Appendix A

AMENDED PLANS

Appendix B

DOP LETTER + ADVICE

NSW GOVERNMENT | Planning

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Email: ben.eveleigh@planning.nsw.gov.au

9 March 2011

Our ref.: MP09_0197 & MP09_0220

Mr Vince Hardy
Urban Planning Consultant
Cityscape Planning + Projects
PO Box 127
Glenbrook NSW 2773

Dear Mr Hardy

Subject: Exhibition of Environmental Assessment for Nepean Heath Precinct Mixed Use Development, Parker Street, Kingswood, Concept Plan (MP09_0197), and Stage 1 Project Application (MP09_0220)

The exhibition of the Environmental Assessment (EA) for the above project ended on Monday 28 February 2011. All submissions received by the Department during the exhibition of the project are available on the Department's website at the following location:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3602

In accordance with section 75H of the *Environmental Planning and Assessment Act 1979*, the Director-General requires Aesthete No.3 to respond to the issues raised in these submissions in a Submissions Report.

The Department has also reviewed the EA, in light of the submissions, and raises the following key issues:

Land Use:

- Only retail floor space ancillary to the proposed medical and short stay accommodation on the site and the adjoining hospital uses are supported at this location. The provision of retail floor space to serve a customer base beyond the development and hospital precinct is discouraged, particularly given the close proximity of the Kingswood retail centre.
- Commercial floor space proposed within the development must be used for medical/health care related uses associated with the health precinct.
- Further consideration should be given to siting the residential component of the development away from the intersection of the Great Western Hwy and Parker Street due to the effects of noise and air pollution associated with vehicle movements.

Height, Bulk and Scale:

- The scale of the residential component of Stage 2 of the Concept Plan is considered inappropriate given the existing medium density zoning of the site, the height of the existing Nepean Private Hospital building and the context of surrounding low density

residential areas. The height of the Stage 2 building should be significantly reduced and buildings within Stage 1 should be a maximum of 6 stories above natural ground level.

Urban Design:

- An unsatisfactory standard of urban design is achieved as a result of poor pedestrian and bicycle linkages both within the subject site and leading to the site, insufficient provision of landscaping along public frontages and within the plaza, excessive height, bulk and scale, and inadequate building articulation.

In addition to addressing the above key concerns, the Department also requests that you provide:

- Further details regarding the construction noise impacts of the proposal including identification of sensitive receivers, predicted construction noise levels at sensitive receivers, potential noise controls measures in accordance with DECCW's *'Interim Construction Noise Guideline"* and noise impacts on the operation of the Nepean Hospital and Nepean Private Hospital.

- Further details regarding the construction traffic impacts of the proposed development on the nearby road network and operation of Nepean Hospital and Nepean Private Hospital.

The Department is also anticipating a submission from the RTA which may raise issues in relation to traffic and car parking.

If there are any proposed changes to the project to minimise its environmental impact, a Preferred Project Report may be required. The Statement of Commitments may need to be revised to reflect any proposed changes to the project.

Please note that the fees for the Concept Plan and Stage 1 Project Application are still outstanding. The Department will not complete any further assessment of the application until confirmation of fee payment is received.

Your contact officer for this proposal, Ben Eveleigh, can be contacted on (02) 9228 6391 or via email at ben.eveleigh@planning.nsw.gov.au. Please mark all correspondence regarding the proposal to the attention of the contact officer.

