6.2.2 Additional Network Coding

As required, a new development Travel Zone (Zone 81) has been coded to represent the demands associated with the new development. Subsequently the demands associated with Zone 14 have been edited to reflect the reduced land use catchment in line with the surveyed generation of the site discussed in Section 3 above.

Additional links were coded to reflect the Street Network Structure Plan outlined in the Ryde Council DCP 2010. The orientation of the roads outlined in the Structure Plan vary slightly to those adopted in the design as a result of consultation with the RTA and Council, as well as site constraints. However the general principles and objectives of the structure plan have been adopted. This is discussed further in Section 7. The additional modelled links included a one way north to south link from the site out onto Epping Road via a left turn exit on the western boundary; and a new east-west road along the northern boundary, facilitating two way flow from Herring Road. The additional links are shown in **figure 5** below.

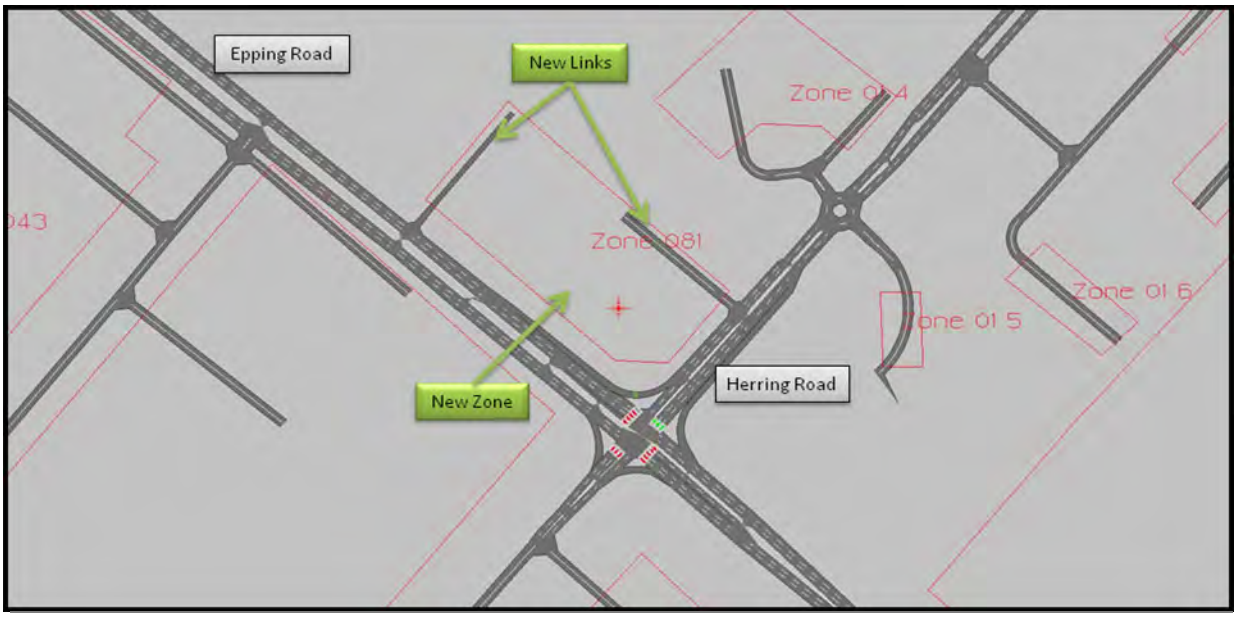

figure 5: additional zone and links

6.2.3 Trip Distributions

The future distribution of traffic has been assessed using the Ministry of Transport 2006 Journey to Work Data for Travel Zone 2486. The directional travel splits which resulted from this analysis (for both journey to work trips from TZ2494 and to TZ2494) are summarised in **table 3** below.

table 3: journey to work travel data by direction

Direction	From TZ2486		To TZ2486	
	Volume	%	Volume	%
North	67	11%	28	22%
South	64	10%	20	16%
East	414	65%	62	48%
West	90	14%	18	14%

This distribution was then applied to the amended demand matrix for both the AM and PM peaks and was allocated as shown in **table 4**. It should be noted that the generation of zone 14 was also reduced proportionally to reflect the reduced demands as a result of the development.

table 4: journey to work travel data by direction

Zone	AM Peak		PM Peak	
	To Zone 81	From Zone 81	To Zone 81	From Zone 81
46	7	17	17	7
49	41	99	99	41
57	3	8	8	3
60	3	3	3	3
64	4	12	12	4
65	5	12	12	5
Total	**63**	**151**	**151**	**63**

6.2.4 Future Intersection Operation

The operation of the key intersections analysed in Section 3 have been re analysed using the turning movement data extracted from the Base Case + Development models for the peak one hour periods during both the AM and PM peaks.

