LEADING

ITEM NUMBER	13.8
SUBJECT	Epping Town Centre Traffic Study and other Epping Planning Review Matters
REFERENCE	F2017/00210 - D06023116
REPORT OF	Snr Project Officer
PREVIOUS ITEMS	11.3 - Epping Planning Review - Completion of Stage 1 and Commencement of Stage 2 - Council - 14 Aug 2017 6:00pm 12.5 - Update on Epping Planning Review and Related Matters - Council - 12 Feb 2018 6.30pm 13.4 - Outcomes of Public Exhibition - Draft Amendments to Hornsby Development Control Plan 2013 - Tree and Vegetation Preservation - Council - 26 Feb 2018 6.30pm

PURPOSE:

This report details the progress of the Epping Town Centre Traffic Study and updates Council on the implications for the findings of the Epping Planning Review, as well as several related planning matters relevant to the Epping Town Centre.

RECOMMENDATION

(a) **That** Council note this update on the Epping Planning Review and related matters.

(b) **That** Council exhibits the Epping Town Centre Traffic Study and supporting documentation to enable comment from major stakeholders in accordance with the consultation plan described in the body of this report.

(c) **That** despite recommendation (b) above, that Council adopts the position that it does not support any:

i. Planning proposal or preliminary planning proposal that applies to sites situated within the Epping Planning Review Study Area which seek to deliver extra housing in addition to what can be achieved under the current planning controls, unless the planning proposal is seeking to address a planning issue identified in Council's Epping Planning Review process related to heritage interface controls, commercial floor space or resolving open space issues at Forest Park.

ii. Development applications seeking an increase in residential density via clause 4.6 of the *PLEP 2011*

and that Council write to the Department of Planning and Environment (DP&E) advising them of this position.

(d) **That** in relation to the Austino Planning Proposal that Council write to the DP&E to:-

i. Object to the Planning Proposal in its current form and density proceeding; and

ii. Request that Council be re-instated as the RPA so that Council can pursue a Planning Proposal that would retain the current controls that

apply to the site with the exception of the former Bowling Club portion of the site which would be rezoned from RE1 Public Recreation to R4 High Density Residential with a maximum Height of Building control of 17.5m and FSR of 1.5:1.

(e) That should Council be re-instated as the RPA (on the basis that it will pursue a Planning Proposal as per (d)(ii) above) Council officers be authorized to commence discussions with the Austino PP applicant about the form of the Planning Proposal and whether there are any opportunities for some contribution to additional open space as part of the Planning Proposal. The outcome of these discussions should be reported to Council.

(f) **That** Council write to the Minster for Planning and the Greater Sydney Commission and request the State Significant Development currently being progressed for 240-244 Beecroft Road be placed on hold until:

i. the supplementary work on a new road link has been completed; and

ii. that the relevant approval authority agrees to the provision of commercial floor space equivalent to a 1:1 FSR.

(g) **That** a further report is brought to Council on the options for the Rawson Street carpark site as a site for future civic space and community facilities and analysis on whether any EOI process should be commenced to seek partners to redevelop the site and realise the FSR available on the site.

(h) **That** a further report is brought to Council on the outcome of the consultation on the Epping Town Centre Traffic Study and the results of the supplementary traffic analysis discussed in this report on:-

i. Reopening of the former M2 bus tunnel link; and

ii. A new east west road link through 240-244 Beecroft Road

(i) **That** a Planning Proposal including all necessary background studies and analysis be prepared to progress the recommended LEP amendments detailed in this report relating to:-

i. Rosebank Avenue HCA, Precinct;

ii. 1, 3, 3A, 5, 7, and 7A Norfolk Road and 25 Pembroke Street;

iii. Essex Street HCA Precinct;

iv. Rose Street Precinct; and

v. Rockleigh Park Precinct;

and that the Planning Proposal and associated material be reported to Council for endorsement before it is forwarded to the Department of Planning and Environment seeking any Gateway Determination for the planning proposal.

(j) **Further, that** a Planning Proposal including all necessary background studies and analysis be prepared to progress the recommended LEP amendments detailed in this report relating to new controls to require the provision of commercial floor space in the centre and that the Planning Proposal and associated material be reported to Council for endorsement before it is forwarded to the Department of Planning and Environment seeking any Gateway Determination for the planning proposal.

BACKGROUND

1. This report is a progression of a Council report deferred from the 12 February 2018 Council meeting (Item 12.5) provided at **Attachment 1**. This report also relates to a Council assessment of the Austino planning proposal.

2. As noted above, Item 12.5 from the 12 February 2018 Council meeting which sought to provide an update on the status of the Epping Planning Review and associated matters was deferred. It resolved as follows:

   ***That** consideration of this matter be deferred for the following reasons:*

   1. *Consultation with Ward Councillors.*
   2. *That Council write to the Department of Planning seeking clarification around the decision of 1 December 2017 to appoint the Sydney Central Planning Panel as the relevant Planning Authority, meaning that Council no longer has relevant planning Authority Status for this proposal. Council is seeking this clarification particularly around the fact that the Department of Planning and Environment will be referring the outcome of the Traffic Study to make their determination which is the reason for our Council delaying a recommendation to the Council.*
   3. *Upon receipt of the valuation for the former Epping Bowling Club site, the formal valuation be the subject of a Briefing to Ward Councillors and any other interested Councillors prior to the Austino Planning Proposal or any update on the Epping Planning Review being reported back to Council.*

3. In response to the resolution of 12 February 2018:

   a. A Workshop was held with Councillors on 16 February 2018 so that the applicants of two preliminary planning proposals – Oakstand consortium and Lyon Group – could present their respective preliminary planning proposals. These preliminary planning proposals are detailed later in this report.

   b. A Councillor briefing session was held with Ward Councillors on Wednesday, 28th March 2018 which provided an update on the Epping Planning review including the draft findings on the Epping Town Centre Traffic Study and valuation report on 725 Blaxland Road.

   c. A meeting was held with the Member for Epping, Damien Tudehope on Thursday, 29th March 2018 which also provided an update on the Epping Planning review and included a discussion on the draft findings on the Epping Town Centre Traffic Study and valuation report on 725 Blaxland Road.

4. Consistent with resolution 2 above, on 1 March 2018, Council Officers wrote to the Department of Planning and Environment (DP&E) seeking clarification on the removal of the relevant planning authority role from City of Parramatta council. The DP&E's response is attached to this report at **Attachment 2**.

OVERVIEW OF EPPING PLANNING REVIEW AND STRUCTURE OF THIS REPORT

5. The Epping Planning Review (EPR) was initiated as a review of planning controls for the Epping Town Centre and immediate surrounds (refer to the

area delineated orange in the figure below) to address the issues of land use conflicts. These conflicts were raised by the Epping Community following from the DP&E's Priority Precinct process which increased the density controls in March 2014. The EPR Study Area is shown in Figure 1.

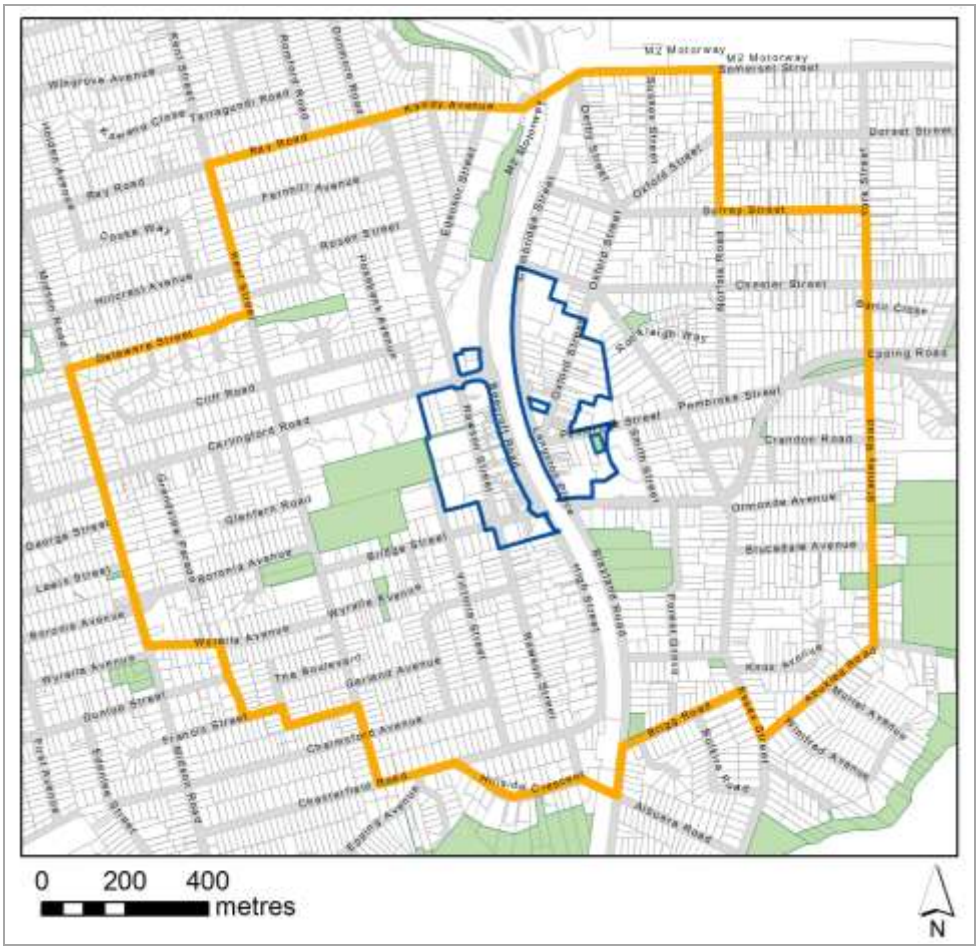

Figure 1 - Epping Planning Review study area showing the town centre and immediate surrounds

6. The EPR has also followed the Council boundary changes occurring in May 2016 under which the Epping Town Centre came to be entirely contained within the City of Parramatta (having previously been split between Parramatta City and Hornsby Shire Councils).

7. One objective of the EPR has been to create a unified planning framework for the Epping Town Centre and its immediate surrounds, including one set of LEP and DCP controls, a unified development contributions framework and one public domain plan. Council has already developed a single development contributions framework for the Epping Town Centre and Council's formal LGA-wide Harmonization Process will have a role in bringing some further consistency to the planning controls.

8. The EPR has two stages. The first stage has involved undertaking technical studies and community consultation to inform planning control amendments to resolve land use conflicts or issues. The last remaining element of this stage is the completion of traffic analysis and the major element of this is the Epping Town Centre Traffic Study.

9. The **Epping Town Centre Traffic Study** (ETCTS) is the key component of this report, as its findings have major implications for the Epping Town Centre in the

short to mid-term. The implications of the ETCTS are also discussed with regards to:

a. Updates on the status of **LEP and DCP amendments** affecting land within the Town Centre with a small section of the report discussing the release of the final **Central City District Plan** in March 2018 and relationship with the EPR.

b. the State Significant Development proposal affecting NSW Government owned land at **240-244 Beecroft Road, Epping**.

c. The **Austino Planning Proposal** and **Preliminary planning proposals** affecting land within the Town Centre.

10. This report makes recommendations on:

a. the **interface areas** at Rosebank Avenue, Rockleigh Park, Pembroke Street/Norfolk Rd, Essex Street and the Rose Street Precinct;

b. **commercial floorspace** within the centre; and

c. potential **social infrastructure** provision on the Rawson Street Car Parking site.

RELATED PLANNING POLICY MATTERS

11. A series of recent policy amendments (LEP, DCP and development contributions plans) are complete which apply to land within the EPR study area and relate to:

a. Housekeeping Amendment to Hornsby LEP 2013 recently coming into effect.

b. Fast Tracked Amendments to Parramatta DCP 2011 involving footpath widening recently coming into effect.

c. Amendment to Hornsby DCP 2013 - Tree Preservation and associated matters raised by Council in its resolution from the 26 February 2018 Council meeting pertaining to tree removal in Forest Park and the potential impact of Austino planning proposal on trees in the north of Forest Park are detailed in **Attachment 3** to this report.

d. Section 94 and 94A Developer Contributions Plans applying to the EPR area recently coming into effect.