Yours sincerely,

Daniel Cavallo 9/3/11
A/Director
Metropolitan and Regional Projects North

Appendix C

AMENDED LANDSCAPE PLAN

turf
landscape architecture & urban design

Barber Avenue, Kingswood

Landscape Report Rev B

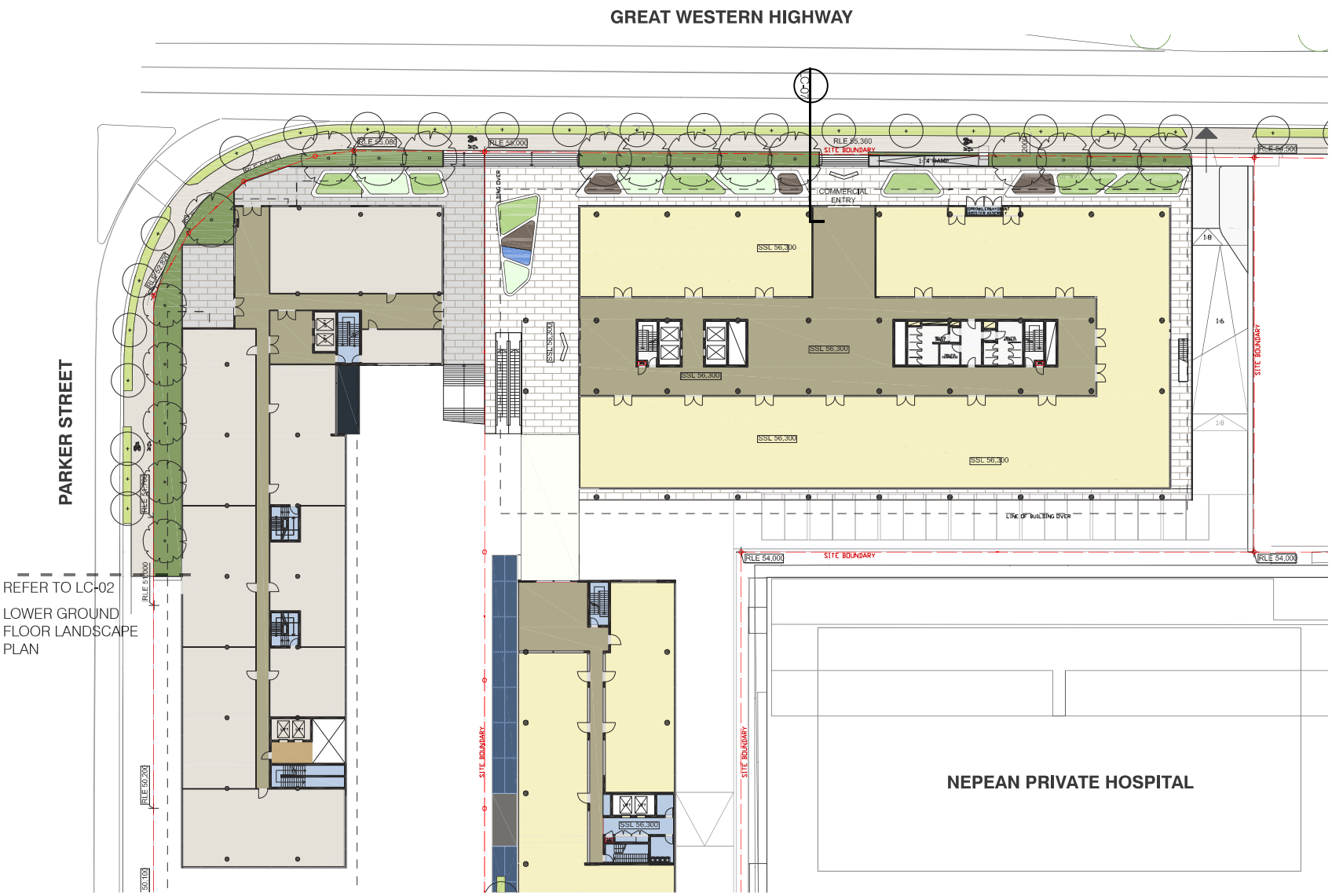
2011-May

GREAT WESTERN HIGHWAY

Legend

- Understorey planting in kerbside verge
- Timber decks 150mm above surrounding pavement level.
- Lawn / groundcover terraces 150mm above surrounding pavement.
- Gravel
- Dimensioned Granite Flags in alternating flame & bush-hammer courses
- Deep soil zone

	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title: LOWER GROUND FLOOR LANDSCAPE PLAN	Project No.: 1007 / Dwg No.: LC-02 / Scale: 1:500@A3 / Date: 29/04/11 / Dwg Status: PROJECT APPLICATION	Revision: B



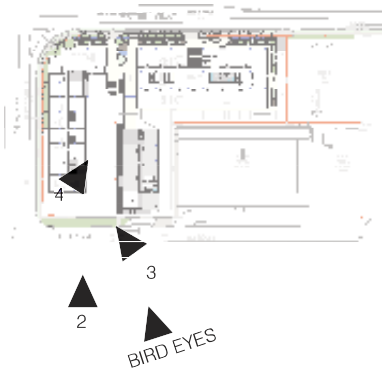
REFER TO LC-02

LOWER GROUND FLOOR LANDSCAPE PLAN

Legend

- Understorey plantings in kerbside verge
- Shrubs in raised planters.
- Timber decks.
- Lawn / groundcover terraces in raised planter.
- Water feature
- Dimensioned Granite Flags in alternating flame & bush-hammer courses
- Deep soil zone

Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title: GROUND FLOOR LANDSCAPE PLAN	Project No. 1007 / Dwg No. LC-03 / Revision B	Scale 1:500@A3 / Date 29/04/11 / Dwg Status PROJECT APPLICATION



View 1

View 2

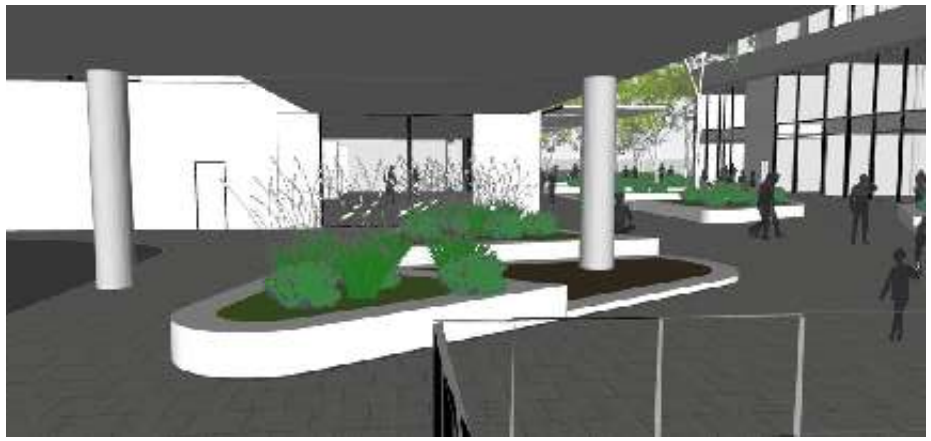
View 3

View 4

	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title:	Project No. 1007 / Dwg No. LC-04 / Scale / Date 29/04/11 / Dwg Status PROJECT APPLICATION	Revision B

