over the period surveyed (8-9am and 4-6pm). The results of these surveys were analysed using the SIDRA computer program to determine their performance characteristics under existing traffic conditions. The SIDRA model produces a range of outputs, the most useful of which are the Degree of Saturation (DOS) and Average Vehicle Delay per vehicle (AVD). The AVD is in turn related to a level of service (LOS) criteria. These performance measures can be interpreted using the following explanations:

DOS - the DOS is a measure of the operational performance of individual intersections. As both queue length and delay increase rapidly as DOS approaches 1, it is usual to attempt to keep DOS to less than 0.9. When DOS exceeds 0.9 residual queues can be anticipated, as occurs at many major intersections throughout the metropolitan area during peak periods. In this regard, a practical limit at 1.1 can be assumed. For intersections controlled by roundabout or give way/stop control, satisfactory intersection operation is generally indicated by a DOS of 0.8 or less.

AVD - the AVD for individual intersections provides a measure of the operational performance of an intersection. In general, levels of acceptability of AVD for individual intersections depend on the time



of day (motorists generally accept higher delays during peak commuter periods) and the road system being modelled (motorists are more likely to accept longer delays on side streets than on the main road system).

LOS - this is a comparative measure which provides an indication of the operating performance of an intersection as shown below:

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.



Figure 4: Existing AM Peak Traffic Volumes



Figure 5: Existing PM Peak Traffic Volumes



A summary of the modelled results from the original traffic report are provided below. Reference should also be made to the SIDRA outputs provided in that report which provide detailed results for individual lanes and approaches.

Table 1: Existing Intersection Performance: AM and PM Peak Hour

Intersection Description	Period	Control Type	Degree of Saturation	Intersection Delay	Level of Service
Parker St. & The Great Western Highway	AM	signals	1.311	60.3	E
	PM		1.313	68.1	E
Parker St. & Barber Ave.	AM	priority	0.301	21.4	B
	PM		0.350	22.1	B
Parker St. & Derby St.	AM	signals	1.00	25.6	B
	PM		1.00	27.3	B
Somerset St. & The Great Western Highway	AM	priority	0.333	13.6	A
	PM		0.427	15.9	B

It can be seen from Table 1 that with the exception of the adjacent main intersection of Parker Street with the Great Western Highway these critical intersections operate satisfactorily under the existing 'base case' scenario, all with a levels of service A or B during both peak periods and with moderate delays. The intersection of the Parker Street and the Great Western Highway operates at level of service E during both peak periods and is therefore at capacity. The average delay is 60.3 seconds in the AM peak and 68.1 seconds in the PM peak, with evidence of right turn bays currently overflowing on the northern, eastern and southern approaches. The through movement on the eastern approach (westbound) on the highway during the PM peak is at level of service F, with an average delay for that movement of 127.5 seconds.

Nevertheless, it is stressed that the most relevant use of this analysis is to compare the relative change in the performance parameters as a result of the proposed (amended) development. This is discussed further in Section 5.



4. description of proposed changes

A detailed description of the development proposed under this Section 75W Application is provided in the Section 75W Planning Assessment report prepared separately, of which this report forms a part. In summary, the proposed changes compared to the Preferred Project Application are as follows, for each Stage.

Stage 1: Serviced Apartments, Commercial Office and Local Retail

- Development of 87 serviced apartments increased from 76 apartments comprising
 - 76 one bedroom units; and
 - 11 two bedroom units
- 9,226m² of commercial floor area reduced from 18,861m² GFA (-9,635m²);
- 1,220m² NFA of retail area reduced from 1,386m² NFA (-166m²)
- Introduction of 36 residential units comprising:
 - 4 one bedroom units; and
 - 32 two bedroom units
- Provision of 402 parking spaces reduced from 449 spaces (-47 spaces).
- Provision of 85 bicycle spaces reduced from 139 spaces.
- Provision of 57 motorcycle spaces reduced from 60 motorcycle spaces.

Stage 2: Residential Units and Local Retail – This remains unchanged as follows

- Development of 78 residential units comprising:
 - 24 one bedroom units; and
 - 54 two bedroom units
- 1,814m² NFA of retail area (same as lettable area)
- 1,505m² of commercial area; and
- Parking for 286 parking spaces



It can be seen that the main changes in Stage 1 relate to a significant reduction in commercial floor area and the introduction of 36 residential units. The parking and traffic impacts arising from the above changes to the Stage 1 Development are discussed in the following sections. Reference should be made to the plans submitted separately to the Department of Planning and Infrastructure which are prepared by Turner Associates Architects, some of which are presented at reduced scale in **Appendix A** for ease of reference.

As with the previous Stage 1 development, the amended proposal further strengthens the synergy with the existing hospital, so that parking and particularly traffic generation is still reduced by virtue of linked trips (where patrons will divert from their existing trips) and multi-purpose trips (where one vehicle trip will involve visits to several uses). In addition, many people using the on-site retail facilities will be drawn from the on-site population and the surrounding neighbourhood, so that there will be a high proportion of walking trips, thereby containing external travel demand. Finally, the proposed use of car sharing will also reduce parking demands.



5. transport management and accessibility

5.1 introduction

The traffic impact assessment undertaken in this Section 75W Application Report, as discussed in this section below, is still premised upon a reduction in traffic generation when compared with the RTA's "unconstrained" trip rates, which reflect relatively poor access to public transport for many of the land use components under consideration. To achieve this target, various initiatives are proposed. These are discussed below and include improved bus services, provision of pedestrian and bicycle linkages (including end-user facilities), taxi services, a constrained parking supply, car sharing arrangements and the formulation of a Transport Access Guide.

These should be seen in the context where the site is expected to accommodate over 700 employees and residents, reduced from an estimated 1,000 under the previous proposal. The majority of this reduction relates to the removal of commercial floor area.

5.2 bus services

Existing bus services are discussed in Section 3 and are extensive within a 350 metre walking distance, which includes services along the Great Western Highway and Derby Street. At this time, no additional bus services are considered necessary. Nevertheless, discussions will still be held with bus operators as part of the later Stage 2 Project Application stage to identify the potential for improved services when the site is fully developed, as well as improved facilities including bus shelters. At this stage, all weather shelters are considered essential along both sides of Parker Street and the Great Western Highway, although these would benefit the hospital precinct generally.

These bus services operate regularly and will provide an alternative travel mode choice for residents, employees and visitors associated with the proposed development. The use of these services should be encouraged by residential strata managers and employers where possible. This may include the provision of current service timetable and route information within reception, foyer and/or other communal areas within the site.



The only significant change arising from this Section 75W Application for Stage 1 will be a reduction in demands on bus services by virtue of the net reduction of some 300 workers associated with the commercial use.

5.3 rail services

Rail services provide access to the wider transport network serving the greater metropolitan area. The site is only 700 metres from Kingswood Station which is clearly very attractive for all trip purposes. The station will be accessed via the existing footpath and crossing facilities that exist along the Great Western Highway.

As with buses, the only change arising from this Section 75W Application for Stage 1 will be a reduction in demands on rail services by virtue of the net reduction of some 300 workers associated with the commercial use.