It should be noted that increased delays along Epping Road were recorded during the PM peak period in the Base Case + Development Paramics model which were also replicated in the Sidra analysis. These delays are generally as a result of insufficient phase time allocated to the right turn movement undertaken by westbound vehicles on Epping Road turning into Herring Road to access the site. The phase time for the right turn movement adopted in the Paramics model provided by Council, allows for 7 seconds of green time. This compares to phase times obtained from the RTA that indicate an average phase time for the right turn movement from Epping Road into Herring Road of 21 seconds, including a green time of 16 seconds, during the PM peak period, or 9 seconds longer than that adopted within the model.

The intersection of Epping Road and Herring Road is a SCATS operated intersection and as such the phase times can be varied to compensate for shifting arrival patterns of vehicles, and some variation between the actual phase time and the times adopted in the model is expected. However, the additional volumes associated with the right turn movement (approximately 6 additional movements per phase or 90 vehicles per hour) resulted in the need to increase the green time for the right turn phase from 7 seconds (as adopted in the Base Case model) to 11 seconds, whilst maintaining the overall cycle time adopted in the Base Case Paramics model of 150 seconds at the intersection. This is considered an acceptable method of assessment and in fact more accurately represents the future operation of the intersection.

The additional movements at key intersections within the model do not exceed the 5% threshold requiring SIDRA analysis as outlined in the Paramics Reference Documentation under any scenario. The analysis of the key intersections below has been undertaken for Council and the RTA for reference purposes only to advise the assessment process. Intersections outlined by the RTA for analysis not listed below continued to operate at current levels of service with no minimal to no change in delays or queues. These intersections were analysed using Paramics.

The results of the SIDRA intersection analysis at the key intersections in the vicinity of the site are summarised in the table below.

table 5: future intersection performance: am and pm peak hour

Intersection Description	Period	Control Type	Degree of Saturation	Intersection Delay	Level of Service
LCR & Epping Rd	AM	Signal	1.10	80.6	F
	PM		0.93	59.2	E
Epping Rd & Herring Rd	AM	Signal	1.00	42.4	C
	PM		1.00	63.2	E
Herring Rd & Waterloo Rd	AM	Signal	0.84	39.1	C
	PM		0.82	38.6	C

The impact of the proposed development, as discussed above, will result in a net increase of only 109 vehicles per hour during peak periods or a maximum of 1-2 additional vehicles per minute over and above the conditions that occur under Council's 'base case' model, which takes into account all other committed development in the locality. This is well within existing fluctuations of daily flows and can easily be accommodated with the existing road network without any measurable impact on existing levels of service as shown in Table 5. Accordingly no network road improvements are considered necessary to support the development and all critical intersections will continue to operate as currently occurs.

It should however be noted that intersection turning volumes extracted from the models for the peak one hour periods between the existing and future models varied to a significant degree that made a direct comparison difficult. These variations are likely to be the result of different release patterns within the models. Specifically, the volumes used in the analysis summarised in Table 5 do not represent simply a net increase of vehicles at each intersection; but rather a complete redistribution of volumes across the entire network including the 109 vehicles associated with the site.

In this regard, the increased volumes associated with the site are considered very moderate especially when compared to existing volumes along both Epping Road and Herring Road (the two main roads used to access the site) and equates to a maximum increase of only 1.5% over and above existing

volumes. The variations indicated using Paramics do not appear to accurately reflect this moderate increase.

Nevertheless, the analysis summarised in Table 5 clearly indicates that the future volumes will have no measurable impact on the existing operation of key intersections. The proposed development is therefore supportable on traffic planning grounds.