View from Great Western Highway 5 to 8

View 5

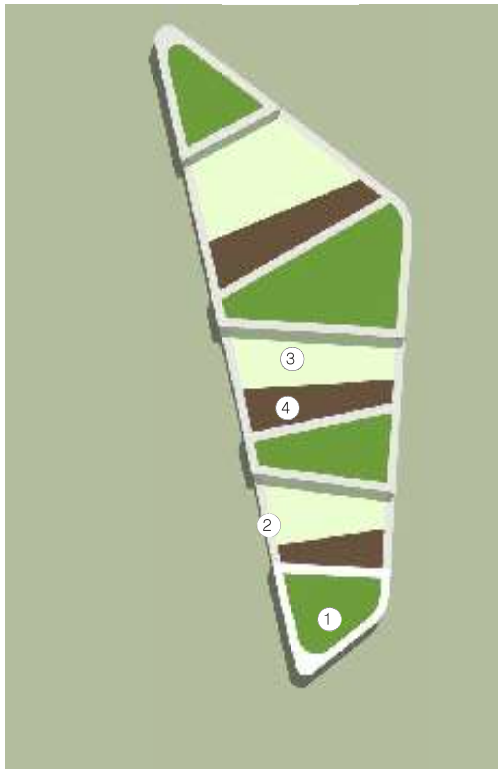


View 6

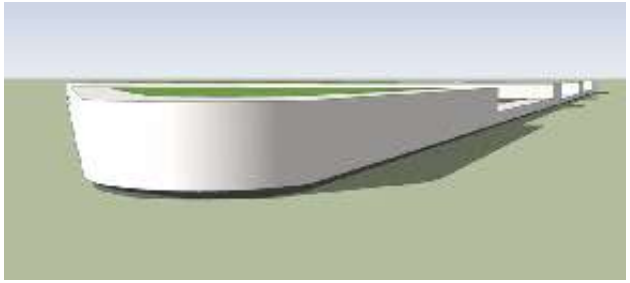
View 7

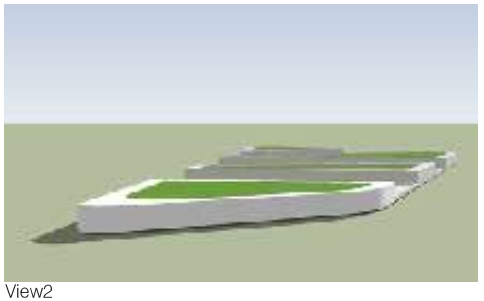
View 8

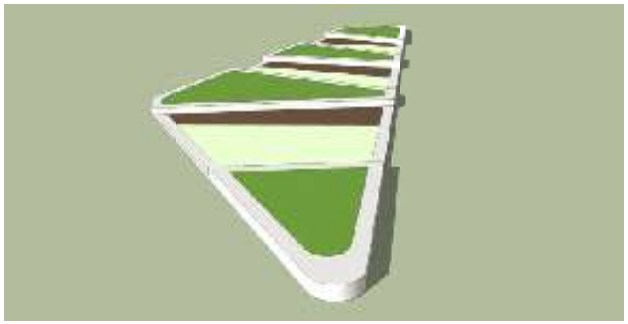
	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title:	Project No. 1007 / Dwg No. LC-05 / Scale / Date 29/04/11 / Dwg Status PROJECT APPLICATION	Revision B



Top View


View1


View2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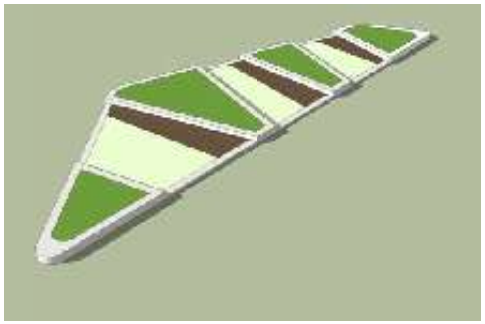
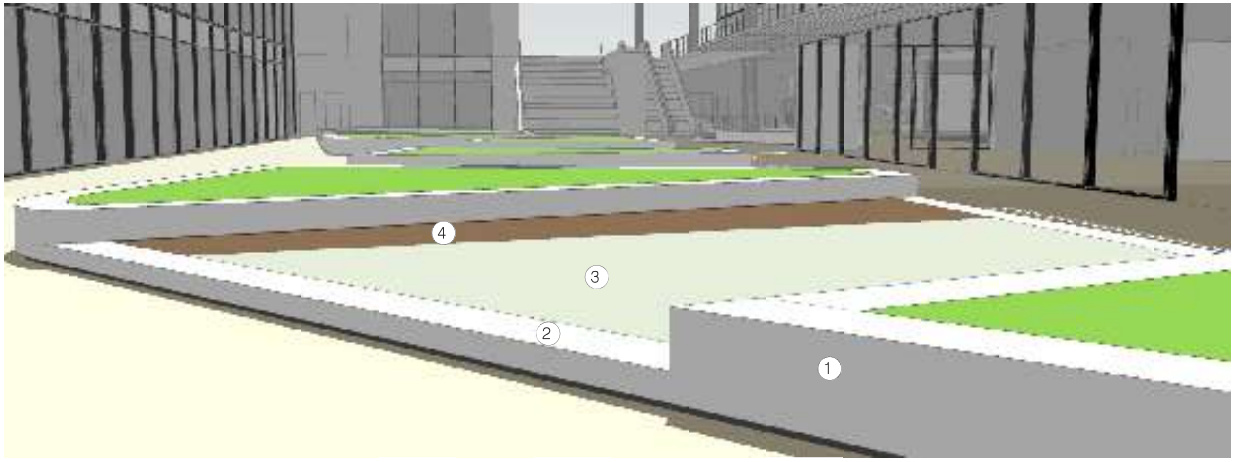