12. These matters are further detailed in **Attachment 3**.

Greater Sydney Region Plan and Central City District Plan

13. In March 2018, the Greater Sydney Commission (GSC) released the final *Central City District Plan* (CCDP) and its metro-wide level plan *Greater Sydney Region Plan - A Metropolis of Three Cities.*

14. In both plans, Epping is identified as a ‘Strategic Centre’ for 2036. However, in the earlier iterations of the District Plan and Metro Plan, Epping was identified as a “Town Centre” or “Local Centre”. Thus the role of the Epping Town Centre has been elevated to a higher-order centre without any corresponding dialogue or justification. Also, the ‘Strategic Centre’ category is still not clearly defined in the Final Plans. The change has also occurred ahead of completion of the Epping Town Centre Traffic Study.

15. The CCDP establishes dwelling targets for the five year period from 2016 to 2021 for the Parramatta LGA and jobs targets for lower and higher scenarios

for 2036 for Epping, specifically. In the context of the Epping Planning Review and recent development forecast, these are discussed below:

a. With regards to **dwelling targets** for that period, the CCDP sees 21,650 additional dwellings for the 2016-2021 period for the Parramatta LGA. Analysis contained in this report on recent dwelling growth within the Epping Town Centre demonstrates that recent growth patterns mean this centre can meet a substantial proportion of this target.

b. With regards to the **jobs targets**, the Epping Town Centre is identified as a Strategic Centre for 2036 with a jobs target of 1,900 additional jobs (2036 baseline) to 2,400 additional job (2036 higher target). These are on top of the 5,100 jobs that the CCDP sees as the baseline for 2016. Further discussion about the provision of commercial floorspace is provided further in this report.

16. Furthermore, a series of actions (both direct or indirect) across a number of the CCDP's Planning Priorities apply to the Epping Town Centre and largely involve collaboration with the DP&E and GSC.

EPPING PLANNING REVIEW - STAGE 1

17. The major elements of Stage 1 of the EPR were spelled out in the 12 February 2018 report (Item 12.5) which noted that Stage 1 of the Epping Planning Review was largely completed with the exception of a Final Traffic Study. This was precluded by a report of Council at its meeting on 14 August 2017 which reported the Discussion Paper and its supporting technical studies.

18. An **Interim Traffic Modelling Report** (dated June 2017) was prepared by EMM for the purposes of the Epping Planning Review Discussion Paper which was exhibited in June/July 2017. The Interim Report formed preliminary analysis in order to consult the Epping community on traffic and access in and around the Town Centre.

19. At the 14 August 2017 Council meeting, Council endorsed a suite of principles to guide Stage 2 of the Epping Planning Review. The issues discussed in this report directly affect many of the principles.

Epping Planning Review Steering Group

20. To ensure delivery of the Epping Planning Review, in February 2017, Council established the Epping Planning Review State Agency Steering Group which has representation from the Greater Sydney Commission, the Department of Planning and Environment, Transport for NSW and Roads and Maritime Services.

21. The Steering Group is also consistent with the Central City District Plan where:

> *Parramatta City Council is leading the review of planning controls and the Commission is collaborating with Council and other State agencies to address social infrastructure, traffic, heritage and commercial land issues* (p.21).

22. Given the recommendations within this report, the role of the Steering Group in providing further direction on the Epping Planning Review process is paramount.

BACKGROUND TO EPPING TOWN CENTRE TRAFFIC STUDY

23. The principal traffic study underpinning the existing planning controls which is now outdated is the **Halcrow Study** of 2011 commissioned by Hornsby

Council, the then Parramatta City Council and the DP&E prior to the Priority Precinct process formally commencing. The Epping Town Centre Traffic Study (ETCTS) replaces this analysis.

24. The Halcrow Study tested the short term and long term land use scenarios:

    a. The short term (2016) land use scenario was based on a forecast of additional 900 dwellings and additional 3,000sqm of retail uses; and

    b. The long term (2026) land use forecast a further 2,100 dwellings and another 3,000sqm of retail uses.

25. In total, this tested the impact of 3,000 additional dwellings and 6,000sqm of additional retail within the Town Centre by 2026. As is discussed further in this report, the Halcrow assumptions on residential land use have substantially underestimated the development trends.

EMM's Interim Traffic Study (2017)

26. The preliminary analysis carried out by EMM in 2017 as part of the Interim Traffic Modelling report for the purposes of the EPR Discussion Paper allowed discussion of the issues as part of the Discussion Paper process. Specifically, the preliminary study identified the following key issues:

    a. The east west Carlingford Road/Epping Road and north south Beecroft Road/Blaxland Road are sub-regional routes that converge at the Town Centre mixing with local traffic.

    b. Approximately 89% of trips that cross the bridge are through traffic trips where the origin and destination of the trip is outside the Epping Town Centre.

    c. The through trips are a significant barrier to improving the traffic flow around the Epping Town Centre. (Note: Centres are usually structured in a way that separates local traffic from through-traffic, but the Epping Town Centre is not).

    d. The widening of the rail bridge will not be a "game changer" given the time it will take motorists to cross the bridge. In other words, the expansion of the bridge will be an improvement, but will not be a *significant* improvement in providing relief to congestion.

    e. Traffic routes and intersections are currently operating at over-saturated traffic levels for both the morning and afternoon peak hour, and the increased intersection traffic delays are already displacing some of the previous regional through traffic movements away from the Epping Town centre to other parallel traffic routes such as the M2 Motorway for east-west traffic and Midson Road for north-south traffic.

Local road upgrades

27. The Roads and Maritime Services' (RMS) program of main road improvements within the town centre have been factored into the ETCTS. They are:

    a. Widening of Epping Road from two lanes to three lanes involving:

        i. Removal of the right turn movement from Langston Place into Epping Road,

        ii. Removal of the right turn movement from Epping Road into Smith Street and Forest Gove;

iii. New dedicated right turn lanes from Essex Street into Epping Road; and

iv. New traffic light controlled pedestrian crossing for Epping Road and Essex Street.

b. Upgrading the Beecroft Road and Carlingford Road intersection in Epping involving:

i. New traffic light controlled pedestrian crossing for Carlingford and Beecroft Roads;

ii. Additional right-turn lane from Beecroft Road into Carlingford Road; and

iii. New pedestrian path to link with the exiting path to Epping Station.

28. A critical factor is that the traffic modelling undertaken since 2011 all factor in a widening of the rail bridge carriageway on Epping Road to accommodate an additional westbound lane. In a letter from the DP&E to Council dated 7 November 2017, it notes that "Transport for NSW is investigating several options for widening this overpass and the Council would be informed of the results when the investigation concludes" but the letter did not provide a timeframe. Since the receipt of the letter, Council Officers have not been provided with an update.

Dwelling forecasts since 2011 and actual dwelling growth

29. In order to understand the significance of the findings from the ETCTS (covered in the next section), it is important to understand recent (actual) and anticipated dwelling growth in the context of the growth predicted by the DP&E as part of the former Epping Priority Precinct process completed in March 2014. This must be understood so that infrastructure providers (Council and the State government) can ensure the delivery of appropriate infrastructure at the right time.

Dwelling forecasts

30. During the progression of the DP&E's Priority Precinct process, dwelling growth forecasts were reviewed from **3,000 additional dwellings** for 2026 in the Halcrow Study to **3,750 additional dwellings** for the year 2036 as per the Department of Planning and Environment's (DP&E's) *Finalisation Report* (November 2013). However, shortly after the City of Parramatta commenced the EPR process, in early 2017, the DP&E revised its forecast figure of 3,750 additional dwellings to **5,500 additional dwellings** by 2036 and set a maximum dwelling yield of **10,000 additional dwellings** at a 100% take up rate.

Actual dwelling growth

31. The Epping Planning Review Discussion Paper (June 2017) noted that Council Officers had reviewed recent development applications and approvals to track actual growth against the dwelling forecasts undertaken by the DP&E and/or during the Priority Precinct process. This reviewed all of the pre-lodgments, DAs under assessment and determined (both under construction and not yet under construction) that have occurred since March 2014 when the new Priority Precinct controls came into effect and found that **4,735 additional dwellings** could be delivered in the short to mid term (assumed to be as early as 2023), if all DAs are constructed and fully occupied in that time. This equates to an

additional **10,890 people** within the centre assuming a household size of 2.3 persons per household (Source: Council's Social Outcomes Unit).

32. Then again, for the purpose of this Council report, on 19 April 2018, Council Officers tracked this figure to **5,553 additional dwellings** by 2023. This is made up of 3,940 approved dwellings and 1,613 dwellings under assessment. Again, applying an occupancy rate of 2.3 persons per household, this means an additional **12,771 people** in the town centre by 2023. With no signs of the Town Centre's residential market slowing down, Council Officers conclude that within 4 years of the new planning framework being in place, the DP&E's revised 5,550 additional dwelling target for 2036 is well on its way to being met well before 2036.

What does this growth mean?

33. The tracked growth is well above what was forecast and planned for by the DP&E during the Priority Precinct process. In effect, the 2036 revised forecast of last year by the DP&E (of 5,500 dwellings) will already effectively be met within 4 years of the new planning controls if the development detailed in existing approvals and applications are realised.

34. The rate of this growth has significant implications for the amenity and function of the centre including infrastructure provision in the short and mid-terms. For example:

    a. The widening of the rail bridge carriageway on Epping Road to accommodate an additional westbound lane is yet to be delivered by the State Government.

    b. Education infrastructure such as schools managed by the Department of Education (public schools) as well as private schools will be under more pressure.

    c. The significant loss of commercial floorspace spelled out in the SGS *Commercial Floorspace Study* and the *Epping Planning Review Discussion Paper* exhibited in mid 2017 means the future amenity and function of Epping as a centre is at stake.

    d. The provision of local infrastructure (libraries, community facilities, open space and recreational facilities) is under pressure to be enhanced and improved.

Conclusions

35. Comparing the Town Centre's growth with the CCDP's dwelling targets for the Parramatta local government area (LGA) for the 2016-2021 period which is (21,650 dwellings), the 5,553 additional dwellings represents a substantial proportion of the dwelling target although some of that growth has occurred post March 2014.

36. In addition to the tracked dwelling growth since March 2014, there is substantial interest from developers and land owners within and around the town centre seeking an increase in residential yield above what the current controls allow via a planning proposal process.

37. Council must ensure that the amenity of the centre as well as the long term social, environmental and economic aspirations of the Epping community are not undermined. Both the Greater Sydney Commission and the DP&E have a critical role in this.

EPPING TOWN CENTRE TRAFFIC STUDY

38. Council Officers commissioned EMM Planning and Environmental Consultancy in March 2017 to revise the traffic analysis work done as part of the DP&E's Precinct Planning process.

39. The Epping Town Centre Traffic Study (ETCTS) effectively replaces the 2011 Halcrow Study which formed the basis for the current planning controls within the Town Centre. It also replaces other applicant-prepared traffic analysis from 2015. A copy of the ETCTS is provided at **Attachments 4 and 5** (Attachment 4 comprises the Traffic Report and Attachment 5 comprises the Appendices).

The EMM Epping Town Centre model

40. The traffic model was developed by Transport Modelling for EMM. The base model report was completed in December 2017 and forwarded to the RMS for authorisation which was received in February 2018. In its response, RMS stated that the consultant's 2017 base model is suitable for traffic assignment analysis (traffic distribution) for the assessment of any future proposals within the study area.

41. The ETCTS models the co-ordinated operation of a chain of linked intersections. It does this for four existing and future traffic network model and land use scenarios which are:

    a. Existing actual peak hour intersection traffic volumes which were surveyed in March 2017;

    b. Modelled base case 2017 intersection traffic volumes from the EMME model;

    c. Modelled +5,000 dwellings growth scenario intersection traffic volumes from 2026; and

    d. Modelled +10,000 dwellings growth scenario intersection traffic volumes from 2026.

42. To develop a base year for the network traffic model, in March 2017 the following peak hour surveys, travel time surveys and traffic queue length observations were undertaken:

    a. Peak hourly intersection turning movements at 17 intersections;

    b. Morning/afternoon peak hour travel time surveys across the full study area;

    c. Morning/afternoon peak hour maximum traffic queues for traffic signal operations on Beecroft Road, Carlingford, Epping and Blaxland Roads.

43. The model then tests two future residential growth scenarios in the study area as follows:

    a. A 2026 land use scenario tests 5,000 additional dwellings

    b. A 2036 land use scenario tests 10,000 additional dwellings.

    These scenarios are additional dwellings realized after the new DP&E planning controls came into effect in March 2014.

44. The ETCTS also includes preliminary analysis of two local road network options:

    a. The reopening of the former M2 bus tunnel link to Epping Station as a one way westbound link with left turn egress only at Beecroft Road and

b. A new east west road link connecting between Ray Road and Beecroft Road, through the NSW Government site at 240-244 Beecroft Road on the western side of Beecroft Road.