While the volumes were similar to those recorded in the Base Case models for the purpose of undertaking a Sidra analysis, the variations were significant during the PM peak in particular, so that link and delay comparisons between the existing and future models were not considered reliable. Accordingly, it is proposed that this be considered further during the Peer Review Process that is required by Council.

7. access & internal design aspects

7.1 access

Chapter 3 of Council's DCP 2010 outlines the "Future Street Network Structure Plan" for the Macquarie Park Corridor. The Network Structure Plan identifies two Type 3 roads which are to traverse the northern site boundary from Herring Road to the west of the site, and a second road (also a Type 3) which is to traverse in a north south direction for approximately 200 metres, bisecting the Stamford Hotel site.

In response to the Structure Plan outlined by Council an alternative alignment for the localised road network is proposed. The alternative alignments have been discussed with Council and the RTA and result from a detailed review of the lot boundary locations and alignments. As a result the following adjustments are now proposed:

- Construction of the Type 3 road along the northern site boundary as proposed under the DCP. The construction is to include a carriageway width of 8.5 metre and will allow two-way flow along its length in addition to indented (protected) parallel parking along the southern side of the road;
- The relocation of the proposed north-south Type 3 road currently aligned to bisect the site is now proposed to be deleted. This road would forms an intersection with Epping Road that would be less than 100 metres from Herring Road. This would be hazardous for left turn entry movements as following traffic would potentially assume that a vehicle entering the site would be turning left at Herring Road, resulting in a potential for rear-end collisions. In addition, left turn exit movements would be over a crest where visibility is limited; while access could not safely be achieved to access the far the right turn lane in Epping Road for the movement into herring R0oad (south); and
- The relocation of the Type 3 road to the western boundary is considered preferable to the one slightly further west as it is able to be delivered as part of the road staging solution for the Concept Plan. Specifically, it is proposed that there be a half road construction with southbound movement onto Epping Road only permitted. Sight distance at this intersection is excellent and two-way movement can be introduced when the Type 3 road is required to be constructed in the future. The one-way southbound operation will also ensure that "rat running" through the site does not

occur. The road is to be constructed with a 9.2 metre wide carriageway and will include parallel parking on both its eastern and western sides.

Both roads will therefore facilitate convenient access to the overall site. Reference should be made to the reduced plans included in **appendix b** which depicts the future road network.

7.2 internal design

The internal design for the Concept Plan adopts the general the principles of AS2890.1 as demonstrated by the concept plans attached. In particular the following aspects are considered noteworthy:

- All parking modules are designed with a minimum width of 2.66 metre wide bays and 5.8 metre wide aisles which exceeds the requirements of AS2890.1 for all classes of parking;
- All ramps are designed with a compliant grades and transition as required under AS2890.1;
- All sloping floors within the parking aisle are designed with a maximum grade of 1:20 (5%) measured parallel to the angle of parking and 1:16 (6.25%) in any other direction;
- All parking spaces located adjacent to obstructions have been provided with an additional 300mm clearance;
- Disabled parking spaces are located within close proximity to lifts and are designed in accordance with the requirements of AS2890.6 (Off Street Parking for People with Disabilities); and
- Visual splays are provided at the accesses to the basement car parks and are designed in accordance with Figure 3.3 of AS2890.1.

Having regard for the internal design aspects discussed above, the Concept Plan is considered acceptable and will operate satisfactorily. It is noted that a more detail assessment has been undertaken for the Stage 1 Project Application within Section 11 of this report; and will be similarly undertaken for the Stage 2 Project Application.

7.3 pedestrian and bicycle linkages

An extensive footpath system is proposed with access opportunities for both pedestrians and cyclists on all frontages to the proposed development. The site boundary walls have been set back to provide increased footpath widths along both Epping Road and Herring Road to improve existing pedestrian conditions. Furthermore, significant internal pedestrian connectivity is proposed to allow easy access along pedestrian desire lines to areas such as major bus stops along Herring Road and Epping Road.

Bicycle facilities will be provided in accordance with Council's requirements at Project Application stage. Bicycle facilities including lockers or racks will be provided in convenient locations near to main pedestrian access locations and within the basement car park. The provision of these facilities will encourage alternative transport methods.