View4

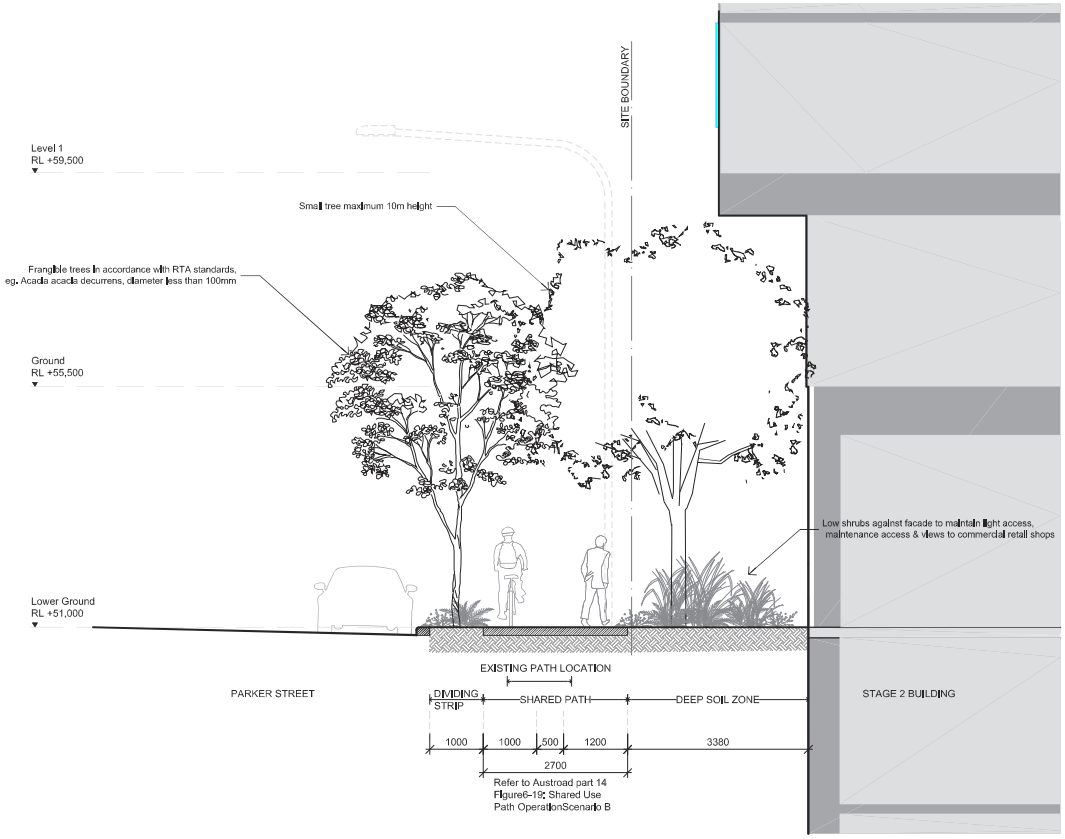
Key

1. Planters - 500mm high x 450mm wide concrete with recessed base
2. Lawn/groundcover - 150mm high x 450mm wide concrete edge with recessed base
3. Timber deck - Deck infill within 150mm high x 450mm wide concrete edge with recessed base

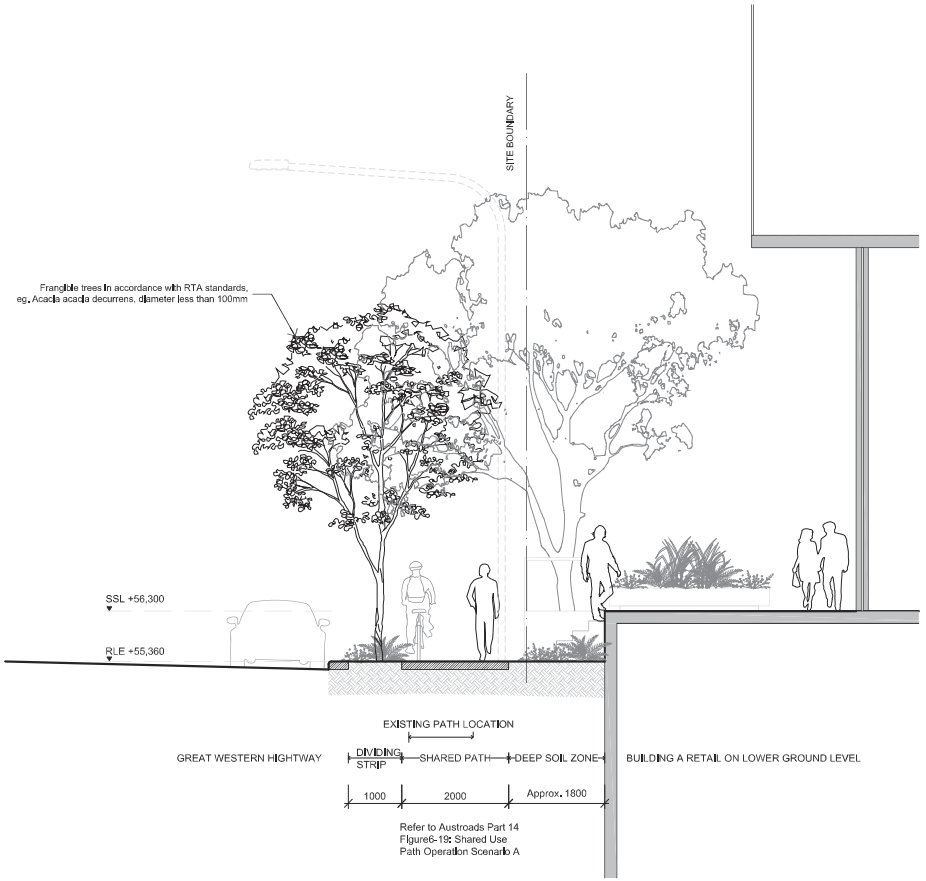


Perspective

Architect	Landscape Architect	Project	Drawing Title	Project No.	Dwg No.	Revision
TURNER+ASSOCIATES	turf design	Barber Avenue, Kingswood	MODELLING	1007	LC-06	B
				Scale	Date 29/04/11	
				Dwg Status	PROJECT APPLICATION	



PARKER STREET INDICATIVE SECTION



GWH INDICATIVE SECTION

	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title: SECTIONS	Project No. 1007 / Dwg No. LC-07 / Revision B	Scale 1:100@A3 / Date 29/04/11 / Dwg Status PROJECT APPLICATION

Material








	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title: MATERIAL	Project No. 1007 / Dwg No. LC-08 / Scale / Date 29/04/11 / Dwg Status PROJECT APPLICATION	Revision B

Understorey Planting


Callistemon 'White Anzac


Baeckea virgata 'dwarf'


Grevillea lanigera


Correa decumbens


Grevillea sericea


Dianella caerulea


Indigofera australis


Lomandra longifolia


Melaleuca thymifolia


Olearia microphylla


Scaevola aemula


Westringia longifolia

Great Western Highway & Parker Street frontage
A diverse array of indigenous understorey shrubs. Group species in swathes to establish a strong visual aesthetic.


Austromyrtus dulcis


Correa decumbens


Doryanthes_Excelsa


Gardenia florida


Hibbertia scandens


Austromyrtus inophloia


Dianella caerulea


Goodenia ovata


Melaleuca-incana


Plectranthus verticillatus


Raphiolepis 'Snow Maiden


Westringia brevifolia var. raleighii


Viola hederacea

Lower ground floor plaza
The understorey planting will be comprised of a harmonius mix of indigenous, part shade/shade tolerant plant species appropriate to the setting beneath the tree canopy above.

A small number of plant species will be used in order to ensure foliage colour and textural contrasts are in harmony.