45. These two road network options are only explored in a preliminary sense for the 2026 and 2036 future traffic network models. This seeks to determine the potential future extent of the likely road network traffic delay benefits for locally based traffic accessing the major road network at Epping. Refer to Sections 7.3 and 7.4 of the ETCTS provided at **Attachment 4**.

ETCTS Findings

46. The broad findings from the ETCTS are summarized below.

Findings from Survey Counts

47. For the **March 2017** surveyed morning and afternoon peak hour traffic conditions the findings are as follows:

a. Up to four of the six key intersections on the four major traffic routes (via Beecroft Road, Blaxland Road, Carlingford Road and Epping Road) are operating at over saturated (level of service F) traffic conditions respectively with an average 5 minute waiting time.

b. During the morning peak period the combined eastbound and southbound traffic queues on Carlingford Road and Beecroft Road can reach a combined total length of approximate 1.5 km.

c. The most widespread traffic queuing effects on all areas of the road network are considered to occur at approximately 8:40 am and 5:40pm, consistent with the Sydney regional major road traffic conditions.

d. The increasing road traffic congestion occurring in the Town Centre area, is adversely affecting both the regional through traffic movements and local traffic accessibility to the major road network.

Future years of 2026 and 2036

48. The findings of the +5,000 and +10,000 dwellings growth scenario intersection traffic volumes for the 2026 and 2036 are as follows:

a. Future peak hour traffic conditions continue to worsen even when the full programs of the identified RMS and Council road improvements have been implemented.

b. In the road networks, five to six of the assessed intersections will have traffic conditions operating at oversaturated (level of service F) during both the morning and afternoon traffic peak periods. As an example, in 2026, the Carlingford Road/Beecroft Road intersection has an average delay which equates to 70.5 minutes (morning peak) and 23.5 minutes (afternoon peak). In 2036, this increases to 77 minutes (morning peak) and improves to 10.5 mins in the afternoon peak.

c. In 2036, over 3,300 vehicles cannot enter the network.

49. The average intersection delays are predicted to improve by 2036 from the 2026 base scenario as a result of Council proposed road improvements which are anticipated to be implemented during this period. However, the most crucial intersection – Beecroft Road – actually experiences a higher average delay in 2036 than for the 2026 case (p.41).

50. The ETCTS also finds that *the afternoon performance of the network for the base 2036 is such that it is unlikely that there will be any spare capacity for additional vehicles* (p.41).

Additional westbound lane on Epping Bridge

51. The additional westbound lane on Epping Bridge would primarily benefit the afternoon peak hour westbound regional traffic movements travelling through the Town Centre. However, if the bridge were to operate with future tidal flow traffic conditions such as four lanes eastbound during the morning peak periods with two lanes westbound and three lanes in each direction during the afternoon peak periods, this future improvement could provide significant travel flow benefits during both these peak periods.

Additional road network options

52. The findings from preliminary testing of two additional road network options, are as follows:

    a. **Reopening of the former M2 bus tunnel link:** the envisaged number of vehicles that would use the tunnel would result in equivalent peak hourly traffic reductions for certain southbound right turning traffic and westbound traffic movements. These "*would probably have significant network traffic benefits in terms of reducing the future peak hourly intersection traffic delays at these intersections"* (ETCTS, p.45).

    b. **A new east west road link through 240-244 Beecroft Road:** the envisaged number of vehicles that would use the through link would result in equivalent peak hourly traffic reductions for the other traffic movements using the Carlingford Road intersections with Beecroft Road or Ray Road and Rawson Street which "*could have significant network traffic benefits in terms of reducing the future peak hourly intersection traffic delays at these intersections"* (ETCTS, p.45).

53. However, further SIDRA intersection analysis is required of the above two road network options, this analysis is currently underway.

Implications

54. The findings from the ETCTS has major land use and infrastructure implications for town centre and surrounds. Therefore, Council Officers see that the role of the ETCTS is to:

    a. Inform planning policy affecting the Study Area particularly in relation to:

        i. Certain proposals seeking an increase in residential yield; and

        ii. State Significant Development applications.

    b. Provide a basis for Council to take to the DP&E, GSC and the Minister for Planning seeking support for:

        i. a position on residential development that indicates that any growth in residential development should only be permitted to resolve planning issues in Epping rather than just to permit additional residential development above what can be achieved under the current controls; and

        ii. a coordinated approach to infrastructure delivery consistent with actions within the CCDP.

c. Inform changes to the principles adopted by Council on 14 August 2017 that relate to:

i. Heritage interface;

ii. Commercial floorpsace; and

iii. Open space and community infrastructure.

Consultation

55. The ETCTS and any associated traffic analysis as part of the overall ETCTS brief should be placed on exhibition so that the major stakeholders (such as RMS, Transport for NSW (TfNSW), DP&E, GSC, landowners and the wider community) have an opportunity to comment on the documentation. Consultation will occur via:

a. Formal invitation to State agencies represented on the EPR Steering Group which are RMS, TfNSW, DP&E and GSC.

b. Formal invitation to major land owners formally seeking density residential density uplift such as Austino, Oakstand and Lyon Group.

c. Notification e-newsletter to the 440 residents and businesses registered on the EPR project mailout database. This will include local residents and business as well as planning consultants acting for Epping landowners.

d. A public notice in the *Northern District Times.*

56. The ETCTS and associated supporting material will be made available on the EPR project website.

IMPACT OF ETCTS ON STATE SIGNIFICANT DEVELOPMENT AT 240-244 BEECROFT ROAD

57. The State government owned site at 240-244 Beecroft Road (refer to Figure 2) once used for the Sydney Metro Northwest project is subject of a State Significant Development (SSD) application.

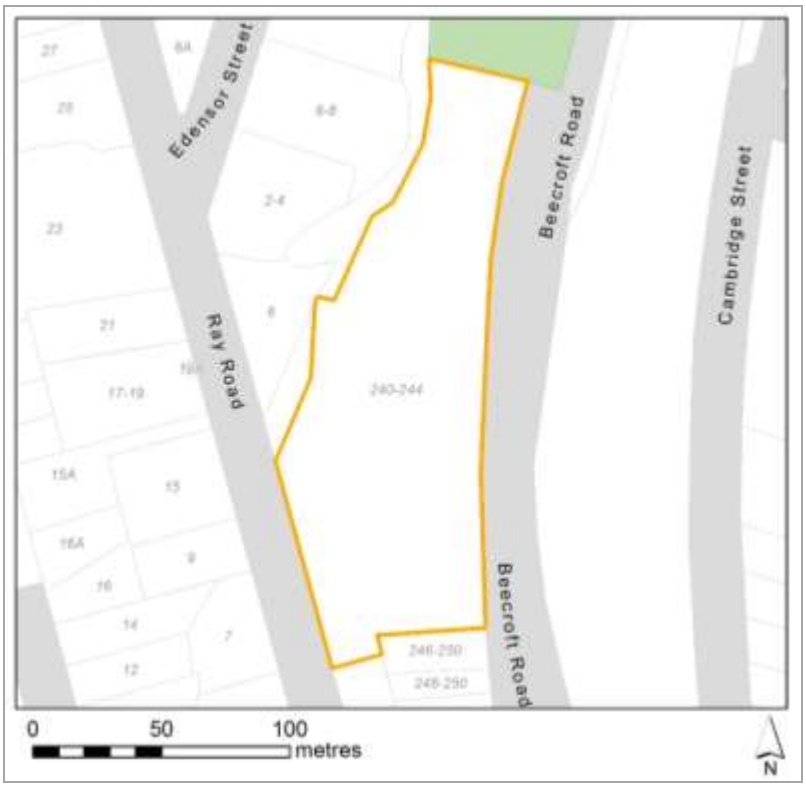

Figure 2 - State government owned land at 240-244 Beecroft Road, Epping

58. The background to his SSD application up to January 2018 is contained within the deferred Council report of 12 February 2018 (**Attachment 1**). However, the role of the site in the future development of the Town Centre is key in two ways: from both land use and traffic/access perspectives.

Land Use issue

59. The SSD application applies to 10,120sqm of the 13,342sqm total site area and proposes 39,000sqm of GFA (450 residential units) and 15 storeys which equates to a 3.8:1 FSR. Of that, the SSC proposes 2,000sqm of commercial FSR which equates to 0.2:1 *to be located at ground level on Road (could be general store, childcare, gymnasiun, café, small offices).*

60. The Commercial Floorspace Study by SGS prepared for the purposes of the EPR Discussion Paper saw that there has been a loss of commercial floorspace estimated at about 63%. Further internal analysis undertaken by Council Officers in early February 2018 has identified that that approximately **8,200sqm retail** and **35,200sqm office** floorspace needs to be "replaced" within the Town Centre. Given its scale, this site plays an important role.

61. From a planning perspective, the SSD process presents Council with an opportunity to negotiate an outcome because:

    a. The site's current zoning (R4 High Density Residential) does not require any commercial floorspace however, a ***neighbourhood shop*** use (max. 100sqm) is permissible within the zone.

    b. The site's previous zone (B4 Mixed Use) would still have allowed the commercial office building on that site to be demolished and replaced with a building that had retail and commercial at lower levels and residential on higher levels. Returning the site to its previous zoning would not require the owner to replace the previous commercial floor space that historically existed on that site.

    c. The timeframe around the SSD process is much faster, than a rezoning process; in the latter, Council can seek a higher amount of commercial floorspace on the site, but this would take some time. The SSD can approve commercial floorspace even it if is not permitted in the zone so there is a mechanism for addressing the floorspace in a timely manner if agreement can be reached.

62. Therefore, a 1:1 FSR (10,120sqm) for commercial uses is a balanced negotiating position that maximises the chances that commercial can be achieved on the site and contribute to Epping's role as a Strategic Centre as identified in the CCDP.

Local Traffic/Access issue

63. Also, as already noted in this report, a road link through the SSD site is being tested to determine whether it can alleviate some of the traffic pressure at the intersections of Carlingford Road with Ray Road and Beecroft Road. Preliminary testing shows it can take of some pressure of peak hour traffic. However, more detailed analysis is progressing with a supplementary report due shortly which will form supplementary analysis to the ETCTS.

Recommendations

64. Council Officers therefore recommend:

a. That Council not support the application until:

   i. A 1:1 FSR of commercial land uses can be delivered on the site; and

   ii. A supplementary report on an east west through link is completed.

b. That Council write to the Minister seeking that he not support the proposal until the two criteria listed in a. immediately above are achieved.

IMPACT OF ETCTS ON AUSTINO PLANNING PROPOSAL

Introduction

65. Council Officers were intending to undertake a detailed assessment of the Austino PP. However, on account of:

    a. The Town Centre having effectively reached the DP&E's revised 2036 dwelling target; and

    b. the findings from the ETCTS;

    Council Officers consider that a detailed assessment of this proposal is no longer required. Instead the assessment method emphasises the significance of the findings of the ETCTS and recognises the critical importance of the RMS and JRPP's comments on traffic matters at the earlier stages of the planning proposal (discussed in the "Traffic" sub-section, below). In short, the traffic impacts associated with the faster than anticipated dwelling growth is the guiding principle informing the outcome of this proposal.

Background

66. The Austino Property Group are the applicant for a Planning Proposal affecting land at 2-18 Epping Road, 2-4 Forest Grove and 725 Blaxland Road (the latter site being the former bowling club site – refer to Figure 3).

Figure 3 - Land affected by the Austino Planning Proposal denoted in solid red line (from applicant's Urban Design Report)

67. The planning proposal – resubmitted to the DP&E in January 2018 seeks to:

    a. Reconfigure the existing R4 and RE1 zones resulting in no net loss of open space;

b. Increase the building heights over the reconfigured R4 zone from 26.5 metres to a maximum of 65.5 metres along with 5 other building heights; and

c. Increase the density on the site from an equivalent 2.1:1 to a combination of 7.5:1, 4.6:1, and 1.75:1.

68. The above proposed changes seek to deliver a predominantly residential development comprising two towers on Blaxland Road with smaller towers on Epping Road accommodating estimated 794* units. (Note this calculation relies on Council's standard practice of applying an efficiency unit rate of 85sqm per unit whereby the applicant relies on a rate of 100sqm). Under the current controls (ie R4 zoning, maximum height of 26.5 metres) on the sites fronting Epping Road), the Austino landholdings would realise a total of approximately 308 units according to Council Officer analysis.