5.4 pedestrian and bicycle linkages

Pedestrian and bicycle linkages will be provided within the site and no significant changes occur under the Section 75W Application. Connectivity to all footpath systems in the locality on all public roads will be provided, with the ability to access bus and rail services. Safe crossing opportunities are available on all major desire-lines, including integrated crossings within the intersections of Parker Street with the Great Western Highway; and Parker Street with Derby Street. In addition, the hospital precincts to the immediate east and south of the south are provided with extensive pedestrian linkages, including links through to Somerset Street and Derby Street.

Cyclists will continue to rely on the external roads which provide shared on-road facilities, while Council's bicycle network is generally available more remote from the site. In addition, shower facilities will be available within buildings and bicycle storage is provided in accordance with Council's requirements.

The amended plans incorporate bicycle storage facilities within the development (85 spaces), as well as shower and change room facilities. The plans also depict the proposed pedestrian network, which connects to the existing pedestrian network serving buses and trains as well as the adjoining hospital campus.



5.5 pedestrian safety

The internal design principles and vehicle access locations remain unchanged under this Section 75W Application.

5.6 taxi services

Taxi services will be able to access the site directly via the internal road system which is via Barber Avenue. The recommended that consideration be given to the provision of a taxi rank in Barber Avenue is reiterated and this is a matter for Council's traffic committee. Taxis can also use the drop-off area within the Stage 1 development.

The implementation of a car share policy is a matter that can be conditioned having regard for relevant guidelines in relation to this Stage 1 development, although there is no effective change under this Section 75W Application.

5.7 site access arrangements

The site will be accessed using both access driveways that are proposed under the Concept Plan application and the previous Stage 1 Project Application. This includes an entry-exit driveway onto Barber Avenue and an exit only driveway onto the Great Western Highway.

These driveways are designed to comply with AS 2890.1 and AS 2890.2 and will operate safely and efficiently. The main driveway onto Barber Avenue is primarily associated with left turn entries and right turn exits and on this basis, a single entry and exit lane is appropriate. This also has the advantage of reducing the footpath crossing width, while also providing an improved streetscape.

5.8 parking requirements

The Stage 1 parking requirements under the Section 75W Application have adopted the requirements (rates) advised by the Department of Planning and Infrastructure as shown in Table 2. This is based on the application of Council's DCP 2006, having regard for the evident need for the development to



be self-sufficient in terms of parking demand, in circumstances where there is an existing limited availability of on-street car parking. The Department has also expressed a view that the parking for each stage should be sufficient for the needs of each stage. The applicable rates as applied in Table 2 are as follows:

- Commercial 1/40m²
- Serviced Apartments 1/apartment (no additional visitor parking is required)
- Retail 1/26m²
- Residential 1/unit plus 1/5 units for visitors

Table 2 Car Parking for Amended Stage 1 PA and CP Based on Penrith DCP 2006

Land Use	Stage 1		Stage 2		Stages 1 and 2	
	Yield	Requirement	Yield	Requirement	Yield	Requirement
Commercial	9,226	231	1,505	38	10,728	269
Serviced Apartments	87	87	n/a		87	87
Retail	1,220	47	1,614	62	3,034	117
Residential	36	36	78	78	112	112
Residential Visitor		8		15		23
TOTALS		409		194		603

It is evident that a total of 409 spaces are required in Stage 1 and in response, 402 spaces are proposed. This is effectively full compliance, particularly when account is taken of the ability to share parking within this mixed use development, where peak demands do not overlap. This also acknowledges the underpinning policies to reduce parking to promote alternate travel modes.

A minor change has been made in relation to the Stage 2 land use intensity or mix compared with the Preferred Project Application and the parking provision has been adjusted to reflect the need to comply with DCP 2006, resulting in a need for 194 spaces for the Stage 2 development and hence



603 spaces for the overall development. This is slightly less than the RMS requirement so that there will be some suppression of parking demand.

5.8.1 disabled parking

There are a total of 16 disabled parking spaces in Stage 1 which are designed in accordance with AS 2890.6. This represents 4% of the total parking which complies with AS 2890.1 and complies with DCP 2006. The drop-off area is also able to accommodate the needs of disabled drivers in taxis or being set-down by family or friends.

5.8.2 motorcycle parking

The development provides 57 motorcycle spaces as required under DCP 2006. This is a relatively high level of provision that acknowledges the increasing ownership of motorcycles and these in effect reduce parking and traffic demands. They may therefore be regarded as an integral component of the Travel Access Guide as the conversion of car drivers to motorcycles has environmental benefits, which is the fundamental aim of the promotion of alternate travel modes.

5.8.3 bicycle parking

The development provides 87 bicycle spaces as required under DCP 2006.

5.9 servicing

The Stage 1 development incorporates the service dock for the entire development (Stages 1 and 2). The dock incorporates two bays that are both capable of accommodating an MRV, which is the standard delivery vehicle under AS 2890.2. This size of truck is also suitable for use by the small retail area. It is also noted that additional short-term loading can occur within the drop-off area.

A Loading Dock Management Plan is proposed to be prepared in response to a suitable condition of consent.



5.10 transport access guide

It is proposed that a Transport Access Guide and Work Place Travel Plan will be prepared in response to a suitable condition of consent. This would include the promotion of alternate travel modes and travel demand measures including car sharing, public transport availability (bus, rail and taxi), cycle and pedestrian routes and linkages, bicycle end-user facilities and motorcycle parking. The provision of a drop-off area on the Lower Ground Floor will be particular benefit to taxi use, which is a recognised form of public transport.

5.11 internal design aspects

A swept path analysis has been undertaken which demonstrates satisfactory internal operation. It is recommended however that a standard condition of consent be imposed requiring compliance with AS 2890.1 and 2890.1.

5.12 demolition and construction impacts

A condition is invited seeking preparation of a detailed Demolition and Construction Traffic Management Plan. It is anticipated that all such activity will be focussed on Barber Avenue and the Plan will need to be prepared in consultation with the appointed builder. It will need to address requirements during each stage (demolition, site preparation, excavation, construction, fit-out and landscaping) and will need to include consideration of times of operation, truck access routes, site access, average truck frequencies, truck sizes, parking for construction workers, work zone requirements, pedestrian control, traffic management plans and any road occupancy applications. These are matters that cannot be addressed at this time although in principle, there are considered to be no obvious constraints to the preparation of a safe and efficient Management Plan.



5.13 traffic impacts

5.13.1 Previous Stage 1 Trip Generation

There is no change to the land use intensity in Stage 2 so that the only change that requires assessment is in relation to Stage 1. The original Stage 1 Project Application was predicted to generate trips as follows, based on the rates discussed in the Concept Plan application.

- 215 veh/hr (147 in, 68 out) in the AM Peak; and
- 344 veh/hr (148 in, 196 out) in the PM Peak

This represented 76% of the overall development under the approved Concept Plan, which was predicted to generate 262 veh/hr in the AM peak and 450 veh/hr in the PM peak.

5.13.2 Amended Stage 1 Generation

The traffic generation arising from the amended Stage 1 development needs to be adjusted to take account of the increased parking provision that is now proposed for the retail and commercial uses, as required by the Department of Planning and Infrastructure. The only adjustment that has any bearing on the analysis is in relation to the commercial use, which previously adopted 0.6 trips/space/hr and the application of this rate to the increased parking therefore takes account of this factor. The resultant generation is as shown in Table 3 below.