The arrangement of plants will be structured around the garden modules developing larger swathes of mass plantings.

Though modulated at different heights the planting will be structured as such to retain views across the plaza.

Architect	Landscape Architect	Project	Drawing Title	Project No.	Dwg No.	Revision
TURNER+ASSOCIATES	turf design	Barber Avenue, Kingswood	UNDERSTOREY PLANTING	1007	LC-09	B
				Scale	Date 29/04/11	
				Dwg Status PROJECT APPLICATION		

Tree Planting

Tree species have been recommended under review of BASIX and Penrith Council Landscape DCP.

Great Western Highway frontage

The Great Western Highway frontage, with such an expanse of roadway, requires substantial vegetation to provide a stronger connection for pedestrians to the streetscape. It is proposed to use an indigenous tree species such as *Eucalyptus sclerophylla* to provide a medium sized canopy for shade and streetscape character, and ornamental white smooth bark to offset darker green shrubbery behind.

Parker Street frontage

Street verge planting is recommended to lift the visual quality of the street and provide additional shade and protection for pedestrians. A frangible species in accordance with RTA requirements is proposed e.g. *Acacia decurrens*.
Adjacent the building facade *Fraxinus grifithii* is recommended to nestle beneath the 10m building overhang. Crown lifting will be undertaken to ensure low hanging branches are removed to provide a clear stem height to prevent impact on pedestrians and retain views into adjacent retail shops.

Barber Avenue frontage

Locally indigenous trees are recommended to create a strong entry statement to the site. The wide verge provides ample deep soil to establish mature exemplary specimens. Suggested species include: Eucalyptus tereticornis, mollucana, and crebra.

Lower Ground Floor Plaza

The lower ground floor plaza will receive protection from winds and shade from surrounding buildings.
It is recommended to incorporate light foliaged, and deciduous species to provide landscape qualities while maintaining access to sunlight. Recommended species include:
Acer negundo 'Kelly's Gold'
Backhousia myrtifolia
Hymenosporum flavum.

	Architect: TURNER+ASSOCIATES	Landscape Architect: turf design	Project: Barber Avenue, Kingswood	Drawing Title: TREE PLANTING	Project No.: 1007 / Dwg No.: LC-010 / Scale: / Date: 29/04/11 / Dwg Status: PROJECT APPLICATION	Revision: B

Appendix D

ADVICE FORM ACOUSTIC CONSULTANT

MANAGING DIRECTORS
MATTHEW PALAVIDIS
VICTOR FATTORETTO

DIRECTOR
MATTHEW SHIELDS

2010716.2/0305A/R0/TT

03/05/2011

Turner and Associates

ATT: KARL MAY

Barber Avenue - Construction Noise Assessment

1 INTRODUCTION

We have been asked to provide comment on potential noise and vibration impacts on nearby development arising during construction of the subject development.

We note that a detailed construction program for the demolition, excavation and construction of the development is not available at present (this is not typically undertaken prior to project approval) and as such, a detailed construction noise assessment cannot be undertaken at this stage.

We recommend that a detailed assessment of noise emissions from construction activities be undertaken at Construction Certificate Stage, once a construction programme has been determined. As such, only an indicative analysis is possible, as outlined below.

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2 SITE DESCRIPTION / AFFECTED PROPERTIES

The proposed development is located at Barber Avenue, Kingswood and includes two stages and three separate mixed use buildings. Proposed works and noise sensitive properties are outlined below.

- Stage 1
    - Building A is bounded by the Great Western Highway to the north, which carries high volumes of traffic and by the Nepean Private Hospital to the east and south. The western façade of the property faces Stage 2 of the development. This building is proposed to be an 8 storey building and to include retail and commercial.
    - Building C is bounded to the south by Barber Avenue which carries medium to low volumes of traffic and to the east by the Nepean Private Hospital. The western façade faces stage 2 of the development and the northern façade is bounded by building A of the development. The building is proposed to be 8 storeys high with a mixture of residential, retail and commercial.
- Stage 2- Comprises of a 12 storey residential building bounded to the north by the Great Western Highway, to the west by Parker Street, which carries high volumes of traffic, and to the south by Barber Avenue. The eastern façade will face Building C of this development.

Figure 1 Site Map and Measurements Location

Stage 1

Stage 2

3 ACOUSTIC CRITERIA

Both noise and vibration criteria will be outlined below.

3.1 CONSTRUCTION NOISE

Relevant guidelines are:

- The DECCW Interim Construction Noise Guidelines and
- Australian Standard 2436.

3.1.1 DECC Interim Construction Noise Guideline

This guideline nominates acceptable levels of noise emissions above the background noise level. For projects within the recommended standard hours the guideline recommends a noise level of 10dB(A) above the background – this level is referred to as the "noise effected level". The noise emission goals for nearby development is as follows:

Table 1 – Noise Emission Goal – Residential Properties

TIME OF DAY	MEASURED BACKGROUND LEVELS – dB(A)L_{90}	NOISE EFFECTED LEVEL BACKGROUND + 10dB(A)$L_{eq(15min)}$
Day (7am-6pm)	56*	66

*This level has been determined based on long term on-site noise monitoring conducted at DA stage.

Table 2 – Noise Emission Goal – Hospital

TIME OF DAY	Noise Emission Goal dB(A)$L_{eq(15min)}$
Day (7am-6pm)	45 (internal noise level)*

*Assuming standard façade construction, and external noise level of 65-70dB(A) will result in an internal noise level of 45dB(A).

Where noise from the construction works is above the "noise affected level", the proponent should apply any feasible and reasonable work practices to minimise noise.

If noise emissions are likely to exceed 75dB(A)$L_{eq(15min)}$, the receiver is deemed to be "highly noise affected". Introduction of management controls such as scheduling of noisy periods, or respite periods is recommended.

3.1.2 Australian Standard 2436-1981 "Guide to Noise Control on Construction Maintenance and Demolition Site".

Where compliance with DECCW cannot be achieved, noise emissions are to be managed in accordance with principles in AS2436:

- That reasonable suitable noise criterion is established (ie – adopt DECC/Council guidelines).