69. A VPA dated 4 December 2015 accompanies the planning proposal which proposes a public urban plaza through the proposed development providing a pedestrian connection between Epping Road and Forest Park, with an area equivalent to the area of land currently zoned RE1 Public Recreation (6,665sqm), so there will be no net loss in open space. However, much of the area proposed to be zoned public open space contains underground car parking below it which is generally not acceptable to Council.

70. This PP has a complex history. Details of the process and the proposal are provided at **Attachment 6.**

Petition

71. Between February and March 2017, Council Officers received a petition which containing nearly 600 signatures. The petition requested a number of actions including that Council purchase the site at 725 Blaxland Road. Other actions related to concerns on the impacts of the planning proposal on Forest Park in terms of traffic and urban design.

72. The petitions were tabled at the Council meeting held on 13 February 2017 where Council resolved:

> *That the petition be received and referred to the appropriate Council officer for report.*

73. In response to the resolution, the appropriate time for the consideration of the petition was always intended to be undertaken as part of the assessment of the Austino planning proposal. This section in this report forms that assessment.

Traffic Analysis

74. The applicant's Traffic Impact Study prepared by GTA in 2015 tested the traffic impacts of the proposal based on the Halcrow Study's 3,000 additional dwellings for 2026. However, as identified in the Halcrow Study, the 3,000 dwellings for 2026 falls well short of the likely growth of 2025 (5,553 dwellings) based on current and expected development activity.

75. In March 2016 having reviewed the applicant's traffic analysis the RMS wrote to Hornsby Shire Council when it was the RPA noting the following:

> *Should Council support a recommendation for gateway determination, the exhibited proposal must also ensure that the Transport Impact Assessment traffic includes detailed Network modelling results (ie. phasing, queue lengths/delays for all movements, intersection details) for [six] key intersections for all modelled scenarios.*

76. At that time, RMS also noted that *the total Residential Parking requirements being restricted to no greater than the minimum parking rates applicable for a total of 327 apartments* on the entire site (ie. Limited to approximately half the amount being sought under this proposal)*. (Note: it is not clear what assumptions the RMS has relied to determine this number of units. Council's assessment suggests the figure is closer to 308 units).

77. In February 2018, the brief for the Epping Traffic Study was extended so that an impact assessment of the Austino planning proposal on traffic and access around the site could be undertaken. This was decided given the findings from the modelled base case 2017 intersection traffic volumes from EMME software based counts.

78. The Traffic Impact Assessment (TIA) prepared by EMM (provided at **Attachment 6**) concludes that the proposal would generate an additional 768 daily vehicle movements on Forest Grove. It also sees that because the impacts of the 2026 and 2036 additional dwellings on the network are so severe, that the actual intersection performance deterioration due to the Austino development either with or without the planning proposal is relatively small.

79. The ETCTS and recent TIA by EMM updates the Austino TIA because the TIA findings were based on a slightly lower future baseline year 2026 additional dwelling forecast than the forecast which has been used in the ETCTS. That said, the general findings within the EMM TIA are still valid. All the same, with regards to the Austino planning proposal impacts, the ETCTS concludes the:

> *…significant intersection performance deterioration from the 2017 base to the 2026 future base traffic situation renders any further traffic generating development in this location unacceptable without further capacity improvements to the locality major road and local road network capacity, in particular at the Epping Road/Blaxland Road intersection, and to a lesser extent at the Epping Road/Essex Street intersection. (p.42)*

80. When the (then) Sydney East Joint Regional Planning Panel (JRPP) assessed the planning proposal as part of its initial review, it stated, as one of the seven (7) actions, that:

> *The proposal on this site should be part of the current Council traffic review of the whole of Epping Town Centre and the outcomes that review shall inform the final decision on Floor Space Ratio for the site.*

81. Because of this, a detailed assessment of the planning proposal is considered unnecessary as the fundamental determinant for deciding whether the Epping Planning Review Study Area can take any more residential development is the ETCTS.

82. It is also worth noting that in March 2014, the zoning and density controls for the parcels fronting Epping Road and Forest Grove were amended enabling higher residential yields as part of the DP&E's Priority Precinct process. With the controls having only been in place for 18 months, the applicant seeks further uplift through this planning proposal process. As noted elsewhere in this report, this planning proposal for additional residential development represents housing development simply to increase housing.

Purchase of 725 Blaxland Road (former bowling club) site

83. Part of the site (the former Bowling Club site) is zoned RE1 Public Recreation. The City of Parramatta became responsible for the Planning Controls that apply

to the subject site when the amalgamation occurred in May 2016. Therefore, the City of Parramatta became the acquisition authority for this public recreation land.

84. However, Hornsby Council did not have a funding strategy to acquire the site at 725 Blaxland Road. When the bowling club site became available for sale (ie the transaction that resulted in the current land owner acquiring it). The then Hornsby Council, had the opportunity to purchase it but made a decision not to yet still retained both the RE1 Public Open Space zoning on the Land Zoning Map, and the "Local Open Space Reservation" on the Land Reservation Acquisition Map, over the site.

85. Currently, there is no City of Parramatta Council funding strategy for its acquisition. The revised Section 7.11 and 7.12 (formerly 94/94A) Contributions Plans for Epping which came into effect in November 2017 does include collection for some open space provision. However, the advice in the Epping Planning Review was that Council would be better served by acquiring open space in different parts of Epping where growth is occurring rather than spending a substantial proportion of any funding available (via Section 94 or from other sources) on this portion of land which adjoins an existing substantial piece of open space. This recognises that spending funds to acquire this site would reduce Council's capacity to invest in other open space to meet the needs of growth in other parts of Epping as well as other community needs.

86. An initial internal valuation of the site was undertaken in mid 2017. The ERP Discussion Paper concluded that for the reasons described above the purchase of the site did not represent value for money and this position informed the subsequent adopted principle which was that Council not purchase the site and instead:

> *That Council should seek to progress the planning proposal with Council as the RPA subject to the Traffic Study being completed before FSRs for the site can be finalised. That Council also negotiate with the developer for the provision of public open space in a way that ensures there is a suitable area of open space which is appropriately sized and located.*

87. Council Officers have subsequently commissioned an independent valuation for peer review purposes. The valuations remain Commercial in Confidence and confirms that the purchase of the site by Council is not a viable financial option.

88. With regards to the adopted principle above, Council Officers suggest that the opportunity to negotiate with the landowner to have them provide an equivalent amount of open space has changed because of the result of the ETCTS and is in part depended upon the decision made by the current RPA for the Austino Planning Proposal.

89. As already detailed above in this report the DP&E has chosen to remove the Council as the Relevant Planning Authority (RPA) for the Austino Planning Proposal and so it will need to make the next key decision. If despite the ETCTS the RPA now in place for the Austino PP (ie the Central Sydney Planning Panel) decide to proceed with the Planning Proposal then the Council should seek to enter into further discussions with the applicant and the RPA to seek to achieve some dedication of an equivalent amount of open space at no cost to Council as part of the Planning Proposal. If the DP&E allows the further growth despite the problems with the road network they should also be seeking to broker appropriate open space outcomes to help deal with the growth proposed.

90. However, if the RPA decides not to proceed with the Planning Proposal then Council and the applicant will still need to resolve what will happen to the former bowling club site as it will remain zoned RE1 Public Recreation. Whilst this zoning is retained Council remains the acquisition authority.

91. Council options for the former bowling club site in this case will be:-

    a. To commit to the acquisition by retaining the RE1 zoning. As detailed above this option is not recommended by Council Officers as is not considered to be an efficient use of Council funds.

    b. Alternatively, rezone the site so Council is no longer the acquisition authority. In this case the appropriate zoning would be R4 High Density Residential with a maximum height of 17.5m (which permits 5-6 storeys) (Note the *Hornsby LEP* does not include FSR controls for sites zoned R4 High Density Residential but Council's Urban Designers indicate that this would allow approximately 162 units to be built on this site under the controls that would apply under the Hornsby DCP with an FSR equivalent to 1.5:1).

92. It is acknowledged that allowing the site to be rezoned to allow more residential development will be inconsistent with the ETCTS conclusions but Council has two conflicting issues that need to be managed. Council will need to balance two potential negative impacts:-

    a. the traffic impact

       versus

    b. the sub-optimal financial and open space outcomes if it commits to remaining as the acquisition authority for the former bowling club site.

93. Council Officer consider that rezoning the former bowling club site to R4 High Density Residential with a height of 17.5m and FSR of 1.5:1 is the preferred approach because:-

    a. The density that would be permitted is much less than that proposed in the applicants PP so the traffic impact would be mitigated by comparison.

    b. Council will not be forced to expend resources acquiring the former bowling club site in a location Council Officers consider is not optimal use of available funds.

    c. The building height is consistent with the height applied by the DP&E to transition areas when it put in place the existing planning controls in Epping. It will see a stepping down of permitted height as you move away from Epping Road and down to Forrest Park.

94. It is acknowledged that the density permitted on the former bowling club site is the most significant factor driving its valuation and as the density decreases so will the cost of acquiring the site. If Council and the DP&E accept that a R4 High Density Residential Zoning with a height of 17.5m and FSR of 1.5:1 are the appropriate alternate controls to the current RE1 zoning then it maybe possible to have further discussions with the owner about the implications of this for the redevelopment of the site and the delivery of open space outcomes.

Recommendation

95. That Council object to the Planning Proposal in its current form and density proceeding and request that Council be re-instated as the RPA so that Council

can pursue a Planning Proposal that would retain the current controls that apply to the site with the exception of the Bowling Club portion of the site which would be rezoned from RE1 Public Recreation to R4 High Density Residential with a maximum Height of Building control of 17.5m and FSR of 1.5:1.

IMPACT OF ETCTS ON PRELIMINARY PLANNING PROPOSALS

96. As has been noted during Stage 1 of the Epping Planning Review process, two preliminary planning proposals were lodged with Council in late 2014 which affect land within the town centre (western side). Refer to Figure 4. Both proposals have been on hold on account of the ETCTS being completed as per adopted principles of 14 August 2017. When combined, the preliminary planning proposals seek more than **2,000 dwellings**. This equates to an additional 1,000 dwellings above what can currently be achieved across both sites.

97. Each proposal seeks a partnership with Council to develop their sites in conjunction with the Council car park. Figure 4 below shows both the Oakstand and Lyon Group land holdings as well as Council's land holdings. The details of each proposal are provided in **Attachment 7**.

Figure 4 – Applicant owned land for preliminary planning proposals as well as Council's Rawson Car Park sites

Recommendations

98. Given the current growth rate from tracked DAs and the findings from the ETCTS, Council Officers conclude that in the short to mid term, there is no justification for further residential development simply to increase housing. That said, there is an opportunity for an expression of interest (EOI) process with landowners within the Town Centre to transfer some of the floorspace on Council's car park sites to another land owner/s site/s. The EOI process would, at the minimum, stipulate public benefits around a community hub facility, underground car parking, an east-west connection between community hub and the Epping Rail Station, and the like.

99. The outcome of this approach would mean that there is there no net increase in residential floorspace above what can currently be achieved. Effectively Council would be "trading" off the FSR from the carpark site to other sites to generate

funding to provide community facilities on the site of the current car park. It should be noted that any redevelopment would also include retention of carparking on site as it is recognised that this is critical to the operation of western part of the Epping Town Centre.

100. This process would be the subject of a further Council report before any further action is taken explaining the process and potential outcomes. The alternative is to retain the current carpark site and seek to redevelop it independent of other landowners sites. In this case Council would find it difficult to realise the full FSR that currently applies on the site and at the same time provide a significant piece of civic space within current height limits. The viability of achieving the FSR of 4:1 and community facilities and a civic space on the site as a stand alone redevelopment would also be covered in the report should Council request a further report be provided.

IMPACT OF ETCTS ON AREAS WITH INTERFACE ISSUES

101. With regards to the heritage interface areas at Rosebank Avenue HCA, part of the Essex Street HCA, land parcels and Pembroke Road and Norfolk Street and the Rose Street Precinct, the principles adopted at the 14 August 2017 Council meeting recommend further planning analysis that tests higher residential densities such as ***manor homes*** or 3 storey ***residential flat buildings*** which would replace existing detached dwelling development.

102. The interface issues are a result of land use conflicts occurring as a result of the DP&E's Priority Precinct process and require resolution where possible. It is acknowledged that the ETCTS identifies significant traffic impacts on the EPR study area and increasing densities at interface areas will have an increase on the traffic impacts. However, the interfaces put in place where 5-6 storey building look onto the backyards of sites zoned for single dwelling development and covered by a Heritage Conservation Area designation are unacceptable and need to be addressed in some format. This issue was discussed in detail in the Epping Planning Review documents.