It should be noted that both the Ryde Bicycle Strategy Mater Plan 2007 and Planning Guidelines for Walking and Cycling (2004) were reviewed and elements have been adopted within the design. Although the Ryde Bicycle Strategy Master Plan 2007 does not directly outline measures for private developments and concentrates more on public domain improvements, the key objectives of encouraging the use of bicycles in the area has been adopted, with the provision of extensive bicycle storage facilities (with one bike space per unit) and access to bicycle routes. The Planning Guidelines for Walking and Cycling (2004) also mainly apply to major urban centres, regional cities and towns, although some elements have been adopted. These include the provision of pedestrian and cycle access locations within close proximity to the major crossing and desire lines to ensure ease of access.

The Macquarie Park Pedestrian Movement Study has also been reviewed and considered during the planning stages. This report does not identify any major pedestrian or cycle infrastructure upgrades in the vicinity and as such the proposed pedestrian access locations to major crossings on Epping and Lane Cove Roads are considered acceptable to facilitate future pedestrian and cycle needs as identified in the report.

8. construction traffic management

A preliminary CMP is included in **appendix d** for review by the Department of Planning and outlines the major site management principles to be adopted during the construction program. The CMP outlines the following key management issues and identifies the main principles to be adopted for each stage;

- Site accommodation;
- Waste management;
- Materials handling;
- Noise management, and
- Sequencing and programming of the project;

The need for a Construction Traffic Management Plan (CTMP) is also recognised. At this stage the broad principles of the CTMP can be provided as a response to the DGR's however it is not possible to provide a detailed CTMP until such time a builder and relevant contractors have been engaged. Once the builder has been engaged the detailed CTMP can be provided to both the RTA and Council for approval and will address all relevant matters as required by the RTA and Australian Standards.

For the purpose of the Concept Plan Application however, TRAFFIX have undertaken consultation with the client to develop the main access and traffic management principles for the development. A copy of the Preliminary CTMP is included in **appendix e** which establishes the operational aspects of the CTMP for adoption and deals with the key operational issues with regards to traffic management including:

- Hours of construction;
- Access principles
- Truck types and volumes;
- Management of Site Workers, and
- Pedestrian management;

9. response to DGR No. 5

The matters discussed below are in direct response to the specific requests for information outlined in the Director Generals Requirements (DGR's) relating to the transport and accessibility impacts of the proposed development. The matters below are also in response to inadequacies identified by the Department of Planning in its letter dated 23 March 2011.

It is emphasised that a detailed assessment has been undertaken by TRAFFIX of the impacts of the development on the existing and future road network in accordance with the Director General's Requirements dated 25 November 2010 and forms part of the EA as submitted to the DoP and this is considered to be suitable for the purpose of assessment by the RTA.

The assessment by TRAFFIX was undertaken based on the adoption of a trip generation rate as published in the RTA's Guide to Traffic Generating Developments for high density residential developments within a metropolitan sub-regional centre. That is, the adopted rate of 0.29 trips per dwelling assumes a level of public transport accessibility (and usage) that would be comparable to those that are provided within sub-regional centres generally. The adoption of this trip rate also takes into account the high levels of walking trips that are expected, with many residents either working in the locality or having an affinity with Macquarie University.

Accordingly, the development assessment is predicated on the assumption that alternate travel modes will be an integral and necessary part of the operations of the development. These alternate modes will be actively encouraged as identified in the Transport and Accessibility Impact Study undertaken by TRAFFIX. In particular the following measures are proposed to promote alternative transport measures by both visitors and residents accessing the site:

- Council's DCP requires a minimum of 1 bicycle space/3 units for residents (209 spaces) and 1 bicycle space/12 units for visitors (53 spaces). The Concept Plan in fact proposes a bicycle space for each dwelling unit which is an exceptional level of provision and will encourage the use of bicycles in the area.

- A residential travel plan is proposed and is intended to identify sustainable travel options that are available to residents and visitors. In particular the travel plan is to identify services available to residents and their locations and is to include aspects such as:

    - Local bus stop locations,
    - Bus and rail time tables
    - Location of taxi ranks in the locality
    - Location of local services within walking distance such as convenience stores, supermarkets and other retail related areas,
    - Location of car share vehicles within reasonable walking distance (if any); and
    - Local cycle routes including the City of Ryde Cycle Map.