- That all practicable measures be taken on the building site to regulate noise emissions, including the siting of noisy static processes on parts of the site where they can be shielded, selecting less noisy processes, and if required regulating construction hours.
- The undertaking of noise monitoring where non-compliance occurs to assist in the management and control of noise emission from the building site.

3.2 VIBRATION

Vibration caused by construction should be limited to:

- For structural damage vibration, German Standard DIN 4150-3 *Structural Vibration: Effects of Vibration on Structures; and*
- For human exposure to vibration (amenity), the evaluation criteria presented in the British Standard BS 6472:1992 *Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80Hz)* for low probability of adverse comment

The criteria and the application of this standard are discussed in separate sections below.

3.2.1 Structure Borne Vibrations

German Standard DIN 4150-3 (1999-02) provides vibration velocity guideline levels for use in evaluating the effects of vibration on structures. The criteria presented in DIN 4150-3 (1999-02) are presented in Table 1.

It is noted that the peak velocity is the absolute value of the maximum of any of the three orthogonal component particle velocities as measured at the foundation, and the maximum levels measured in the x- and y-horizontal directions in the plane of the floor of the uppermost storey.

Table 3 – DIN 4150-3 (1999-02) Safe Limits for Building Vibration

TYPE OF STRUCTURE		PEAK PARTICLE VELOCITY (mms^{-1})			
		At Foundation at a Frequency of			**Plane of Floor of Uppermost Storey**
		< 10Hz	**10Hz to 50Hz**	**50Hz to 100Hz**	**All Frequencies**
1	Buildings used in commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40
2	Dwellings and buildings of similar design and/or use	5	5 to 15	15 to 20	15
3	Structures that because of their particular sensitivity to vibration, do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g. buildings that are under a preservation order)	3	3 to 8	8 to 10	8

3.2.2 Assessing Amenity

Department of Environment and Conservation NSW "Assessing Vibration: A Technical Guideline" (Feb 2006) is based on the guidelines contained in BS 6472:1992. This guideline provides procedures for assessing tactile vibration and regenerated noise within potentially affected buildings.

The recommendations of this guideline should be adopted to assess and regulate vibration within the construction site.

Table 4 - DECC Recommended Vibration Criteria

		RMS acceleration (m/s^2)		RMS velocity (mm/s)		Peak velocity (mm/s)	
Place	Time	Preferred	Maximum	Preferred	Maximum	Preferred	Maximum
Continuous Vibration							
Residences	Daytime	0.01	0.02	0.2	0.4	0.28	0.56
Impulsive Vibration							
Residences	Daytime	0.3	0.6	6.0	12.0	8.6	17.0

4 COMMENT / ASSESSMENT

Potential noise and vibration impacts are reviewed below.

4.1 NOISE IMPACTS

Obviously, noise impacts on nearby development will be dependant on the activity and where on the site the activity is undertaken. Excavation and piling works tend to be the loudest typical activity. Work close to the western boundary will have greatest impact on the residents on Parker Street while work in the south-eastern corner will have greatest impact on the Nepean Private Hospital.

Initial analysis indicates:

- Excavation/soil retention phase - Primary noise emissions occur during excavation and earth retention (piling), with equipment items typically having sound power levels of approximately 115dB(A)$L_{eq(15min)}$. Excavators (dozers with bucket, saws or hammers) and piling works are typically the loudest activity during construction. Noise levels of between 40-60dB(A) within the hospital and 60-75dB(A) at the nearest residents will potentially be generated, indicating that DECCW acoustic criteria (refer to tables 1 and 2) may be exceeded from time to time, with higher noise levels generated when working near the western and south-eastern boundaries of the site.

- During erection of structure, it is the use of hand tools (angle grinders etc) and concrete pumps which are the loudest typical activity (sound power levels of approximately 105dB(A)$L_{eq(15min)}$). Noise levels of between 30-50dB(A) within the hospital and 50-65dB(A) at the nearest residents will potentially be generated, indicating that a minor exceedance of

DECCW acoustic criteria (refer to tables 1 and 2) is possible from time to time, with higher noise levels generated when working near the western and south-eastern boundaries of the site.

- Obviously, once construction of the building shell is complete, noise from hand tools will be relatively low, as the new building façade will provide considerable noise attenuation. Once the building shell is largely complete, use of hand tools in internal areas is unlikely to exceed DECCW recommended levels.

Noise impacts can be minimised using the following:

- Selection of equipment and process.
- Location of static plant (particularly concrete pumps).
- Use of screens or enclosures (typically only feasible for static plant).
- Scheduling of noisy activities and provision of respite periods.

Detailed construction noise planning is typically undertaken after engagement of a builder and a construction program is prepared (ie – after DA stage) and therefore, detailed planning is not possible at this stage.

In light of the above, we recommend:

- During preparation of the construction program (CC stage), consult with Nepean Private Hospital to determine what areas of the hospital are particularly noise sensitive, and at what time (ward rooms, operating theatres etc).
- On completion of the construction program, acoustic review of proposed construction activities and plant/methods should be undertaken to identify work items likely to exceed DECCW guidelines.
- For those activities likely to generate high noise levels, the analysis should Identify where on the site are the areas likely to result in high noise levels. This will then assist in determining the likely time period for which high noise levels will occur.
- Identify feasible acoustic controls or management techniques (use of screens, scheduling of noisy works, notification of adjoining land users, respite periods) when excessive levels may occur.
- For activities where acoustic controls and management techniques still cannot guarantee compliant noise levels, implement a notification process whereby nearby development is made aware of the time and duration of noise intensive construction processes.

Through adoption of the above, noise impacts on nearby development can be suitably managed to prevent excessive impact.

4.2 VIBRATION IMPACTS

Excavation and earth retention works (piling) are the primary vibration generating activities.

Vibration impacts on the residential properties to the west are unlikely to exceed the criteria outlined in section 3.2

Due to its proximity, there is potential for higher levels of vibration to be generated at the Nepean Private Hospital. In particular, if excavating in rock or installing driven piles in close proximity to the façade of the hospital. We recommend:

- Consultation with Nepean Hospital prior to construction to determine if there is any particularly vibration sensitive equipment items on site, particularly near the northern or western facades (MRI, microscopes etc) in order to determine appropriate vibration criteria.