103. A copy of the EPR Discussion Paper and the report considered by the Council on 14 August 2017 have been attached (refer to **Attachments 8 and 9**). The details on each HCA and background on the recommendations for these areas is available in this background material. The report below details just the recommendations made previously and options discussed with Councillors at Ward Councillor Briefings to allow Council to determine whether it should proceed with the previous recommendations.

104. Council officers are of the opinion that if growth is to be permitted which will impact on the road network that it should be to resolve these types of planning problems rather than to just increase density on a site for the sake of additional housing numbers. It is for these reasons that Council Officers recommend that changes to the planning controls proceed despite the findings of the ETCTS.

105. Furthermore, in March this year, the DP&E released its *Low Rise Medium Density Housing Code* which comes into effect in July 2018. This establishes planning controls on some forms of medium density housing and provide further guidance on the recommended outcomes in this section.

Rosebank Avenue HCA

106. With regards to Rosebank Avenue HCA, in the 14 August 2018 Council report, Council Officers recommended:

    a. Removing the HCA notation but keeping heritage items.

b. For the area south of the heritage items: allow 3 storey ***residential flat buildings (RFBs).***

c. For the area north of the heritage items: no change.

d. That the changes occur ahead of completion of ETCTS.

107. Council subsequently resolved that it pursue 2 storey ***manor homes*** along full length of Rosebank Ave but test benefits of 3 storey ***RFBs***.

Recommendation

108. Council Officers recommend proceeding with the original recommendations to remove the HCA notation, enable 3 storey ***RFBs*** south of the heritage items with no change north of the heritage items. Refer to Figure 5.

Figures 5 – Council Officer recommendation for Rosebank Avenue HCA

1, 3, 3A, 5, 7, and 7A Norfolk Road and 25 Pembroke Street

109. With regards to properties at 1, 3, 3A, 5, 7, and 7A Norfolk Road and 25 Pembroke Street, in the 14 August 2018 Council report, Council Officers recommended:

a. Remove HCA notation but keep heritage items.

b. R3 zone of area edged black but limit No.s 7 & 7A Norfolk Rd to ***manor homes*** (current zoning is shown in Figure 6).

c. Enable 3 storey ***RFB*** on No.s 1, 3, 3A and 5 Norfolk Rd and 25 Pembroke St.

d. Changes occur ahead of completion of ETCTS.

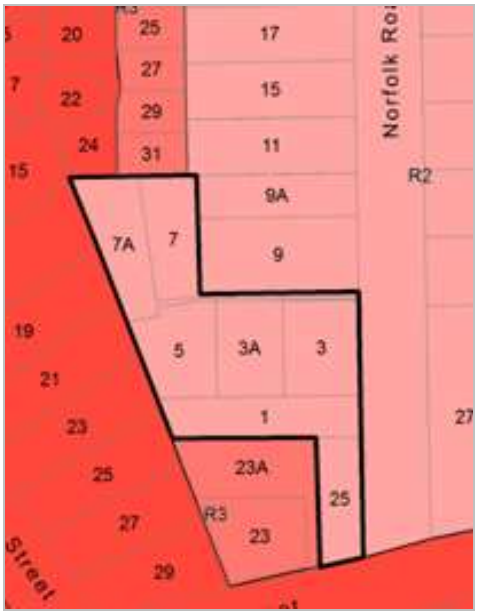

Figure 6 – Current zoning of 1, 3, 3A, 5, 7, and 7A Norfolk Road and 23, 23A and 25 Pembroke Street

110. Council subsequently resolved that it pursue 2 storey ***manor homes*** but test benefits of 3 storey ***residential flat buildings***.

111. At the Ward Councillor Briefings discussed above the option of making no change to the controls in this area was discussed. Should Councillors wish to proceed with this option then Council should resolve to take no further action to change the planning controls for this precinct.

Recommendation

112. To ensure consistency with new Complying Code and subsequent analysis as part of the LEP Harmonisation process, Council Officers propose a new recommendation - **Part 'no change', part RFB:**

    a. No changes to battle-axe blocks at No.s 7 & 7A (ie. maintain controls for ***detached dwellings***) because this conflicts with the DP&E's Complying Code on battle-axe blocks.

    b. Rezone No.s 1, 3, 3A & 5 to R3 zone to enable 3 storey ***RFB*** subject to amalgamation controls being put in place to create 1 super lot.

    c. No.25 Pembroke cannot develop of itself and should retain its existing zoning.

    Refer to the Figure 7.

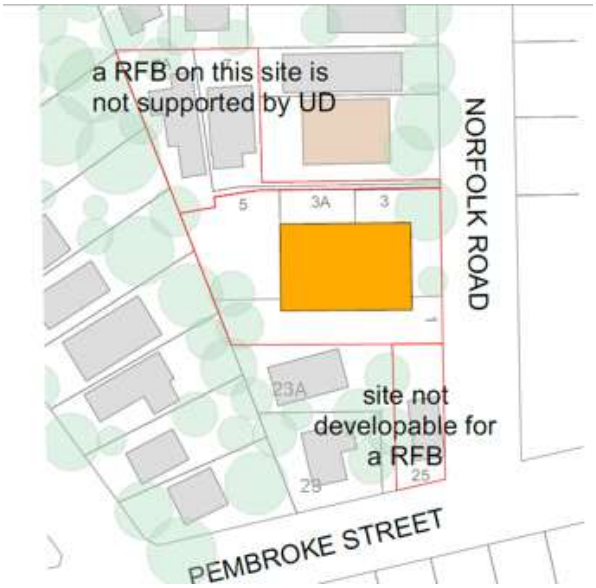

Figure 7 – Council Officer recommendation for 1, 3, 3A, 5, 7, and 7A Norfolk Road and 23, 23A and 25 Pembroke Street

Essex Street HCA

113. With regards to the Essex Street HCA, in the 14 August 2018 Council report, Council Officers recommended:

    a. Remove HCA notation but keep heritage items.

    b. Allow ***manor homes*** on western side between Epping Road and Maida Road only with no change on eastern side.

    c. That the changes occur ahead of completion of ETCTS.

114. The above recommendations were supported by the Council in August 2017.

Recommendation

115. Council Officers recommend maintaining the above recommendations and develop DCP controls that protect larger setbacks to ensure the protection of the tree canopy at rear setbacks.

Rose Street Precinct

116. With regards to the Rose Street Precinct, in the 14 August 2018 Council report, Council Officers recommended:

    a. Allow ***residential flat buildings*** development (R3 zone) with urban design analysis to step down height to Brigg Rd to 2 storeys.

    b. That the changes occur ahead of completion of ETCTS.

117. Council subsequently resolved that it pursue 2 storey ***manor homes*** but test benefits of 3 storey ***residential flat buildings***.

118. At the Ward Councillor Briefing Councillors the issue of the topography of this area and the drainage implications of allowing more density were raised. Council Officers consider that this issue could be investigated as part of the redevelopment options but if Councillors are of the opinion that this should be investigated upfront the recommendation should be amended accordingly.

Recommendation

119. Council Officers recommend allowing ***residential flat buildings*** with associated urban design analysis and DCP controls that enable the stepping down of the building height to 2 storeys at the Brigg Road/Rose Street

frontages and that the four (4) sites fronting Blaxland Road also be included in the precinct. Refer to Figure 8.

Figure 8 – Council Officer recommendation for Rose Street Precinct but include the 4 properties fronting Blaxland Road

Rockleigh Park

120. With regards to the Rockleigh Park, in the 14 August 2018 Council report, Council Officers recommended:

    a. The area zoned R4 (edged with yellow line) be down-zoned to R3 to be consistent with R3 zone boundary to north and east.

    b. That further urban design analysis to determine best height and FSR controls.

121. The above recommendations were supported by the Council.

Recommendation

122. Council Officers recommend reinstate original recommendations. But ensure that ***residential flat buildings*** are prohibited from this area (R3 zone in *HLEP* permits 4 storey RFBs). Refer to Figure 9.

Figure 9 – Council Officer recommendation for Rockleigh Park

IMPACTS OF ETCTS ON COMMERCIAL FLOORSPACE

123. Recent pre-lodgments and development applications within the centre continue to erode the volume of commercial floorspace within the centre as developers

are 'opting out' of applying the existing DCP provisions that require delivery of 2, 3 and 4 storey podiums of commercial floorspace in mixed use proposals. This is because of the weak 'statutory weight' that DCP controls have over an environmental planning instrument such as a LEP.

124. As discussed in the section entitled "Impact of ETCTS on State Significant Development at 240-244 Beecroft Road", Council Officers have identified that approximately **8,200sqm of retail floorspace** and **35,200sqm of office floorspace** needs to be "replaced". To deliver this, Council's Urban Designers determine that three storey commercial podiums (comprising one floor of retail and two floors of office premises) on remaining sites can deliver the required floorspace.

125. With regards to traffic, the associated traffic impacts from commercial land uses (retail and office premises) may well be greater than those associated with residential development. This is because commercial uses tend to generate a greater number of trips per square metre of floor area. This is another area where Council Officers consider that it may be necessary to allow additional development to resolve a planning issue not related solely to housing delivery. In this case allowing additional density that may detrimentally impact on traffic outcomes should be considered.

126. Given this conflict around the need for more commercial floorspace within the centre to protect its economic viability and amenity, with its associated traffic impacts, a delicate balancing exercise is required that meets the of commercial floorspace needs of the centre whilst acknowledging the potential traffic impacts.

127. In light of the above, Council Officers have identified the following potential options:

    a. **Option 1 – No change:** This option involves no change to the current controls. Because the market favours residential development and the pace of that development recently, this option is highly likely to encourage DAs that deliver only ground floor commercial that will undermine centre's amenity and economic viability. This has no traffic impact compared to current controls.

    b. **Option 2 – Require minimum level of commercial FSR provision to be provided without amending the maximum FSR or Building Heights:** This option involves increasing the commercial FSR requirements but this occurs at the cost of residential FSR. It means that the heights or densities of buildings will not change, but there will be a higher proportion of commercial floorpsace within any development and less residential than would currently be permitted. In other words, it equates to a net decrease in residential FSR but will improve centre's amenity and economic viability. This will potentially result in a detrimental impact on the local traffic network.

    c. **Option 3 – Require minimum level of commercial FSR provision to be provided but amend the maximum FSR or Building Heights to seek to retain where possible an FSR for residential equivalent to existing levels** This will mean increases in overall density and building heights but it makes delivery of more commercial (retail/office) uses more viable which will improve the centre's amenity and economic viability. The detrimental impact on the local traffic network will be greatest with this option.

Recommendation

128. Of the above options, Council Officers recommend **Option 3 - Increase Commercial FSR and density/building heights** because of the strong residential market and the way the planning system operates, if Option 2 was pursued, Council would receive a flood of DAs seeking mixed use development with only the ground floor allocated to commercial uses. These would all have to be considered and potentially approved under the current planning rules and the opportunity to provide the commercial floorspace Epping needs will be lost forever. Without sufficient commercial/retail floorspace the future function and amenity of the Town Centre is significantly impacted.

129. Whilst Option 3 is the Council Officer preference at this point in time this scenario needs to be run through the traffic modelling and if the outcome is unacceptable it may be necessary to fall back to Option 2. A further analysis and report to Council will allow Council to determine which option it will ultimately pursue via a Planning Proposal.

CONCLUSION

130. The reported rate of growth compared to the growth envisaged by the DP&E in 2013 demonstrates the Epping Town Centre has been doing a lot of the “heavy lifting” for dwelling growth and that the impact on infrastructure means that further housing growth for the sake of increasing house supply in Epping is not necessary.

131. This report provides a basis for Council to take to the DP&E, the Minister for Planning and the GSC seeking support for a strategic approach to future planning in Epping where any growth seeks to solve existing planning problems rather than just increasing density for the sole purpose of providing additional housing supply.

NEXT STEPS

132. The next steps are:

    a. Progressing supplementary traffic analysis on new through link through 240-244 Beecroft Rd; and re-opening of former M2 bus tunnel link.

    b. Exhibiting the ETCTS documentation for major stakeholder comment.

    c. Council Officers to arrange EPR Steering Group meeting with State agencies about proposed policy change and revisiting infrastructure delivery.

    d. Council Officers prepare further Council reports that seek to:

        i. Provide advice on provision of community facilities on the Councils Rawson Street Car park land and whether an EOI process should be pursued to enter into partnerships with other landowners.

        ii. Report on the outcome of the consultation on the Epping Town Centre Traffic Study and the results of the supplementary traffic analysis discussed in this report on:-

            1. Reopening of the former M2 bus tunnel link; and

            2. A new east west road link through 240-244 Beecroft Road.

e. Planning Proposal processes inclusive of background and technical study preparation commence on:

i. The heritage interface areas; and

ii. The provision of commercial floor space in the centre.