- It is anticipated that awareness of these services and the specific locations of the services will ensure that the development provides maximum opportunity for residents to use non car travel modes;

- The developer will undertake consultation with car share operators with the intention of providing dedicated spaces in either the basement car park or within the proposed road network. These spaces will be available for use by not only the residents of this development but also of neighbouring residential properties creating a benefit for the overall community, and

- The development will seek to design the internal road network as a shared zone environment encouraging walking and other non car travel modes.

It is also noted that the development provides an extensive network of pedestrian linkages both within and around the perimeter of the site. These can be used by cyclists, in addition to the use of shared on-road facilities. In this regard, the internal roads (which will be public roads) are expected to be speed zoned at 40km/h to maximise safety through the creation of a low speed environment. These roads and the network of footpath linkages are integrated with the existing and future public domain.

A response to the specific matters identified within DGR No. 5 is provided below to assist in the assessment of the application and adopts the numbering outlined in the Final DGR's dated 25 November 2010:

1. *Provide a Transport & Accessibility Impact Assessment prepared in accordance with the RTA's Guide and having reference to relevant state planning documents and consider the Macquarie Park 2007 Base Paramcis Model where relevant;*

   This document has been produced with the above taken into account including the relevant documents outlined in the DGR's.

2. *Address any impacts on the planned future street network set out in the Ryde DCP 2010, including any alternatives;*

   This has been addressed in Section 7 of this report. In summary the development seeks to amend the proposed future street network by deleting the proposed north-south road currently identified as bisecting the Stamford Hotel; and realigning the western (north-south) Type 3 Road to the western boundary, with partial carriageway construction. This has been proposed primarily due to safety concerns, but also to achieve delivery of the road network at the earliest opportunity. The proposed east-west Type 3 Road traversing the northern site boundary is provided in compliance with Council's DCP.

3. *Details of pedestrian access routes to local services, shops and public transport infrastructure;*

   The site is located within close proximity to local shops, services and public transport. The Macquarie Shopping Centre is located approximately 600 metres to the north of the site on the corner of Herring Road and Waterloo Road and also includes a substantial bus interchange providing services to areas including the City, Chatswood, Drummoyne and Manly. The Macquarie University Railway Station lies directly opposite the Macquarie Shopping Centre and bus interchange. Access to these services is readily available along Herring Road utilising the existing pedestrian footpaths and crossing locations along the route.

4. *Address any impacts of the development on the existing road network including an estimate of all trips generated by the development and modelling of impacts on nearby major intersections as set out in Recommendation 4 in the response provided by the RTA dated 1 October 2010;*

   The impacts of the development have been addressed in detail in Section 6 of this report. The development will generate a maximum net increase over and above the existing site generation of the site of only 104 veh/hr during the AM peak and 111 veh/hr during the PM peak period which equates to only 1-2 additional movements per minute. Reduced generation will occur at all other times. These volumes have been superimposed onto Council's 'base case' Paramics model as provided, which incorporates all other committed developments within the modelled area that Council requires to be assessed. All intersections outlined in Recommendation 4 of the RTA's response have been reviewed using the Ryde Paramics Micro Simulation Model. The three major junctions identified by the RTA where then further analysed using aaSIDRA which indicated no change in the level of service or delays as a result of the development.

5. *A specific address of Recommendation 2 in the response provided by the RTA dated 1 October 2010 in relation to increased setbacks to Epping Road in order to accommodate planned future road upgrades, and provide evidence of this matter;*

   This matter has been raised with the RTA for advice and guidance. At the time of preparation of this report, no response has been provided by the RTA. All setbacks along Epping Road have therefore been provided in accordance with Councils DCP and are considered to be generous. It is expected that the RTA will require a grade separation of Herring Road over Epping Road due to topographical issues which is an alternative arrangement to that embodied in Council's Paramics model. In the event that any additional widening is required by the RTA, it is expected that this could be accommodated within the setback area provided to Epping Road.

6. *Provide an assessment of the implications of the proposed development for non-car travel modes including increased demand on rail and bus services and infrastructure, with reference to State Plan targets and local controls including the Ryde Bicycle Strategy and Master Plan 2007;*

   This has been addressed in Sections 5, 6 and 7 of this report and summarised above.