Table 3: Adopted Trip Rates and Traffic Generation for Stage 1

Use	GFA (m ²) or Units	Trip Rate	Trips (veh/hr)	Weekday PM Peak	
				IN	OUT
General Retail	1,220 (NFA)	2.4/100	30	15	15
Commercial	9,226	231 @	138	42	96
Residential	36 units	0.3/unit	11	3	8
Serviced	87 units	0.29/apartment	25	20	5
TOTAL			204	80	124
				204	



It is evident that the resultant traffic generation under the amended Stage 1 development is substantially reduced from 344 veh/hr under the PPA during the more critical PM peak period, to 204 veh/hr. This is a highly significant reduction of 40% and this result is fundamentally due to the substantially reduced commercial floor area and is notwithstanding the higher parking rate as has now been adopted ($1/40\text{m}^2$ compared with $1/60\text{m}^2$ under the PPA). It also reflects the inclusion of residential units, which is a low traffic-generating land use.

Based on this result, the overall traffic generation associated with the development (both the Concept Plan and Stage 1 Project Application) will result in significantly improved traffic conditions compared with those assessed in the original EA and the original TMAP report. The conclusions in that report therefore remain valid, namely that the need for RMS to investigate capacity improvements at the intersection of Parker Street with the Great Western Highway is diminished in the context of this application, but remains a strategic issue for RMS in responding to ongoing growth.

In summary, the development as now proposed further reduces traffic impacts below the levels that were previously accepted by RMS and the Department of Planning and Infrastructure, as being supportable.

5.13.3 Sensitivity Testing

It is acknowledged that traffic conditions have potentially changes since the original 2010 TMAP was prepared. In order to assess whether this is the case and whether further investigations are necessary, an additional survey was undertaken at the 'control' site of Parker Street with the Great Western Highway. This was undertaken during the more critical PM peak period on Thursday 3 May 2012, between 4pm and 6pm. The survey demonstrated an overall reduction of 5% over this period reduction and on this basis, it can be concluded that the analysis undertaken in the TMAP represents a worst case assessment in relation to the 'base case' traffic volumes.



6. Conclusions

Having regard for the above matters, the amended Project Application for Stage 1 development is not only supportable on traffic and transport planning grounds, but results in significantly reduced traffic impacts while still maintaining parking in accordance with DCP 2006, as required by the Department of Planning and Infrastructure.

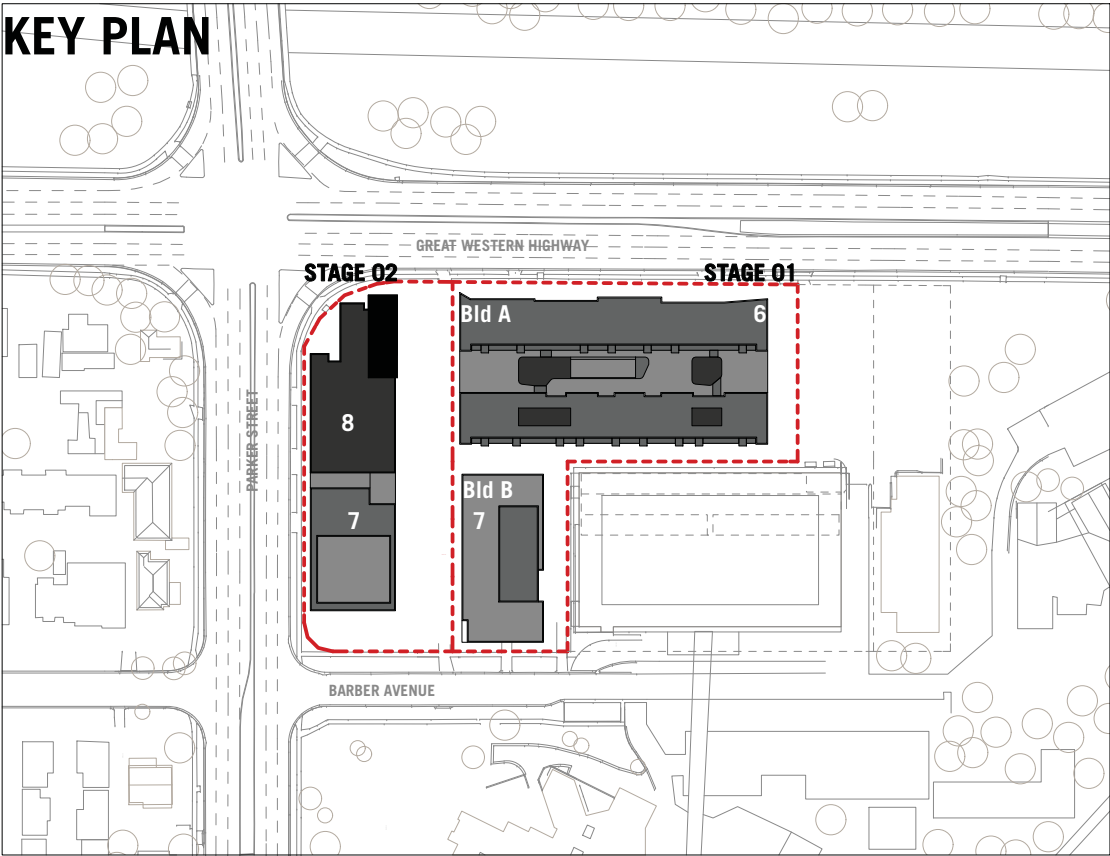
The amended development retains the same access and internal design principles and the Section 75W Application is considered to be a further refinement and improvement which is supportable, subject to appropriate conditions as discussed. This includes the preparation of a Transport Access Guide and a Workplace Place Travel Plan, to further reduce reliance on private cars over time.



Appendix A

Amended Stage 1 Project Application Plans

KEY PLAN



AREA SCHEDULE _ STAGE01		
Zone Category	Zone Name	Zone (GFA)
COMMERCIAL	BldA_COMMERCIAL	8,750.75
	BldA_FOYER / LOUNGE	433
	BldA_BIKE STORAGE / AMENITIES	96
	BldB_COMMERCIAL	401
	BldB_BIKE STORAGE / AMENITIES	111
	BldB_FOYER / LOUNGE	76
		9867.75 m2
RESIDENTIAL	BldA_RESIDENTIAL ARPARTMENTS	2656
	BldB_SERVICED ARPARTMENTS	2585
		5241 m2
RETAIL	BldA_RETAIL	1,225.00
		1,225 m2
TOTAL GFA (STAGE 01)		16334 m2
SITE AREA (STAGE 01)		5853 m2
FSR (Stage 01)		2.79:1

Barber Avenue Kingswood Carpark Schedule

Issue: L Date: 16.07.2012 Approved: KM

STAGE 1 (Amended)						
LEVEL	RETAIL (sq metre)	COMMERCIAL (sq metre)	SERVICE APARTMENTS		RESIDENTIAL	
			1 Bedroom	2 Bedrooms	1 Bedroom	2 Bedrooms
Parking Rates	1:26/NFA	1:40/GFA	1 / Apt		1 / Apt + 1:5 Visitor	
Lower Ground	0	475	0	0	0	0
Ground	1220	635.75	15	1	0	0
Level 1	0	2433	14	2	0	0
Level 2	0	2840	14	2	0	0
Level 3	0	2842	11	2	0	0
Level 4	0	0	11	2	2	16
Level 5	0	0	11	2	2	16
Level 6	0	0	0	0	0	0
Total	1220	9225.75	76	11	4	32
Required Car Spaces	47	231	76	11	4	32
Total Car Spaces	47	231	87 0		44 incl visitors	
Of which Accessible	1	2	9		4	
Bicycle Parking	6	46	22	incl visitors	11	incl visitors TBC
Motorcycle Parking	57					
Total Car Spaces Req'd	409	Total Provided	402			