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Director Strategic Outcomes and Development

Jim Stefan
A/Director City Services

ATTACHMENTS:

1⇩	ATTACHMENT 1 - Council Report of 12 February 2018	16 Pages
2⇩	ATTACHMENT 2 – April 2018 and November 2017 responses from DPE on RPA matter	3 Pages
3⇩	ATTACHMENT 3 – Related planning policy matters	3 Pages
4⇩	ATTACHMENT 4 - ETCTS Report	51 Pages
5⇩	ATTACHMENT 5 - ETCTS Appendices	192 Pages
6⇩	ATTACHMENT 6 - Austino PP Traffic Impact Assessment undertaken for Council	39 Pages
7⇩	ATTACHMENT 7 - For 28 May 2018 Council Report on EPR - Detail of Planning Proposals	6 Pages
8⇩	ATTACHMENT 8 - EPR Discussion Paper	111 Pages
9⇩	ATTACHMENT 9 - Council Report of 14 August 2017	59 Pages

REFERENCE MATERIAL

LEADING

ITEM NUMBER 11.5
SUBJECT Update on Epping Planning Review and Related Matters

REFERENCE F2017/00210 - D05739808
REPORT OF Project Officer

PURPOSE:

The purpose of this report is to update Council on the Epping Planning Review, as well as several related planning matters relevant to the Epping Town Centre.

RECOMMENDATION

(a) **That** Council note this update on the Epping Planning Review and related matters.

(b) **That,** with regards to the Planning Proposal at 2-18 Epping Road, 2-4 Forest Grove and 725 Blaxland Road, Epping, Council endorse the following principles to be applied when assessing and preparing a future formal submission to the Central City Planning Panel on this matter:

i. No more than 50% of Forest Park should be overshadowed in midwinter between the hours of 10am-2pm.
ii. In the case that there are open space dedications to Council, these should be at grade, contain deep soil zones and should be unencumbered with basement car parking.
iii. The proposal shall step down across the site from Epping Road to Forest Park, both in levels and in scale to demonstrate a respect for the interface between the site and Forest Park.
iv. Building heights should better respond to the surrounding residential zoned land context and respect proximity to Forest Park.
v. Linked residential towers with large floor plates shall be avoided to minimize cumulative bulk and scale impacts.
vi. The design efficiencies of residential Gross Floor Area (GFA) should be based on a Gross Building Area (GBA) x 75%.
vii. A design excellence competition process should be put in place in addition to the site specific DCP.
viii. Any roads/pedestrian links provided through the site should:
   - Provide public address and surveillance;
   - If they relate or link to Forest Park, they should resolve levels and scale along the park interface;
   - Be embellished with paving, bollards, furniture and street lighting; and
   - Be dedicated to Council and delivered via VPA with the relevant public domain guidelines to inform the quality of the finishes.
ix. VPA contribution/effort could also be directed to upgrading existing degraded facilities in the park (amenities, playground equipment, furniture, paving etc).
x. No net loss of public open space.
xi. The proposal should provide a suitable area of public open space which is appropriately sized and located.

xii. The proposal should not be finalized until the Epping Traffic Study is completed.

(c) **That** Council objects to progression of the proposed State Significant Development at 240-244 Beecroft Road until:

i. There is a significant increase in the quantum of commercial floor space provided on this site; and
ii. The Epping Traffic Study is complete.

(d) **Further, that,** following completion of the Epping Traffic Study, a further report to commence Stage 2 of the Epping Planning Review be prepared for Council's consideration.

OVERVIEW OF EPPING PLANNING REVIEW AND STRUCTURE OF THIS REPORT

1. The Epping Planning Review involves undertaking a review of planning for the Epping Town Centre and immediate surrounds. The review follows on from new planning controls introduced in March 2014 through the Department of Planning and Environment's (DPE) Urban Activation Precinct (UAP) Process, as well as Council boundary changes occurring in May 2016 under which Epping Town Centre came to be contained within the City of Parramatta (having previously been split between Parramatta City and Hornsby Shire Councils).

2. The intended outcome of the Epping Planning Review is to create a unified planning framework for the Epping Town Centre and its immediate surrounds, including one set of LEP and DCP controls, a unified development contributions framework and one public domain plan.

3. The Epping Planning Review has two stages. Stage 1 has involved undertaking technical studies and community consultation to inform Stage 2, which will involve preparing the aforementioned unified planning framework.

4. Following two briefings with the Epping Ward Councillors in October 2017 in relation to the Epping Planning Review, it is considered timely to present to Council an update on the Epping Planning Review project, as well as several interrelated planning matters happening concurrently in Epping Town Centre. This includes:

    a. Current development activity in Epping Town Centre;
    b. Regional/District planning matters;
    c. LEP matters;
    d. DCP matters; and
    e. Developer Contributions framework matters.

EPPING PLANNING REVIEW - STAGE 1

5. Stage 1 of the Epping Planning Review involved:

    a. A public launch in mid-December 2016;
    b. Preparation of four technical studies on Heritage, Social Infrastructure, Commercial Floorspace and Traffic (Interim) by consultants;

c. Urban design and planning analysis undertaken by Council;

d. Community consultation in December 2016 and Council Officer attendance at various community events such as Australia Day and Lunar New Year in early 2017 to inform the community of the review being undertaken;

e. Community consultation in March and April 2017 which informed the technical studies and Discussion Paper;

f. Preparation and public exhibition (21 June 2017 – 19 July 2017) of the Epping Planning Review Discussion Paper, informed by the steps described above; and

g. Additional community consultation (workshop series) during public exhibition of the Discussion Paper.

6. Stage 1 of the Epping Planning Review was largely completed (with the exception of a Final Traffic Study, as discussed further in this report) by way of a report to Council at its meeting of 14 August 2017 (Item 11.3). At this meeting, Council endorsed a suite of principles to guide Stage 2 of the Epping Planning Review; the endorsed principles are included at **Attachment 1** and are discussed in more detail in the next section of this report.

7. Council's full resolution from 14 August 2017 in relation to the Epping Planning Review is included at **Attachment 2** of this report. An update on the action items from this resolution is provided below.

   a. Consistent with part (c)1 of the resolution, the Epping Ward Councillors were briefed on the Epping Planning Review via two briefing sessions held on 17 and 23 October 2017. At these briefing sessions, there was discussion relating to the traffic implications of some of the endorsed principles and additional information being provided regarding this. In response to discussion at these briefing sessions, and to provide further information in relation to traffic and other matters, this update report is provided for Council's consideration.

   b. Part (c)2 of the resolution requires that a report to Council be prepared to commence Stage 2 of the Epping Planning Review once the Councillors have been briefed. This future report is discussed in further detail in the "Next Steps" section of this report.

   c. Consistent with Part (e) of the resolution, Council wrote to the community thanking them for their feedback and advising them on the outcome of Stage 1 and next steps.

   d. Consistent with Part (f) of the resolution, Council wrote to the Minister for Planning, Greater Sydney Commission, Department of Planning and Environment, Transport for NSW and Roads and Maritime Services to provide an update on the project and next steps.

EPPING PLANNING REVIEW - ENDORSED PRINCIPLES TO GUIDE STAGE 2

8. As discussed above, an extensive suite of principles to guide Stage 2 of the Epping Planning Review were endorsed by Council at its meeting of 14 August 2017. The endorsed principles are included in full at **Attachment 1** of this report, and are summarised in the following subsections. Status updates on actions currently being undertaken are also provided.

Heritage Interface Issues

9. The principles endorse for two (2) of the heritage areas in question (being Rosebank Avenue and certain properties at Norfolk Road/Pembroke Street) and for the Rose Street precinct (located adjacent to the Essex Street Heritage Conservation Area) that facilitating development of 2 storey manor homes be pursued in response to existing heritage interface issues, but that 3 storey residential flat buildings with appropriate DCP controls also be tested through further work. The principles also endorse removal of the Heritage Conservation Area (HCA) notation at Rosebank Avenue and at No.s 1, 3 and 3A Norfolk Road and 25 Pembroke Street.

10. For the Essex Street area, the endorsed principles envision that the HCA notation be removed, that planning controls on the western side of Essex Street be amended to permit redevelopment to 2 storey manor homes, and that planning controls on the eastern side of Essex Street remain unchanged.

11. For Rockleigh Park, the endorsed principles envision that the component of Rockleigh Park zoned R4 be rezoned to the R3 zone, and that further urban design work be undertaken to determine other appropriate controls.

12. For all of the abovementioned areas (excluding Rockleigh Park) the principles state that the recommendations contained in the principles could proceed prior to completion of the Traffic Study, as they seek to urgently deal with existing unintended heritage interface issues.

    <u>Status update:</u> This work has progressed and taken into account the following:

    a. **The need to brief Ward Councillors who have requested further information be provided these options; and**
    b. **It is acknowledged that the principles relating to these heritage precincts endorsed proceeding with these changes ahead of the Traffic Study. However, Council has statutory obligations when preparing any new planning controls to consider the traffic/transport impacts of any proposed changes, therefore, Council is not able to formally advance a Planning Proposal to change these planning controls without consideration of a traffic assessment. Once the Traffic Study is complete, Council may wish to prioritise advancing these amendments based on the further design work that Council officers have undertaken. Council does have the discretion to prioritise these changes ahead of others based on potential traffic impacts, but it must provide an assessment of the traffic implications.**

    The progress on this work has been limited by the need to advance competing priorities for resourcing arising to assist new Councillors upon their election to Council.

13. The principles also endorse recommendations of the Hornsby Heritage Review Stage 6 relating to altering various heritage listings as well as preparation of a Planning Proposal to reflect these recommendations.

Commercial Floor Space

14. The principles endorse further work being undertaken to ensure that minimum 3 storey commercial podiums are delivered on all land zoned B2 (except at 240-244 Beecroft Road, as discussed further in this report), and acknowledge that this work may include investigation through the Traffic Study of additional residential floorspace and height to facilitate delivery of this commercial floorspace. The principles also endorse use of the technical study on commercial floorspace (which informed the Discussion Paper) to be used as an interim assessment measure for future Development Applications until more formal controls are in place.

    Status Update: Council's Land Use Planning officers have been attending DA pre-lodgment meetings with Council's DA assessment officers and applicants in order to advise them of the need to provide appropriate levels of commercial floor space within the town centre in accordance with the Commercial Floorspace Needs Study.

15. The endorsed principles envision rezoning of the site at 240-244 Beecroft back to the B2 Local Centre zone (as was in place prior to DPE changing the zoning to the R4 High Density Residential Zone) to ensure an appropriate commercial floorspace contribution is made. This site is discussed in further detail later in this report. The principles also call for Council Officers to meet with Transport for NSW to discuss opportunities for the Epping rail station site to provide commercial floorspace.

16. The endorsed principles call for investigation of Council-owned sites in relation to both their potential capacity for commercial floorspace and their potential social/community role.

    Status Update: The delivery of commercial floorspace and community facilities on Council-owned sites is still being investigated and Council officers will continue to work to better understand the community needs and commercial opportunities of these sites, as well as work with the proponents of any future Public-Private Partnerships to determine whether the Planning Proposal process can deliver an appropriate development outcome. Regardless, any future development scenarios for Council-owned sites (whether this is Council-led or through a partnership) will need to ensure that the traffic impact is tested as part of the Traffic Study.

Social Infrastructure

17. The endorsed principles call for Council to investigate multiple detailed options to ensure that open space needs in the area are met, and that various other Council planning activities relating to open space consider the community's feedback provided during the Epping Planning Review.

18. With regards to the Austino Planning Proposal, which includes the former bowling club site, the principles endorse progressing the Planning Proposal with Council as the Relevant Planning Authority (RPA), subject to the Traffic Study being completed prior to finalising densities. The principles also state that Council will negotiate with the developer to ensure that a suitable area of open

space is provided. An update on this Planning Proposal is provided elsewhere in this report.

19. The principles state that there will be no net loss of community facility floorspace overall. Providing community infrastructure and civic focal points on both sides of the town centre is endorsed, with a community hub on one side, with adjunct uses on the other. Further feasibility testing should be undertaken to develop options for funding and delivering community facilities.