- Where practicable, excavation in rock should be done using rock saws as opposed to pneumatic hammers.

- If piling is required, use of augured or vibro piling should be used rather than impact piling.

- For at least the initial stages of excavation and piling, vibration monitoring at the Nepean Private Hospital should be conducted to ensure excessive levels of vibration are not achieved. Any monitoring system should allow for rapid feedback to the contractor (for example, SMS notification)in the event that excessive levels are reached.

Adoption of the above will provide a framework to ensure that appropriate systems for monitoring and management of vibration can be implemented.

5 CONCLUSION

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

Acoustic Logic Consultancy Pty Ltd
Thomas Taylor

Appendix E

TMAP ADDENDUM REPORT

TMAP Study

Concept Plan Application and staged Project Application for the Nepean Hospital Precinct Parker Street and Great Western Hwy, Kingswood

Addendum Report

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Document Verification

Job Number:	09 234
Project:	Nepean Hospital Kingswood Concept Plan and Stage 1 Project Applications
Client:	Aesthete No. 3 Pty. Limited

Revision		Initials	Date	Signature
Addendum Report V01	Prepared by:	GP/TL	30 April 2011	
	Checked by:			
	Approved by:	GP	03 May 2011	

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Contents

1. Introduction

Traffix was previously commissioned by Aesthete No. 3 Pty. Limited to undertake a Transport Management Accessibility Plan (TMAP) assessment in support of a Concept Plan and Staged Project Plan Application for a site bounded by Barber Avenue, Parker Street and the Great Western Highway (part of the Nepean Hospital Precinct.

A Concept Plan Application was subsequently submitted to the NSW Department of Planning (DoP) which was notified and was the subject of a number of responses from relevant Government authorities, including the RTA, NSW Transport/Centre for Transport Planning and Product Development and Penrith City Council.

In this regard, the proposal has been amended (reduced in size) to respond to concerns as raised; which has resulted in a fundamental reduction in the level of traffic activity associated with the site. This report documents the findings of our further investigations in relation to the amended plans which respond to concerns raised generally, but particularly those of Council and the Roads and Traffic Authority.

The development intensity has been substantially informed by the limited capacity of the road system to accommodate future traffic volumes, so that every effort has been taken to moderate car travel. This includes the elimination of the supermarket, with the predominant use being residential units, together with ancilliary commercial and retail uses that are of a local nature and will involve extensive walking trips, including trips associated with the residents and employees who reside within the Nepean Hospital Precinct generally. The retail uses will also benefit from moderated trip rates due to the presence of multi-purpose and linked trips.

Furthermore, it is emphasised that further Project/Development Applications will subsequently be submitted which will provide more accurate details of impacts associated with individual development applications. That is, the level of investigations undertaken in this report is consistent with what would be expected based on a master plan/concept plan.

The report is structured as follows:

- Section 2: Describes the changes to the concept plan application
- Section 3: Discusses the responses to issues raised
- Section 4: Presents the conclusions.

2. Preferred Concept Plan Application

A comparison of the Original Concept Plan and Preferred Concept Plan is provided in Table 1 of the Preferred Project Report (MP09_0197) prepared by Cityscape Planning + Projects dated April 2011. The main changes that impact on traffic and transport planning matters are as follows:

- A 15.5% reduction of overall GFA from 42,293m^2 to 35,750m^2.
- The elimination of the 1,531m^2 GFA supermarket.
- A 43% reduction in ancilliary retail area of 2,519m^2 (from 5,828m^2 to 3,309m^2).
- A reduction of 4 serviced apartments (from 80 to 76).
- A 25% reduction in residential area of 2,605m^2 (from 10,154m^2 - 106 units to 7,544m^2 – an assumed 80 units based on a proportional reduction in yield); and
- A 4% increase in commercial area of 873m^2 (from 20,189m^2 to 21,062m^2).

The traffic and transport implications associated with the now proposed development are discussed in more detail in Section 3. Reference should also be made to the amended plans provided separately.

3. Response to Issues

Several issues have been raised by the Department of Planning in its letter dated 9th March 2011. The following is a response to the relevant traffic and transport planning matters raised.

3.1.1 Construction Traffic Impacts

It is anticipated that detailed Construction Traffic Management Plans will be prepared as part of individual Project/Development applications, taking due account of proposed development stages, and in response to a condition of consent. As a general principle, the Plan will need to be prepared in consultation with the appointed builder. It will need to address requirements during each stage (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, with all access focussed on the use of Barber Avenue.

3.1.2 Travel Demand Initiatives (RTA)

The RTA has queried the extent of parking 'suppression' for the development, which was an approach that was adopted as a general policy position aimed specifically at encouraging alternate travel modes, involving a 22.5% reduction in parking overall. In response, the amended development (refer to Table 2 of the Preferred Project Report) provides an increased parking rate, with 761 spaces now proposed in total, for a demand of 800 spaces based on the application of Council's DCP. This is only a 5% reduction and this recognises the relative level of car-dependency associated with the site, while also making some allowance for the ability of the non-residential parking to be shared.

The elimination of the supermarket overcomes the RTA's concerns in relation to the low level of parking proposed for the supermarket.

Finally, the reduced intensity of development as now proposed will also contribute towards reduced travel demand generally. The Original Concept Plan application was predicted to generate 450 veh/hr

during the critical PM peak period. The Preferred Concept plan is expected to result in a substantial reduction of 35% in trips during the critical PM peak (to 290 veh/hr) as shown in Table 1 below, based on the same trip rates as applied in the original TMAP study.

table 1: comparison of PM peak traffic generation for concept plan

Use	GFA (m^2) or Units	Original Weekday PM Peak		Preferred Weekday PM Peak	
		IN	OUT	IN	OUT
General Retail	3,309 (GFA)	56	56	40	40
Supermarket	Nil	61	61	0	0
Commercial	21,062	48	112	50	116
Residential	80 units	26	6	19	5
Serviced Apartments	76 units	20	4	19	4
TOTAL		211	239	125	165
		450		290	

These reduced trips are substantial and are due principally to the removal of the supermarket. The resultant impacts on critical intersections will similarly be beneficial and result in acceptable performance. As with the original Concept Plan application, the intersection of Parker Street with the Great Western Highway will operate with increased delays, but not to the same extent as previously modelled.