SUMMARY		
Total Carparking Required Stage 1	409	(including 16 accessible)
Total Carparking Provided Stage 1	402	(including 18 accessible)
Total Bicycle Provided Stage 1	85	
Total Motorcycle Provided Stage 1	57	

Penrith Local Environmental Plan 2010:
gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:
(a) the area of a mezzanine, and
(b) habitable rooms in a basement or an attic, and
(c) any shop, auditorium, cinema, and the like, in a basement or attic, but excludes:
(d) any area for common vertical circulation, such as lifts and stairs, and
(e) any basement:
(i) storage, and
(ii) vehicular access, loading areas, garbage and services, and
(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
(g) car parking to meet any requirements of the consent authority (including access to that car parking), and
(h) any space used for the loading or unloading of goods (including access to it), and
(i) terraces and balconies with outer walls less than 1.4 metres high, and
(j) voids above a floor at the level of a storey or storey above.

K	16.07.2012	Issue to Consultants
J	18.04.2012	Issue to Consultants
I	18.04.2011	Issue to Consultants
H	21.09.2010	Issue to Consultants
G	20.09.2010	Issue to Consultants
F	13.08.2010	Issue to Consultants
E	04.08.2010	Issue to Consultants
D	01.02.2010	Environmental Assessment issue

Rev. Date Approved by Revision Notes

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
ENVIRONMENTAL ASSESSMENT
DRAWING TITLE
Area Schedule
Analysis

SCALE 1:1000, 1:0.71, 1:0.77	JOB No. EA1, 50%@A3	DRAWN ML/MH/AH/BH	NORTH
STATUS FOR INFORMATION	DWG No. EA03	REV K	

TURNER + ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
T +61 2 8668 0000 F +61 2 8668 0088



NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT

Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
ENVIRONMENTAL ASSESSMENT

DRAWING TITLE
BASEMENT 02
Plans

Rev.	Date	Approved by	Revision Notes
K	16.07.2012		Issue to Consultants
J	18.04.2012		Issue to Consultants
I	18.04.2011		Issue to Consultants
H	08.10.2010		Issue to Consultants
G	21.09.2010		Issue to Consultants
F	13.08.2010		Issue to Consultants
E	30.07.2010		Issue to Consultants
D	01.02.2010		Environmental Assessment issue

Rev. Date Approved by Revision Notes

SCALE
1:250@A1, 50%@A3

STATUS
FOR INFORMATION

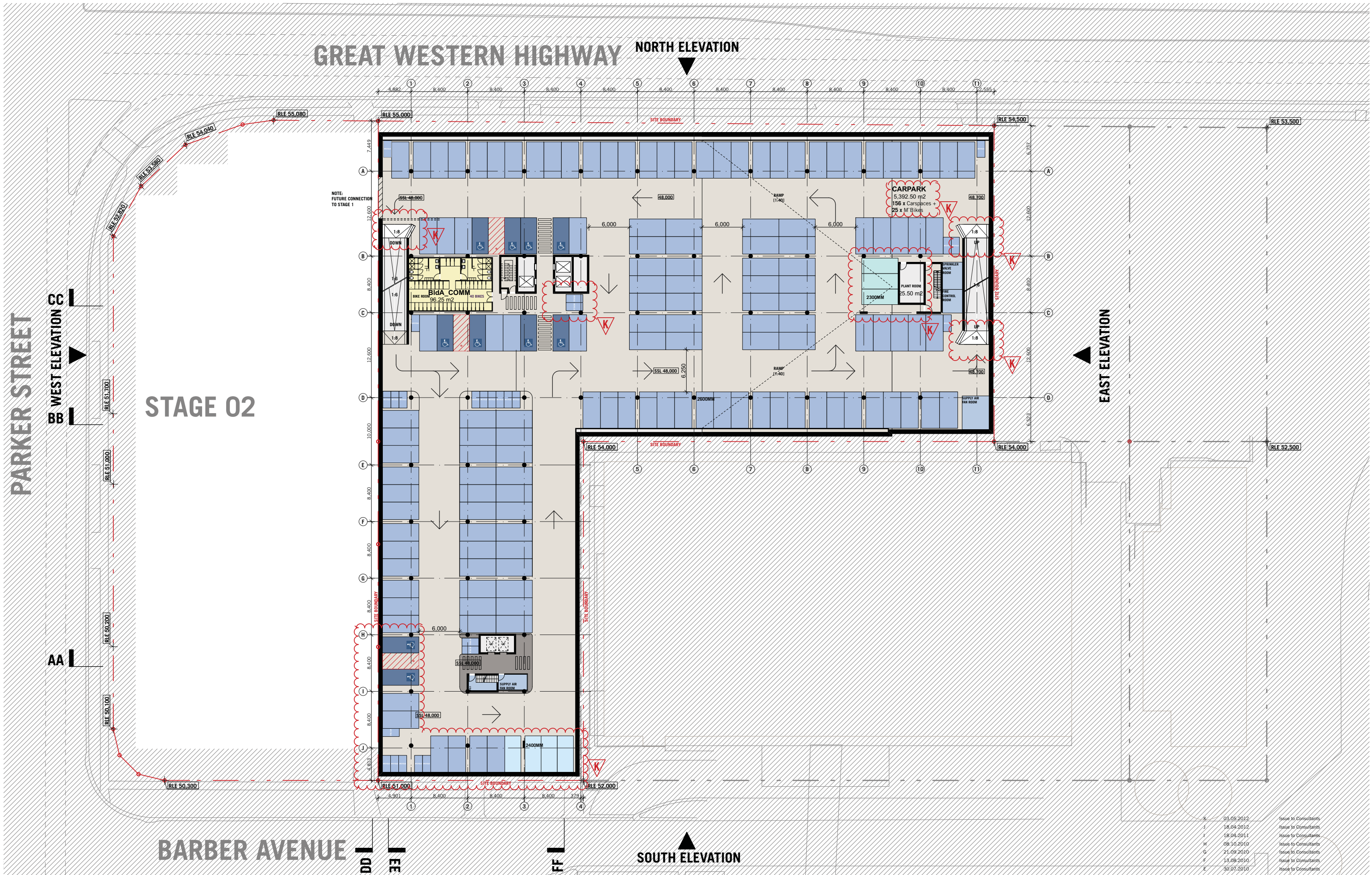
JOB No.
09007

DWG No.
EA11

DESIGN
ML/MH/AH/BH

REV
K

TURNER + ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
t +61 2 8668 0000 f +61 2 8668 0088



NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT

Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
ENVIRONMENTAL ASSESSMENT

DRAWING TITLE
BASEMENT 01
Plans

Rev.	Date	Approved by	Revision Notes
K	03.05.2012		Issue to Consultants
J	18.04.2012		Issue to Consultants
I	18.04.2011		Issue to Consultants
H	08.10.2010		Issue to Consultants
G	21.09.2010		Issue to Consultants
F	13.08.2010		Issue to Consultants
E	30.07.2010		Issue to Consultants
D	01.02.2010		Environmental Assessment issue