    Status Update: Council's Social Outcomes unit will do this in conjunction with other relevant business units as part of the annual Operational Plan/Delivery Plan review process; this process would determine prioritisation and budget for future community facilities in Epping.

20. The endorsed principles call for preparation of a master plan for Dence Park in 2018/2019, and that this include a base assumption of an aquatic facility with 50m pool, consideration of multiple options for the Epping Aquatic Leisure Centre, as well as increasing the overall recreation uses of the site and adjoining sensitive bushland.

    Status Update: Council's Place Services Unit has commenced the master plan process, beginning with preparing a brief for consultants.

Public Domain

21. The principles endorse preparation of appropriate DCP controls and a public domain plan that delivers through-block links and wider footpaths.

    Status Update: Please refer to a later section of this report relating to a fast-tracked DCP amendment to provide wider footpaths.

Traffic

22. Several of the endorsed principles relating to traffic provided direction in relation to progressing current development proposals, as follows:

    a. The principles endorse completion of the Traffic Study prior to finalization of proposals seeking development uplift, so that traffic impacts can be properly understood. Furthermore, the principles state that unless innovative solutions or initiatives are found to significantly curb or restrict car ownership/traffic movements, that proposals from parties seeking uplift will not be able to progress. These solutions should be assessed once the Traffic Study is complete.

    b. The principles endorse completion of the Traffic Study prior to finalization of current preliminary Planning Proposals and any future Planning Proposals, and also state that landowners seeking to pursue additional development uplift need to proceed through a formal Planning Proposal process (rather than as part of the Epping Planning Review Process)

    c. With regards to the Austino Planning Proposal, the principles state that Council will seek to retain its RPA status for this proposal on the basis that the proposal cannot be finalized until the traffic study is complete. (Please refer to a later section of the report where the current status of this proposal is discussed in more detail.)

d. The endorsed principles call for a Councillor briefing in relation to the Rawson Street Car Park, in order to progress preliminary Planning Proposals involving this site (refer to later section of this report).

23. The other endorsed principles regarding traffic relate to parking and congestion issues. These principles endorsed the following:

    a. a review of the car parking rates across the relevant Hornsby and Parramatta DCPs in order to determine appropriate lower parking rates, which are to be tested via the Traffic Study.

    b. a further report to Council in relation to amending the Hornsby DCP (which relies on minimum parking rates) to be consistent with the Parramatta DCP (which relies on maximum rates).

       Status update: This DCP amendment process has not commenced due to the potential for the Traffic Study to recommend changes to the parking rates in order to better encourage public transport usage. Changes to Council's parking DCP are subject to completion of the Traffic Study.

    c. to not proceed with a policy of providing an enhanced commuter car parking facility in the town centre.

    d. to further investigate the potential for a resident parking scheme.

    e. introduction of a car share scheme, and the potential for similar schemes to be provided form part of Stage 2 of the Planning Review.

       Status Update: Council installed six (6) car share spaces in the Epping Town Centre between 15-25 November 2017. Further car share policy and implementation options can be considered following completion of the Traffic Study.

    f. that Council trial a "stop/go" traffic controller at the pedestrian crossing of Rawson Street.

       Status Update: Planning for the trial has progressed, and the trial will proceed once school resumes in Term 1 (as it was considered that undertaking the trial during holidays when traffic patterns and pedestrian volumes are different would not provide reliable information upon which to evaluate the trial).

24. As noted above, several of the endorsed principles relate to finalisation of the Traffic Study, as discussed in more detail in the next section of this report.

EPPING PLANNING REVIEW - FINALISATION OF TRAFFIC STUDY

25. The remaining element of Stage 1 of the Epping Planning Review to be completed is the Traffic Study. It is acknowledged that the timelines for the completion of the Traffic Study have been amended to reflect delays in finalising the base traffic network model, which Roads and Maritime Services (RMS) needs to authorize before testing of the land use scenarios identified in the Epping Planning Review are carried out (i.e. Heritage Interface areas, additional commercial FSR, etc.) The major milestones and expected timeframes in relation to finalising the Traffic Study are now as follows:

    a. February 2018: RMS validation of final component of base model.

    b. February 2018: Scenario testing completed.

c. March 2018: Draft Final Traffic Study to Council and RMS for review.

d. April 2018: Final Traffic Study completed.

e. May 2018: Council report on Final Traffic Study with recommendations.

26. As confirmed in the Ward-based Councillor briefing sessions, the Traffic Study must be completed before Council Officers progress any Planning Proposal – whether Applicant-led, site-specific Planning Proposals or a Council-led Planning Proposal to amend controls in the Epping Town Centre (i.e. Stage 2 of the Epping Planning Review). It is acknowledged that the principles relating to heritage precincts endorsed proceeding with some changes ahead of the Traffic Study. However, as noted above, Council has statutory obligations when preparing any new planning controls to consider the traffic/transport impacts of any proposed changes, therefore Council is not able to formally advance a Planning Proposal to change these planning controls without consideration of a traffic assessment. Once the Traffic Study is complete, Council may wish to prioritise advancing these amendments based on the further design work that Council officers have undertaken. Council does have the discretion to prioritise these changes ahead of others based on potential traffic impacts, but it must provide an assessment of the traffic implications.

CURRENT DEVELOPMENT ACTIVITY IN EPPING

27. Simultaneous to the Epping Planning Review project, there has been significant development activity via Planning Proposals (PPs), Development Applications (DAs) and construction of approved DAs underway in Epping Town Centre and surrounds since late 2014. The following subsections provide updates on this activity.

Austino Planning Proposal

28. A Planning Proposal for land at 2-18 Epping Road, 2-4 Forest Grove and 725 Blaxland Road (former bowling club site) was initially lodged with Hornsby Shire Council in 2015, but came to be located within City of Parramatta Council following the May 2016 Council boundary changes. Figure 1 shows the land affected by this PP.

Figure 1: Land affected by the Austino Planning Proposal denoted in solid red line

(from applicant's Urban Design Report)

29. This PP has a complex history, which is summarised as follows:

    a. **December 2015:** The original PP was lodged with Hornsby Shire Council (HSC).

    b. **January 2016:** Parramatta City Council (PCC) was formally invited to prepare a submission which HSC would have regard to in making a decision to support or refuse the application.

    c. **March 2016:** PCC endorsed a submission to HSC (refer **Attachment 3**) which established seven planning principles that this PP should address; these principles are discussed in further detail below.

    d. **April 2016:** HSC refused the PP. The applicant subsequently sought a pre-Gateway review process through DPE.

    e. **May 2016:** Council boundary changes occurred, and the site came to be located in City of Parramatta. DPE also formally notified Council that the applicant had sought a pre-Gateway review.

    f. **November 2016:** DPE wrote to Council to advise that the PP could proceed to Gateway determination "subject to further consideration as indicated in the advice provided by the [Joint Regional Planning] Panel" as part of its pre-Gateway review. This advice included that the proposal "be part of the current Council traffic review of the whole of Epping Town Centre and that the outcomes of that review shall inform the final decision of the Floor Space Ratio for the site".

    g. **December 2016**: In response to letter from DPE, Council wrote to DPE requesting to be the Relevant Planning Authority (RPA) for this PP. This request was on the basis that the Gateway would be issued after the exhibition of the Epping Planning Review Stage 1 materials (Stage 1 had just commenced at that time).

    h. **March 2017**: DPE appointed Council as the RPA on the basis described above.

    i. **June-July 2017**: The Epping Planning Review Discussion Paper and associated technical studies (including interim traffic study) were exhibited for a four-week period.

    j. **August 2017:** Principles to guide Stage 2 of the Epping Planning Review were endorsed by the Administrator.

    k. **September 2017:** Following a request from the applicant, DPE wrote to Council requesting Council to provide its reasoning as to why an alternate RPA should not be appointed, or to advise that it would submit the proposal for Gateway based on the information available at that time.

    l. **October 2017:** Council responded to the above letter, stating its reasoning for remaining the RPA, as summarised below:

        i. RMS's support for the density sought in this PP was only on account of amendments being made to the PP regarding the number of car parking spaces on the site and additional traffic modelling being carried out;

ii. The progression of the PP is dependent on the outcomes of the Epping Traffic Study (consistent with the JRPP's recommendation).

iii. The Epping community expects that traffic matters will be well understood before any decision is made on proposals seeking uplift within and immediately around the town centre.

iv. The issue of precedent that would be created should the RPA role be removed from this planning proposal.

30. On **1 December 2017**, Council received a letter from DPE advising that it had appointed the Sydney Central City Planning Panel as RPA, meaning that Council no longer has RPA status for this proposal. This is not consistent with the endorsed principles discussed in this report, which sought to retain Council's RPA status.

31. DPE has advised Council that it anticipates that any Gateway determination for this proposal would require completion of the Traffic Study and any necessary amendments to the Planning Proposal prior to exhibition.

32. DPE has also advised Council that there will be formal consultation with Council on this Planning Proposal as it proceeds. Therefore, this report seeks Council's endorsement of principles to guide assessment and preparation of a future formal submission on this matter. Council officers have prepared principles for Council's consideration as follows; these principles align with PCC's original submission to HSC on this Planning Proposal (refer **Attachment 3**), as well as relevant principles established through Stage 1 of the Epping Planning Review:

    a. No more than 50% of Forest Park should be overshadowed in midwinter between the hours of 10am-2pm.

    b. In the case that there are open space dedications to Council, these should be at grade, contain deep soil zones and should be unencumbered with basement car parking.

    c. The proposal shall step down across the site from Epping Road to Forest Park, both in levels and in scale to demonstrate a respect for the interface between the site and Forest Park.

    d. Building heights should better respond to the surrounding residential zoned land context and respect proximity to Forest Park.

    e. Linked residential towers with large floor plates shall be avoided to minimize cumulative bulk and scale impacts.

    f. The design efficiencies of residential Gross Floor Area (GFA) should be based on a Gross Building Area (GBA) x 75%.

    g. A design excellence competition process should be put in place in addition to the site specific DCP.

    h. Any roads/pedestrian links provided through the site should:

        i. Provide public address and surveillance;

        ii. If they relate or link to Forest Park, they should resolve levels and scale along the park interface;

iii. Be embellished with paving, bollards, furniture and street lighting; and

iv. Be dedicated to Council and delivered via VPA with the relevant public domain guidelines to inform the quality of the finishes.

i. VPA contribution/effort could also be directed to upgrading existing degraded facilities in the park (amenities, playground equipment, furniture, paving etc).

j. No net loss of public open space.

k. The proposal should provide a suitable area of public open space which is appropriately sized and located.

l. The proposal should not be finalized until the Epping Traffic Study is completed.

33. Council is mindful that applying the above principles is likely to bring a reduction of built form, yield, height and density when compared to the proposal considered by Hornsby Shire Council.

34. Council officers are also progressing a formal valuation of the former Epping Bowling Club site, which forms part of this Planning Proposal.

State Significant Development at 240-244 Beecroft Road

35. There is a large site at 240-244 Beecroft Road which, until recently, was used as a tunneling and works site for the Sydney Metro Northwest project. The endorsed principles call for an appropriate amount of commercial floorspace to be provided as part of redevelopment of this site (whilst retaining current residential floorspace capacity).

Figure 4: UrbanGrowth site at 240-244 Beecroft Road

36. On 27 September 2017, a State Significant Development (SSD) application for a predominantly residential development at this site was lodged with DPE. The application contains an indicative development yield of 450 units.

37. On 9 October 2017, Council endorsed a Lord Mayoral minute outlining Council's objection to the progression of the SSD application until:

    a. *"There is a significant increase in the quantum of commercial floors space provided on this site; and*

    b. *The traffic study currently underway for the Epping Town Centre is complete."*

    Council also resolved to write to the Local MP, Minister for Planning and DPE requesting support for Council's position on this matter.

38. On 24 October 2017, Secretary's Environmental Assessment Requirements (SEARs) were issued for this project. Council was given the opportunity to comment on the SEARs, and raised three in-principle issues with the project, summarised as follows:

    a. The Traffic Study is not yet complete, and will likely include a proposal that will make use of part of this site to improve traffic conditions and the public domain. The proposed development of the site could make this impossible to achieve. Furthermore, the potential for confusion arising from the concurrent public release of the Traffic Study and the SSD would be a poor outcome.

    b. Future controls from Stage 1 of the Epping Planning Review would require that this site provide significantly more commercial floor space than is currently proposed in the SSD application.

    c. Council welcomed further discussion with DPE regarding the validity of the SSD pathway for this project.