7. *The EA must demonstrate the provision of sufficient on-site car parking having regard to Council and RTA guidelines and include details of compliance with relevant Australian Standards (note: the Department supports reduced car parking in areas well served by public transport);*

   This has also been addressed in Section 5 of this report. In summary the proposed parking provision (790 spaces) is less than that required by Council's DCP 2010 (869 spaces) which will encourage the use of alternative transport measures and will result in reduced car dependency which is consistent with the objectives of both the Macquarie Park Corridor and State Government policy more generally. The provision of 790 spaces is however significantly greater than what would be required by the RTA for a sub-regional centre (611 spaces) which is appropriate as the subject site does not enjoy the same level of access to public transport and other services as exists within a sub-regional centre. This approach will also protect the amenity of the surrounding locality from unnecessary on-street parking impacts. In summary, the proposed parking allocation is considered to achieve a satisfactory balance and takes due account of the proximity of the site to available public transport services.

8. *Provision for a location-specific sustainable travel plan for the overall development, including consideration of a car-share scheme;*

   This is proposed as part of a Travel Plan which is invited as a condition of consent on the Stage 1 Project Application; and subsequently also to the Stage 2 Project Application.

9. *Address the accessibility and traffic/transport principles detailed in current and draft planning controls;*

   This has also been addressed throughout the report. In particular the development aims to reduce car parking provision to promote alternative transport measures, provide bicycle parking over and above that required by Council and require the preparation of a Travel Access Plan as a condition of consent on any Project Application.

10. conclusions

In summary:

- The generation of the development has been assessed as a maximum net increase over and above the existing use of the site as 104 veh/hr during the AM peak period and 111 veh/hr during the PM peak period with reduced volumes at all other times. This relates to an increase of 1-2 vehicles per minute which is very moderate. That is, the proposed residential use of the site may be regarded as a low-traffic generating use;

- An assessment has been undertaken using the Macquarie Park Paramics Model in accordance with the requirements set out in the appropriate reference documentation to assess the impacts of the development on the existing road network. The results of this assessment have also been analysed using aaSIDRA and compared to the existing operation of key intersections in the vicinity. The results of this assessment show that the development will have a negligible impact on the existing road network which will continue to operate as currently occurs. Furthermore, no external road improvements are required to support the Concept Plan, beyond the internal roads that are proposed and their direct intersections with the public road network;

- The parking provision (790 spaces) proposed is less than that required by Council's DCP 2010 (869 spaces) which will encourage the use of alternative transport measures and will result in reduced car dependency which is consistent with the objectives of both the Macquarie Park Corridor and State Government policy more generally. The provision of 790 spaces is however significantly greater than what would be required by the RTA for a sub-regional centre (611 spaces) although this is appropriate as the site is not as well served as a sub-regional centre. In addition, some care needs to be taken to protect residential amenity in the locality from on-street parking effects. Hence, the proposed parking provision achieves an appropriate balance and takes due account of the proximity of the site to public transport and other services. The reduced parking demand is also supported by the Department as indicated in the DGR's.

- The proposed internal road networks have been designed with regards to Council's DCP. Some variations from the road network depicted in the Street Network Structure Plan however these are considered supportable for the reasons outlined above and as a result of discussions with Council, and

- The car park access and internal design adopts the principles set out in both AS2890.1 and Councils DCP. The car park has also been assessed using the computer program AutoTurn, as permitted by AS 2890.1: 2004 and operates safely and efficiently.

It is therefore concluded that the proposed development is supportable on traffic planning grounds and the proposed development will operate satisfactorily.

11. project plan for stage 1

11.1 description of development

The Stage 1 development is shown on the drawings provided at reduced scale in appendix b. It includes:

- Demolition of all existing structures within the Stage 1 area;
- Construction of four (4) residential buildings accommodating a total of 310 residential units (50% of the overall Concept Plan development concept) including:
  - 161 one bedroom dwellings (52%);
  - 119 two bedroom dwellings (38%); and
  - 30 three bedroom dwellings (10%);
- The above includes 32 apartments (10%) which are adaptable;
- Allowance for access by vehicles up to and including an 8.8 metre MRV within the new internal roads created by the development; and a 10 metre garbage truck for the Type 3 roads under Council's DCP;
- The construction of a three level basement car park levels comprising 715 spaces in addition to 75 new on-street parking spaces that are available within the proposed road network (790 spaces in total), and
- Construction of two new Type 3 roads generally in accordance with the principles established under Councils Street Network Structure Plan, accessing both Epping Road and Herring Road, but with the removal of the north-south road that traverses the site and a slight relocation of the north-south road to align it with the western site boundary, so that this road can be (partially) delivered in Stage 1.