SCALE
1:250@A1, 50%@A3

STATUS
FOR INFORMATION

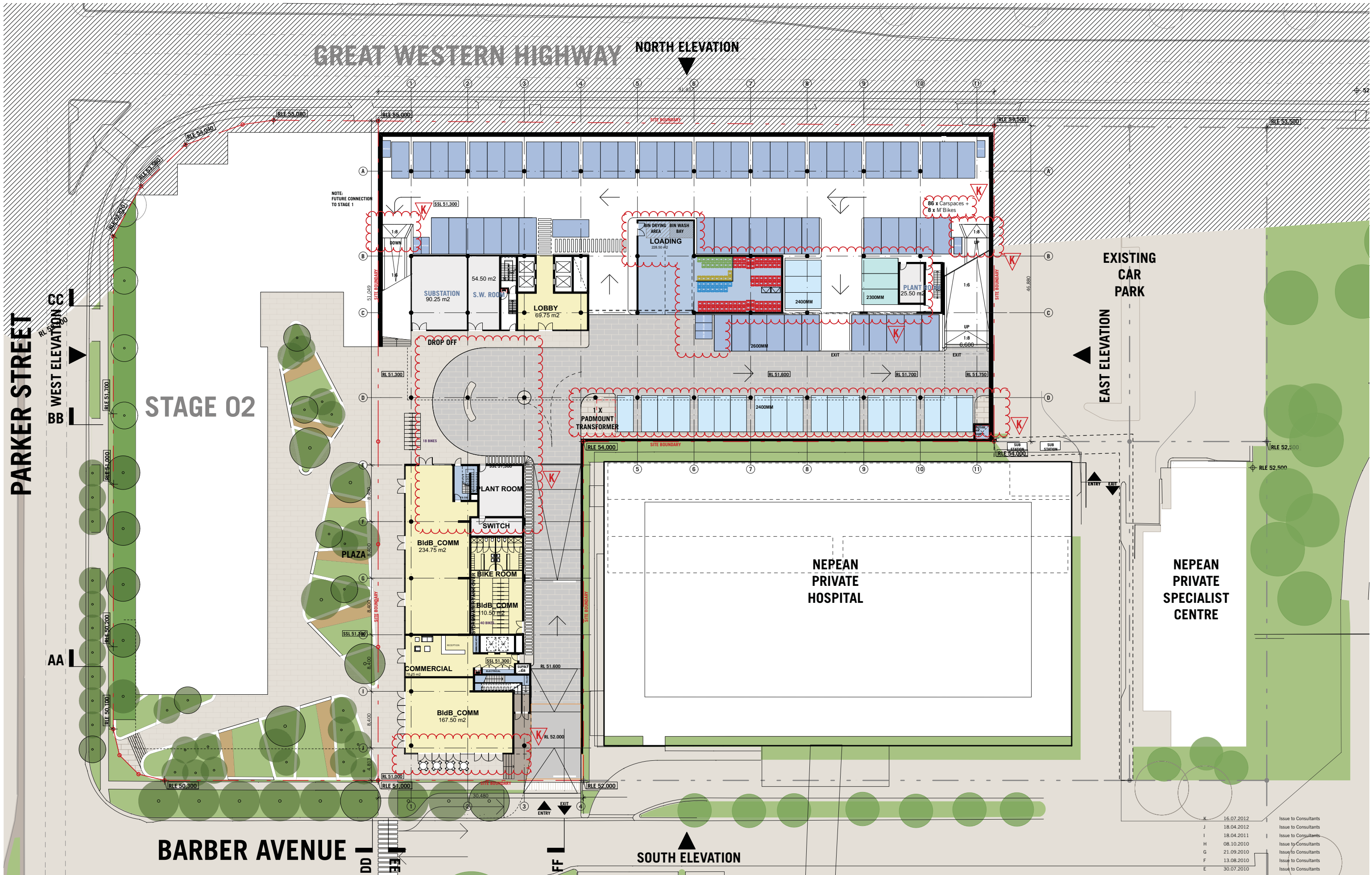
JOB No.
09007

DWG No.
EA12

DESIGN
ML/MH/AH/BH

REV
K

TURNER + ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
t +61 2 8668 0000 f +61 2 8668 0088



NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT

Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
ENVIRONMENTAL ASSESSMENT

DRAWING TITLE
LOWER GROUND
Plans

Rev.	Date	Approved by	Revision Notes
K	16.07.2012		Issue to Consultants
J	18.04.2012		Issue to Consultants
I	18.04.2011		Issue to Consultants
H	08.10.2010		Issue to Consultants
G	21.09.2010		Issue to Consultants
F	13.08.2010		Issue to Consultants
E	30.07.2010		Issue to Consultants
D	01.02.2010		Environmental Assessment issue