3.1.3 Pedestrian and Bicycle Linkages (RTA)

A pedestrian fence is to be installed along the Parker Street site frontage as requested by the RTA and this can be conditioned. This will ensure that pedestrians cross at controlled locations, maximising safety.

The issue raised by the RTA concerning the need to integrate with the Penrith Bicycle Plan is noted. In this regard, the status of future bicycle linkages remains uncertain although it is expected that any future off-road facility would occur on the northern side of the GWH in this locality, within vacant lands between the Highway and the western rail corridor. The subject site would provide access to any such facility via the signal-controlled pedestrian crossing of the GWH at Parker Street. In addition, there are internal bicycle/pedestrian connections within the site, together with end-user facilities for cyclists including shower/change room facilities and bicycle storage facilities

Council's Urban Design Panel has evidently raised the issue of bicycle connectivity to the Hospital lands to the south of the subject site. In this regard, connections are already available via the grade-separated (elevated) walkway across Barber Avenue; while crossings are also available at-grade generally along Barber Avenue, which is a low-order local access road. In this regard, the 'warrant' for a midblock marked footcrossing is not expected to be met, there being no strong desire-line across the road. Nevertheless, a pedestrian refuge island within Barber Avenue at Parker Street is considered justified, which would assist both pedestrians and cyclists and this is recommended for adoption. This is a minor matter that can be conditioned and would require the approval of Council's Traffic Committee.

3.1.4 Servicing (RTA)

The RTA's concerns relate to the movement of trucks associated with the supermarket. As this has been deleted from the proposal, these concerns have been resolved. The amended proposal will generate only moderate servicing demands that can be accommodated within the dock provided. This will include access by vans, small trucks and a standard service truck as defined in AS 2890.2 (an 8.8m MRV).

The possibility of occasional servicing from within the set-down/pick-up area is recognised. However, this is a management issue and can be addressed through the preparation of a Loading Dock

Management Plan as a condition of consent. It is also recommended that the set-down area be signposted as "No Standing" so that vehicles are not left unattended at any time.

3.1.5 State Plan 2010 Objectives (NSW Transport)

This Plan post-dates the Concept Plan documentation. Nevertheless, the key objectives of the Plan are met by the Preferred Concept Plan, through the moderated parking supply and the elimination of the supermarket, which it is acknowledged had some (albeit limited) potential to attract patronage from beyond the local neighbourhood. The proposed land uses are also complementary to the existing Hospital uses, with which they have a synergy. That is, many residents will have an affinity with the Hospital (and can walk to work); while residents and Hospital staff will use the retail areas that are provided and will also walk. Finally, many of the commercial areas will be hospital-related, which will overcome the need for Hospital patients to travel to remote locations for many services. These factors, when combined, will 'contain' travel demand to a very significant extent, which is an important objective of the Plan.

3.1.6 Parking Provision (NSW Transport)

As discussed above, the development now proposes 761 spaces for a 'nominal' demand of 800 spaces (i.e. one derived through the cumulative addition of individual land use components).

The retail/commercial/serviced apartment (i.e. non residential) demand for 705 spaces under the DCP is met by the provision of 666 spaces. This is a reduction of 6% overall which is appropriate having regard for the mixed use nature of the development. The specific allocation of these 666 spaces to individual uses should remain flexible in order to allow the development to respond to changing conditions over time. Accordingly, this is best dealt with in the context of the Transport Access Guide, which can similarly updated over time.

The requirement for 95 spaces for the residential use is fully met, comprising 78 resident spaces and 17 visitor spaces. It is proposed that these will be within a secure area to ensure availability. However, extensive additional visitor parking will be available outside peak times of retail demand. This will ensure that on-street visitor parking does not occur, which in any event would be less convenient.

3.1.7 Excessive Reliance on Travel demand Strategies (Penrith Council)

The extent of reduction sought to Council's Parking Policy (DCP) is substantially reduced, from 22.5% to only 5%. Accordingly, the reliance on travel demand strategies (to make up the difference) is now a relatively modest task. Notwithstanding, promotion of alternate travel modes remains a worthwhile objective for all trip types. Accordingly, the preparation of a Transport Access Guide remains a valid policy initiative and can be prepared in response to a suitable condition of consent.

3.1.8 Options for Vehicle Access through the Hospital (Penrith Council)

While the benefits associated with an alternative link to Somerset Street are desirable and would improve traffic distributions, the reduced traffic generation (35% in the critical PM peak) results in an outcome that is supportable. Nevertheless, such an alternative has been pursued over many years and cannot be delivered having regard for site constraints. It is also noteworthy that as a matter of design principle, it may be a superior outcome to maintain traffic to the perimeter of the Hospital precinct (as proposed) to enable improved internal pedestrian connectivity and amenity. This would be compromised by a through-site vehicular link.

3.1.9 Barber Avenue Taxi Rank

No rank is proposed in Barber Avenue. All taxi activities will occur within the set-down/pick-up area.

3.1.10 Capacity of GWH/Parker Street Intersection

The reduced traffic generation as discussed above reduces the imperative to implement the improvements discussed in the TMAP study. The required improvements at the intersection are in response to strategic road planning requirements (background traffic growth generally) and do not arise solely from this application.

4. Conclusions

The Preferred Concept Plan and Project Application are considered supportable and respond appropriately to all matters raised during the notification process. The traffic generating intensity is substantially reduced, while parking supply is proportionately increased, reducing pressure on alternate travel modes.

There are several matters that have been raised that are appropriately addressed through relevant conditions of consent.

It is therefore concluded that the proposed development concept envisaged under the amended Concept Plan is supportable on traffic planning grounds and the proposed development will operate satisfactorily.