In general, Stage 1 incorporates the delivery of the overall road network under the Concept Plan, together with the provision of all parking under the Concept Plan.

11.2 traffic generation and external traffic impacts

The traffic impacts associated with the Stage 1 Project Application are taken into full account in the Concept Plan component of this report and no further assessment is necessary. This assessment included both Stages 1 and 2 and concludes that satisfactory operation is achieved without any need for external traffic improvements.

11.3 parking requirements

All parking is to be provided for the Concept Plan in Stage 1, notwithstanding that Stage 1 represents about 50% of the overall development. This is a consequence of economies associated with the construction sequencing. It is therefore anticipated that there will be limitations on the use of the balance of parking that is intended for Stage 2, prior to Stage 2 being completed. This parking would however be available for use by construction workers associated with the Stage 2 Project Application. The Stage 1 parking requirements are as shown in **table 6**.

table 6: council parking rates and provision – stage 1

Type	Number	Council Parking Rate	DCP Requirement	RTA Parking Rate	RTA Requirement	Spaces Proposed
Residential						
One Bedroom	161	1.0 spaces per unit	161	0.6 spaces per unit	97	342
Two Bedroom	119	1.2 spaces per unit	143	0.9 spaces per unit	108	241
Three Bedroom	30	1.6 spaces per unit	48	1.2 spaces per unit	36	86
Visitor	310	1 space per 4 units	78	1 space per 5 units	62	105
Total Residential			430		303	774

It is evident that there will be a surplus of 344 spaces and these are shown at the eastern end of the site on the plans provided in **appendix b** as having an indicative layout.

11.4 disabled parking

There are 32 adaptable units provided in Stage 1 and each of these is provided with a disabled parking space. The disabled visitor spaces at ground level will also be available in Stage 1.

11.5 bicycle parking

One bicycle space is provided for each unit which is an exceptional level of provision that compares with only one space/3 units under Council's DCP. These are located within the storage areas indicated on the basement parking levels.

11.6 servicing

The Type 3 roads that are delivered in Stage 1 of the Concept Application (as shown on the plans provided in **appendix b**) have been designed to accommodate a 12.5m HRV, taking due account of the partial construction of the western (north-south) road. The other internal roads are able to accommodate a 10m garbage truck and movement will via forward through-site manoeuvres, with no reversing necessary. Garbage rooms are provided at regular intervals within Basement 1 level and bins will be transported by caretaker to ground level for collection by Council's contractors.

11.7 access and internal design aspects

The access and internal design aspects have been reviewed and comply with AS 2890.1 and Austroads requirements. It is anticipated that a condition will be imposed requiring compliance with AS 2890.1 and AS 2890.2 in relation to the private domain, with compliance with Council and Austroads in relation to the public domain.

11.8 construction

It is anticipated that a detailed construction management plan (CMP) will be prepared in response to a condition of consent, when more detailed information is available from the appointed builder. The CMP will also include a detailed construction traffic management plan (CTMP), prepared to the satisfaction of the RTA and council. Nevertheless, some construction principles have been developed and will guide this ongoing process and these have been included in appendix d and appendix e.

11.9 conclusions

It is concluded that the Stage 1 Project Application is supportable on traffic planning grounds. It is noted that the Paramics modelling reported upon herein will be made available to Council for peer review, in accordance with Council's adopted procedures.

appendix a

photographic record

View looking west along Epping Road towards the intersection with Herring Road.

View looking east along Epping Road towards Herring Road in the vicinity of the proposed new road to traverse the western site boundary.

View looking north along Herring Road in the vicinity of the proposed Type 3 road to traverse the northern site boundary.

View looking south in the vicinity of the proposed Type 3 road to traverse the northern site boundary.

View west along the southern site boundary to Epping Road.

appendix b

reduced plans