SCALE
1:250@A1, 50%@A3

STATUS
FOR INFORMATION

DWG No. **EA13**

JOB No. **09007**

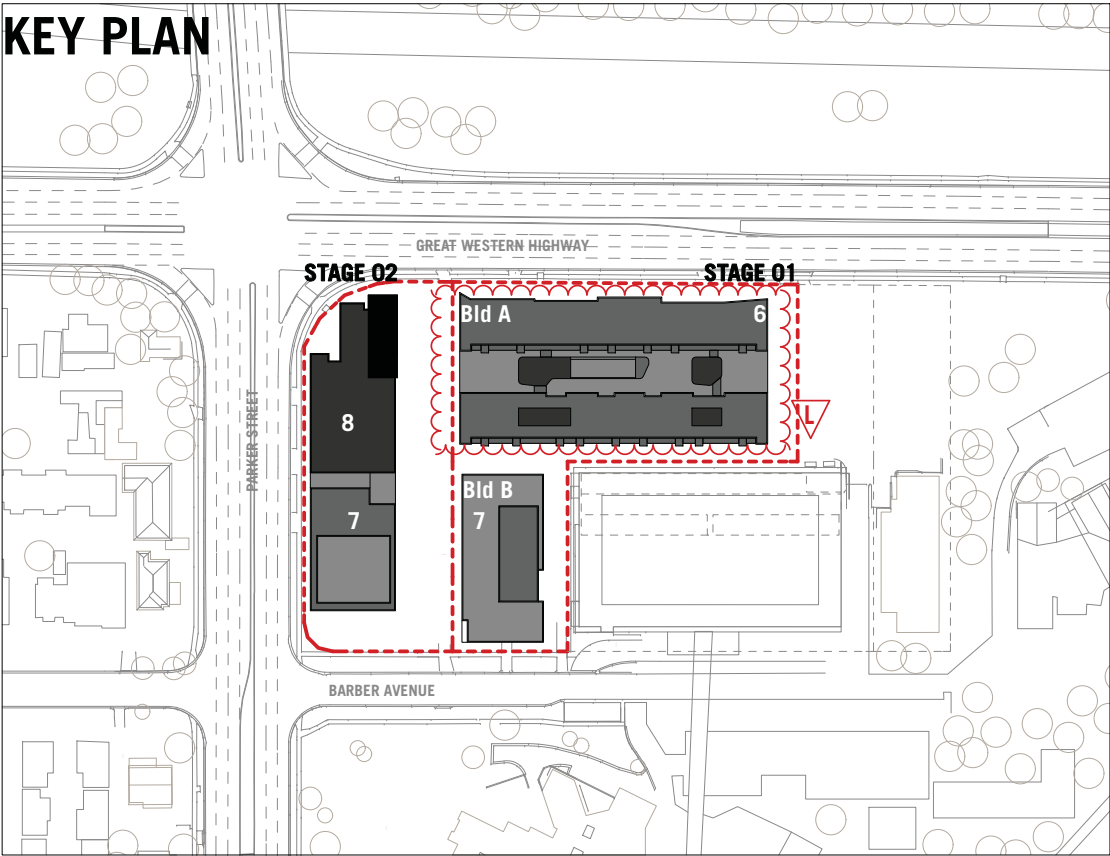
DESIGN **ML/MH/AH/BH**

REV **K**

TURNER + ASSOCIATES

L1 410 Crown Street Surry Hills NSW 2010 Australia
t +61 2 8668 0000 f +61 2 8668 0088

KEY PLAN



Penrith Local Environmental Plan 2010:
gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:
(a) the area of a mezzanine, and
(b) habitable rooms in a basement or an attic, and
(c) any shop, auditorium, cinema, and the like, in a basement or attic, but excludes:
(d) any area for common vertical circulation, such as lifts and stairs, and
(e) any basement:
(i) storage, and
(ii) vehicular access, loading areas, garbage and services, and
(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
(g) car parking to meet any requirements of the consent authority (including access to that car parking), and
(h) any space used for the loading or unloading of goods (including access to it), and
(i) terraces and balconies with outer walls less than 1.4 metres high, and
(j) voids above a floor at the level of a storey or storey above.

AREA SCHEDULE _ STAGE01		
Zone Category	Zone Name	Zone (GFA)
COMMERCIAL	BldA_COMMERCIAL	8,750.75
	BldA_FOYER / LOUNGE	433
	BldA_BIKE STORAGE / AMENITIES	96
	BldB_COMMERCIAL	401
	BldB_BIKE STORAGE / AMENITIES	111
	BldB_FOYER / LOUNGE	76
		9867.75 m2
RESIDENTIAL	BldA_RESIDENTIAL ARPARTMENTS	2656
	BldB_SERVICED ARPARTMENTS	2585
		5241 m2
RETAIL	BldA_RETAIL	1,225.00
		1,225 m2
TOTAL GFA (STAGE 01)		16334 m2
SITE AREA (STAGE 01)		5853 m2
FSR (Stage 01)		2.79:1

Area Schedule_STAGE02		
Zone Category	Zone Name	Area (GFA)
COMMERCIAL	Stage 02_COMMERCIAL	1,504
		1,504 m2
RESIDENTIAL	Stage 02_RESIDENTIAL	7,437
	Stage 02_RESIDENTIAL LOBBY	105
		7,544 m2
RETAIL	Stage 02_RETAIL	1,638
		1,638 m2
		10,686 m2

TOTAL GFA (STAGE 02)

TOTAL GFA (STAGE 01 & 02)	27,020 m²
TOTAL SITE AREA (STAGE 01 & 02)	9,571 m²
FSR	2.82:1

Barber Avenue Kingswood Carpark Schedule

Issue: L Date: 26/08/12 Approved: KM

STAGE 1 (Amended)						
LEVEL	RETAIL (sq metre)	COMMERCIAL (sq metre)	SERVICE APARTMENTS		RESIDENTIAL	
			1 Bedroom	2 Bedrooms	1 Bedroom	2 Bedrooms
Parking Rates	1:26/NFA	1:40/GFA	1 / Apt		1 / Apt + 1:5 Visitor	
Lower Ground	0	475	0	0	0	0
Ground	1220	635.75	15	1	0	0
Level 1	0	2433	14	2	0	0
Level 2	0	2840	14	2	0	0
Level 3	0	2842	11	2	0	0
Level 4	0	0	11	2	2	16
Level 5	0	0	11	2	2	16
Level 6	0	0	0	0	0	0
Total	1220	9225.75	76	11	4	32
Required Car Spaces	47	231	76	11	4	32
Total Car Spaces	47	231	87 0		44 incl visitors	
Of which Accessible	1	2	9		4	
Bicycle Parking	6	46	22 incl visitors		11	incl visitors TBC
Motorcycle Parking	57					
Total Car Spaces Req'd	409	Total Provided	402			

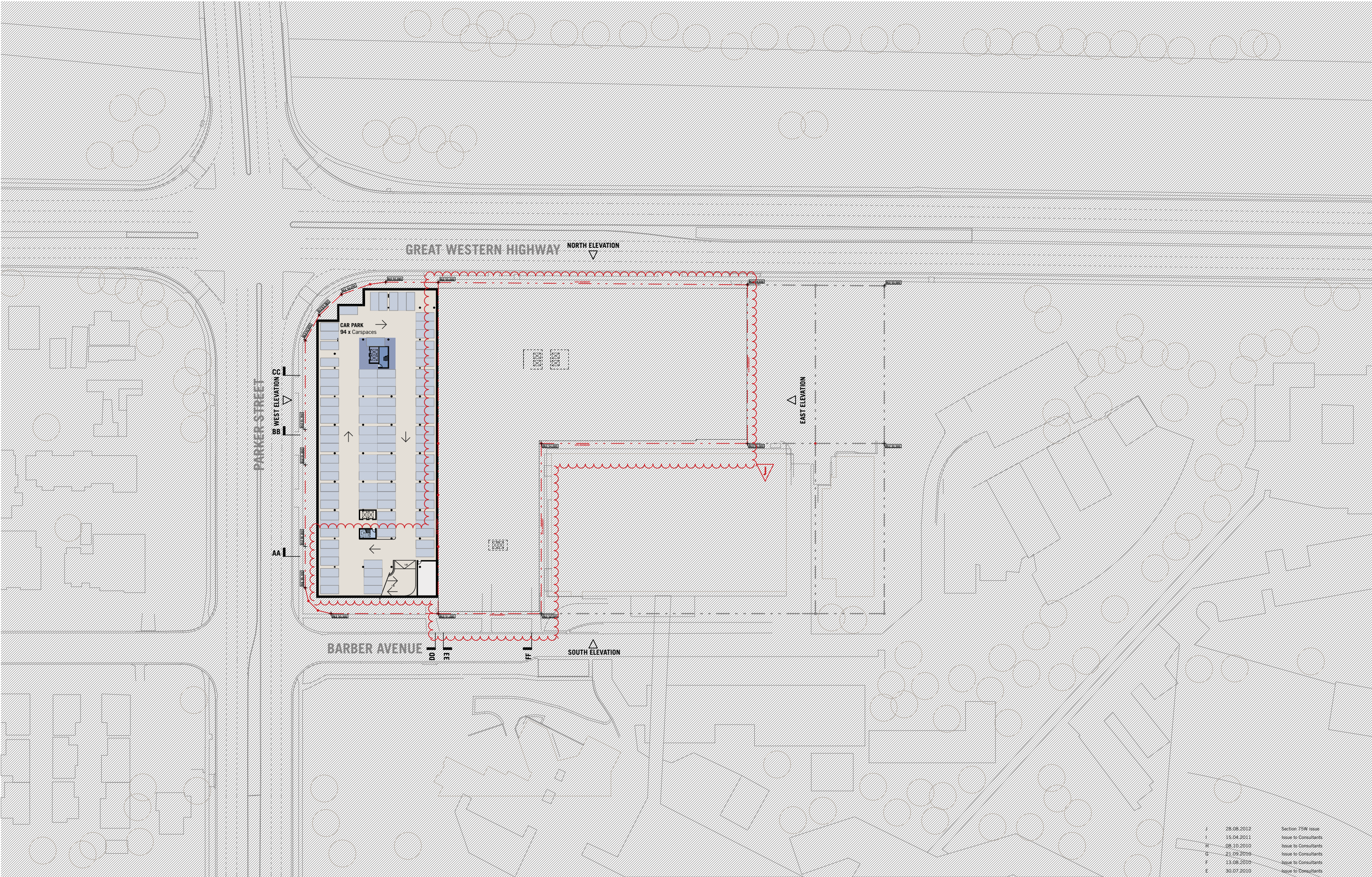
STAGE 2				
LEVEL	RETAIL (sq metre)	COMMERCIAL (sq metre)	RESIDENTIAL	
			1 Bedroom	2 Bedrooms
Parking Rates	1:26 / Nett Floor Area	1:40 / Gross Floor Area	1 / Apt + 1:5 Visitor	
Lower Ground	1614.00			
Ground		1505		
Level 1			4	9
Level 2			4	9
Level 3			4	9
Level 4			4	9
Level 5			4	8
Level 6			2	5
Level 7			2	5
Total	1614.00	1505	24	54
Required Car Spaces	62.08	37.625	24	54
Total Car Spaces	62	38	95 (including 17visitors)	
Total Car Spaces Required	194	Total Car Spaces Provided	286	

SUMMARY	
Total Carparking Required Stage 1 + 2	800
Total Carparking Provided Stage 1 + 2	688

L	27.08.2012	Section 75W issue
K	15.04.2011	Issue to Consultants
J	21.09.2010	Issue to Consultants
H	20.09.2010	Issue to Consultants
G	13.08.2010	Issue to Consultants
F	04.08.2010	Consultant issue
E	20.07.2010	Consultant issue
D	01.02.2010	Concept Plan issue

Rev. Date Approved by Revision Notes

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
CONCEPT PLAN
DRAWING TITLE
Area Schedule
Analysis



J	28.08.2012	Section 75W issue
I	15.04.2011	Issue to Consultants
H	08.10.2010	Issue to Consultants
G	21.09.2010	Issue to Consultants
F	13.08.2010	Issue to Consultants
E	30.07.2010	Issue to Consultants
D	01.02.2010	Concept Plan issue

NOTES

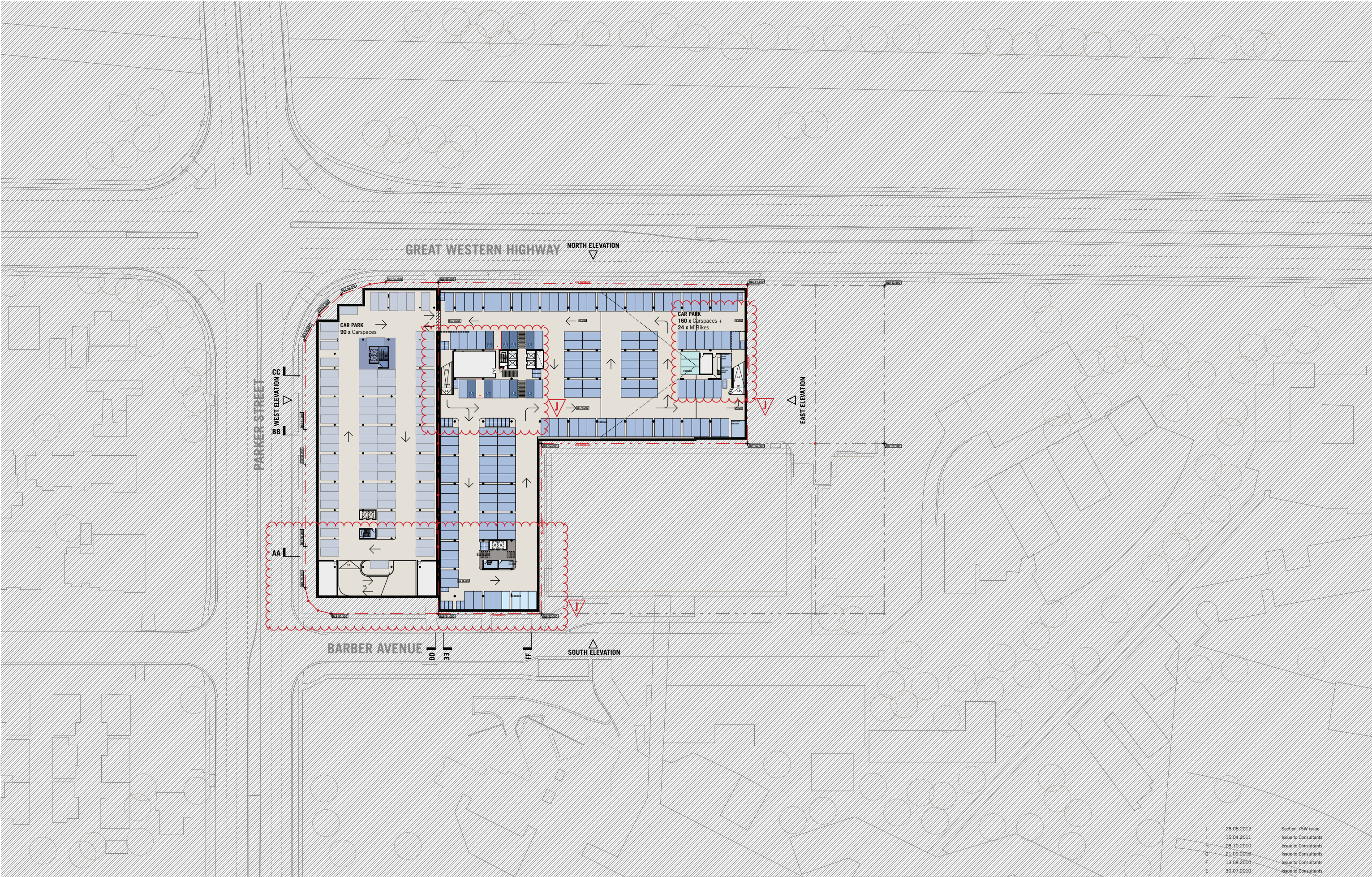
THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT
Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
CONCEPT PLAN
DRAWING TITLE
Basement 03
Illustrative Plans

SCALE 1:500@A1, 50%@A3	JOB No. 09007	DESIGN ML/MH/AH/BH	NORTH
STATUS FOR INFORMATION	DWG No. CP10	REV J	

TURNER+ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
T +61 2 8668 0000 F +61 2 8668 0088



J	28.08.2012	Section 75W issue
I	15.04.2011	Issue to Consultants
H	08.10.2010	Issue to Consultants
G	21.09.2010	Issue to Consultants
F	13.08.2010	Issue to Consultants
E	30.07.2010	Issue to Consultants
D	01.02.2010	Concept Plan issue

NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT

Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE
BARBER AVENUE, KINGSWOOD

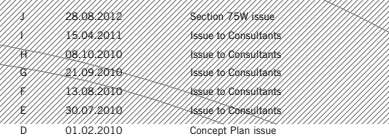
CONCEPT PLAN

DRAWING TITLE
Basement 02
Illustrative Plans

SCALE 1:500@A1, 50%@A3	JOB No. 09007	DRAWN ML/MH/AH/BH	NORTH
STATUS FOR INFORMATION	DWG No. CP11	REV J	

TURNER+ASSOCIATES

L1 410 Crown Street Surry Hills NSW 2010 Australia
T +61 2 8668 0000 F +61 2 8668 0088



Rev.	Date	Approved by	Revision Notes	
SCALE 1:500@A1, 50%@A3	JOB No.	09007	DRAWN ML/MH/AH/BH	NORTH 
STATUS FOR INFORMATION	DWG No.	CP12	REV J	

TURNER+ ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
t +61 2 8668 0000 f +61 2 8668 0088

Nominated Architect Nicholas Turner 6695
ABN 86 064 084 911

DILCS Quality Endorsed Company ISO 9001:2000
Licence Number 4168

NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS, FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

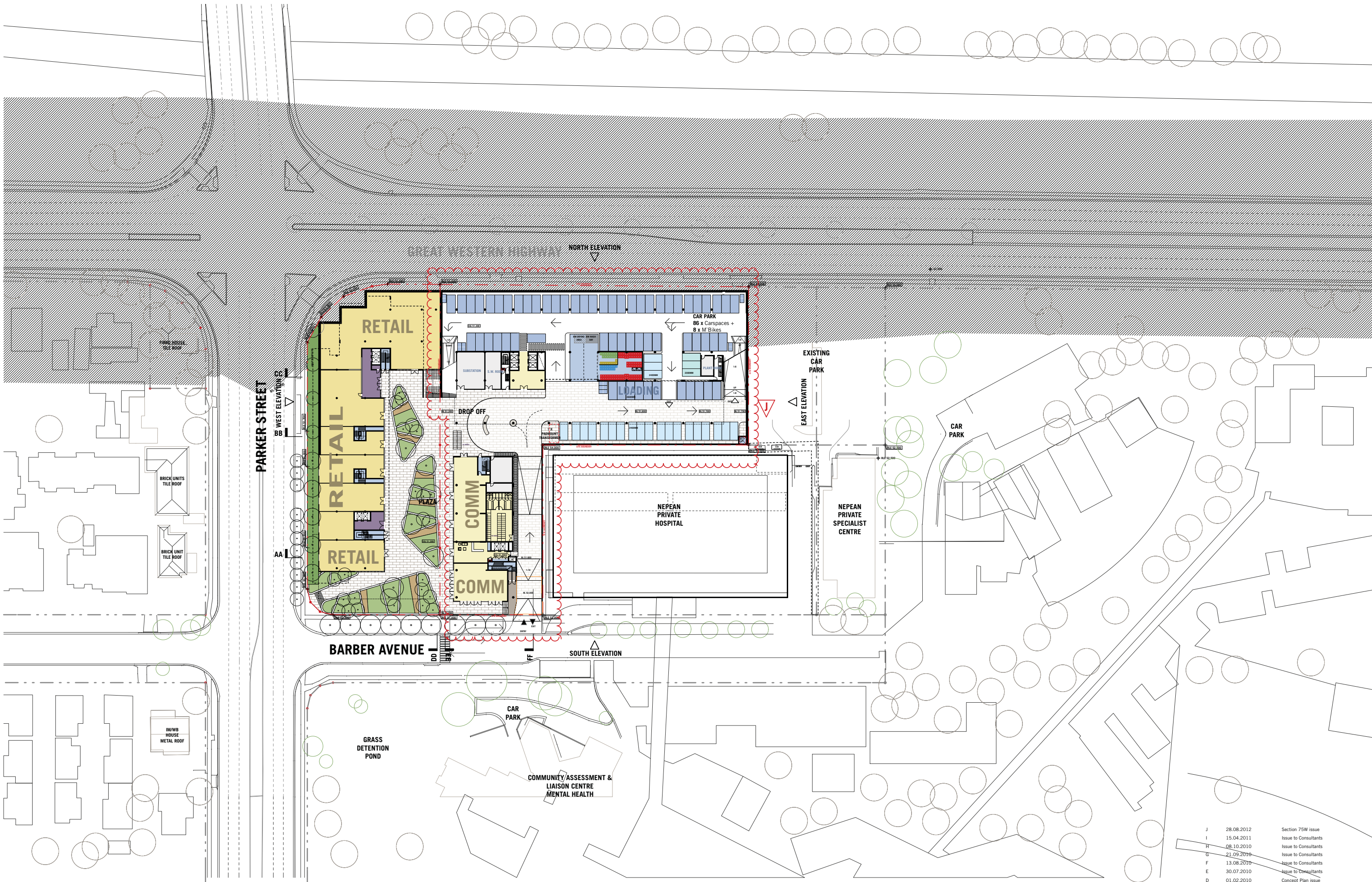
NOTES

THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION. DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

CLIENT

Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
 Level 10, 31 Market Street Sydney NSW 2000
 T +61 2 9261 8899 | F +61 2 9261 1779

PROJECT TITLE	BARBER AVENUE, KINGSWOOD
	CONCEPT PLAN
DRAWING TITLE	Basement 01
	Illustrative Plans



J	28.08.2012	Section 75W issue
I	15.04.2011	Issue to Consultants
H	08.10.2010	Issue to Consultants
G	21.09.2010	Issue to Consultants
F	13.08.2010	Issue to Consultants
E	30.07.2010	Issue to Consultants
D	01.02.2010	Concept Plan issue

Rev.	Date	Approved by	Revision Notes
------	------	-------------	----------------

Nominated Architect Nicholas Turner 6695
ABN 80 004 586 511

DLOS Quality Endorsed Company ISO 9001:2000
Licence Number 4168

CLIENT
Aesthete No.3 Pty Ltd
c/o Yates Beaggi Lawyers
Level 10, 31 Market Street Sydney NSW 2000
T +61 2 9261 8899 | F +61 2 9261 1779

NOTES
THIS DRAWING IS COPYRIGHT © AND SHALL REMAIN THE PROPERTY OF TURNER + ASSOCIATES ARCHITECTS. NO
REPRODUCTION WITHOUT PERMISSION. UNLESS NOTED OTHERWISE THIS DRAWING IS NOT FOR CONSTRUCTION.
DO NOT SCALE FROM DRAWINGS. FIGURED DIMENSIONS SHALL TAKE PRECEDENCE.

PROJECT TITLE
BARBER AVENUE, KINGSWOOD
CONCEPT PLAN
DRAWING TITLE
Lower Ground Plan
Illustrative Plans

SCALE 1:500@A1, 50%@A3	JOB No. 09007	DESIGN ML/MH/AH/BH	NORTH
STATUS FOR INFORMATION	DWG No. CP13	REV I	

TURNER+ASSOCIATES
L1 410 Crown Street Surry Hills NSW 2010 Australia
T +61 2 8668 0000 F +61 2 8668 0088