    Council also provided feedback on the SEARs, requesting that several of these were strengthened to achieve improved outcomes in matters such as social and environmental sustainability, public domain and design excellence. On 8 December 2017, revised SEARs were issued with minor changes.

39. On 1 December 2017, Landcom (the body responsible for the site disposal process) wrote to the Lord Mayor after having conducted a stakeholder engagement with Council, Mr Damien Tudehope MP, the Epping Chamber of Commerce and Epping residents to advise that Landcom will defer the release of the Expressions of Interest (EOI) for the site from early December 2017 to early 2018. The letter advised that this will allow Landcom and Transport for NSW to investigate the possibility of increasing the proposed commercial floorspace on this site from 700sqm to 2,000sqm.

40. As stated previously, the Epping Planning Review Stage 1 principles call for an appropriate amount of commercial floorspace to be provided as part of redevelopment of this site. It is Council officers' view that 2,000sqm is not an appropriate amount, and that additional commercial floor space should be provided. This is based on the following:

    a. the site was previously zoned B2 and had commercial uses on site;

b. the Epping Planning Review Stage 1 principles endorse a minimum 3-storey podium for other land zoned B2 in the Epping Town Centre; and

c. the site area is approximately 13,342sqm, meaning that the proposed 2,000sqm constitutes only about 0.15:1 FSR for commercial uses.

41. It is recommended that Council reiterate its resolution of 9 October 2017 on this matter, specifically, that Council objects to the progression of this SSD application until:

a. There is a significant increase in the quantum of commercial floor space provided on this site; and

b. The Epping Traffic Study is complete.

Other planning and development activities in Epping Town Centre

42. Development Applications (DAs) in Epping Town Centre continue to be processed.

43. There are also two preliminary Planning Proposals involving Council-owned sites (inclusive of Council car park) at 51A and 51B Rawson Street. Consistent with the endorsed principles, Council has advised these applicants that current preliminary proposals will not be finalised prior to completion of the Traffic Study.

REGIONAL/DISTRICT PLANNING MATTERS

44. The Greater Sydney Commission (GSC) released new draft Region and District Plans in late 2017 for public consultation. In the draft *Central City District Plan*, Epping is identified as a 'Strategic Centre' for 2036, with a jobs target of 1,900 to 2,400 additional jobs for 2036.

45. Epping was not identified as a higher-order centre in either of the two previous draft subregional/district plans (the draft *West Central Subregion Draft Subregional Strategy 2007* and the draft *West Central District Plan 2016*). These plans identified Epping as a "Town Centre" and "Local Centre", respectively. Thus the role of Epping appears to have been recently elevated from a lower-order to a higher-order centre. However, the 'Strategic Centre' category is not clearly defined in the 2017 draft plans, and no explanation or justification has been provided for this change. The change has also occurred ahead of completion of the Epping Traffic Study, which will guide the centre's capacity for further growth.

46. Council's submission to the GSC on the draft Region and District Plans supported the relevant Action identified in the draft District Plan, which was to "*continue the review of planning controls for Epping in collaboration with State agencies*". Council's submission also offered feedback on the vision expressed for Epping, as summarised in the following points:

a. Council considers that Epping is less advanced in terms of its development as a strategic centre, and requests stronger guidance from GSC relating to the role of strategic centres (and Epping in particular);

b. Council notes that the vision for the centre expressed in the draft *District Plan* requires a genuine commitment from State government in

all its respective areas of responsibility (including evidence-based policy making, policy implementation, infrastructure investment and governance) to ensure that any expanded role of the centre is a successful one;

c. Council strongly believes that with the support of improved transport, social and recreational infrastructure and public domain investments, the role of Epping as an important business precinct could be heightened; and

d. Any review of the planning controls for Epping must closely involve the community likely to be affected by the outcomes of the review.

47. Council's submission made the following recommendations relating to Epping:

- *That the final plans provide stronger guidance on the role of strategic centres, and Epping in particular.*
- *That the GSC, DPE and UrbanGrowth NSW work with Council to ensure that any review of planning controls for Epping closely involves the community.*

48. Council officers also note that the draft District Plans work to a timeframe of 2036, and the Region Plan presents a vision to 2056. These longer-term timeframes suggest that strategic centres could develop incrementally over the medium- to longer-term. This contrasts with the intense level of development that Epping has experienced in the past few years, and which is forecast for the next few years (as discussed previously in this report).

LEP MATTERS (HORNSBY LEP 2013 – HOUSEKEEPING AMENDMENT)

49. A Housekeeping Amendment to Hornsby LEP 2013 (which was commenced by Hornsby Shire Council prior to council boundary changes in May 2016) was notified on 29 September 2017. This Amendment included some minor changes applying to land in and around Epping Town Centre, as follows:

a. Minor boundary adjustments to the zoning map to align with land parcel boundaries;

b. A change of attribution for the 72m height limit from "AA" to "AA2" (the 72m height remains as is); and

c. Amendment of some minimum lot size requirements at land zoned R3 and R4 (generally around Hazelwood Pl, Essex St, Derby St and Maida Rd) to correspond with previous changes to related planning controls.

This Housekeeping Amendment was administrative in nature, and does not impact the Epping Planning Review.

DCP MATTERS (FAST TRACKED AMENDMENTS TO PARRAMATTA DCP 2011 – PUBLIC DOMAIN)

50. The Epping Planning Review Discussion Paper undertook preliminary analysis identifying the need for amendments for ground floor setbacks in parts of the Town Centre. As part of the suite of principles endorsed on 14 August 2017, Council endorsed the following relevant principle:

That as part of Stage 2 of the Epping Planning Review, that Council prepare appropriate DCP controls and a public domain plan that deliver through-block links and wider footpaths.

51. Since the new planning controls were introduced in March 2014, most DAs in Epping's B4 Mixed Use zone have affected sites on the eastern side of the Town Centre (formerly Hornsby Shire Council area). However, during late 2017, several major land owners on the western side of the Town Centre commenced development proposals (or discussion about potential proposals). Whilst wider footpaths on the eastern side of the Town Centre have largely been delivered through the planning framework and DA processes, widening the footpath on the western side of the Town Centre is now of critical importance in light of significant developer interest and expected increases in pedestrian volumes.

52. The current DCP controls contained within Parramatta DCP 2011 are not considered adequate to deliver the desired outcome of wider footpaths. Council considered a report on this matter on 18 December 2017 which proposed to increase the full building setback from 0m to 1.5m along Beecroft Road (as well as parts of High and Bridge streets). In relation to this matter, Council resolved:

    (a) ***That*** *the Council resolves the proposed changes to amend the Parramatta DCP 2011 by preparing a public exhibition as outlined in this report.*

    (c) ***That*** *the CEO be given delegation to authorise the DCP exhibition material prior to proceeding to public exhibition in early 2018.*

    (d) ***Further, that*** *a report be considered by Council on outcomes of the public exhibition of the DCP amendment.*

53. Exhibition of these amendments commenced on 24 January 2018, and the exhibition outcomes will be reported back to Council in March/April 2018.

DCP MATTERS (AMENDMENTS TO HORNSBY DCP 2013 RELATING TO TREE PRESERVATION)

54. On 10 July 2017, Council resolved to prepare draft amendments to Hornsby DCP 2013 for public exhibition that have the effect of applying the tree preservation controls in Section 5.4 of Parramatta DCP 2011 to land now contained within City of Parramatta which was previously within Hornsby LGA. The draft amendments also update the controls so they are consistent with the new Biodiversity Conservation Act 2016 and State Environmental Planning Policy (vegetation in non-rural areas) 2017. These draft amendments were exhibited from 18 October – 17 November 2017. Council officers are currently preparing a briefing session for Councilors and subsequent report to Council regarding the outcomes of this exhibition; this report is planned for February/March 2018, once a Councillor briefing session has taken place.

DEVELOPER CONTRIBUTIONS MATTERS (NEW CONTRIBUTIONS PLANS RELATING TO EPPING TOWN CENTRE)

55. At its meeting of 13 November 2017 (Item 11.6), Council adopted new Section 94/94A Plans for the area transferred from Hornsby to City of Parramatta as part of council boundary changes in May 2016. These plans were

predominantly required to support infrastructure demand resulting from the growth occurring in Epping Town Centre and will ensure that funds collected within the area now located in City of Parramatta are spent in that area. These plans came into effect on 6 December 2017.

EXPECTED NEXT STEPS

56. Expected timeframes for the individual matters discussed in this report have been provided where possible. It is expected that the outcomes of Council's consideration of a future report to begin Stage 2 of the Epping Planning Review (consistent with part (c)2 of the resolution outlined earlier in this report) will provide more clarity as to the direction for Stage 2 of the Epping Planning Review, as well as other related matters. The timing of this future report depends on the finalisation of the Traffic Study which, as noted previously, is currently expected in May 2018.

CONCLUSION AND RECOMMENDATION

57. As evidenced in this report, there continues to be a significant number of interrelated planning and development matters underway at Epping Town Centre, affecting the formal completion of Stage 1 and commencement of Stage 2 of the Epping Planning Review.

58. It is recommended that Council note the updates on various matters provided in this report and that, following completion of the Traffic Study, a further report to commence Stage 2 of the Epping Planning Review process is prepared for Council's consideration.

Sarah Baker
Project Officer Land Use Planning

Jacky Wilkes
A/Team Leader Land Use Planning

Robert Cologna
A/Service Manager Land Use Planning

Sue Weatherley
Director Strategic Outcomes and Development

Jim Stefan
A/Director City Services

ATTACHMENTS:

1	Endorsed Principles - Stage 1 Epping Planning Review	8 Pages
2	Council resolution - Epping Planning Review - Completion of Stage 1 and Commencement of Stage 2 - 14 August 2017	3 Pages
3	Submission to Hornsby Shire Council - Planning Proposal - Epping and Blaxland Roads, Epping - March 2016	23 Pages

REFERENCE MATERIAL

NSW GOVERNMENT Planning & Environment

IRF18/1026

Ms Sue Coleman
Interim Chief Executive Officer
City of Parramatta Council
PO Box 32
PARRAMATTA NSW 2124

Attention: Mr Robert Cologna

Dear Ms Coleman Sue

Austino planning proposal (2-18 Epping Road, 2-4 Forest Grove and 725 Blaxland Road, Epping)

I write in response to your letter of 1 March 2018 requesting further clarification of why the Sydney Central City Planning Panel was appointed as the planning proposal authority (PPA) for the above proposal.

As detailed in correspondence from the Department of Planning and Environment in November 2017, careful consideration was given to the proponent's request to grant an alternate PPA. Given the delays and ongoing extensions surrounding the delivery of the Epping traffic report, the change in the local government area, the information submitted by Austino and the outcomes of the meetings between the proponent, Council and the Department, the decision was made to appoint the Panel as the PPA for the planning proposal.

Such a decision is not taken lightly by the Department. However, in this instance, the request was considered to have merit.

A copy of previous correspondence outlining the reasons why an alternate PPA was appointed is enclosed for your reference.

Should you have any further questions in relation to this matter, please contact Ms Ann-Maree Carruthers, Director, Sydney Region West, at the Department on 9274 6270.

Yours sincerely

RECEIVED IN RECORDS 03 MAY 2018 Initials

SCANNED 03 MAY 2018 PCC

Marcus Ray
Deputy Secretary
Planning Services
27/04/2018

Encl: Letters to Council dated 8 September 2017 and 29 November 2017

320 Pitt Street Sydney NSW 2000 | GPO Box 39 Sydney NSW 2001 | planning.nsw.gov.au

NSW GOVERNMENT Planning & Environment

Mr Greg Dyer
Interim General Manager
City of Parramatta Council
PO Box 32
PARRAMATTA NSW 2124

17/10406-1

Dear Mr ~~Dyer~~ Greg

Austino Property Group (proponent) has requested that an alternate Relevant Planning Authority (RPA) be appointed to progress a proposal which seeks to amend the zones and development controls applying to land at 2–18 Epping Road, 2–4 Forest Grove and 725 Blaxland Road, Epping.

The proponent is concerned that a planning proposal has not been submitted for a Gateway determination despite the Sydney West Joint Regional Planning Panel determining in September 2016 that the proposal should progress. I am also aware that despite the proponent indicating that it is willing to negotiate parking and access requirements for the site, Council resolved on 10 August 2017 to not progress the proposal until a wider traffic study has been completed.

I have carefully reviewed this matter. Given the history of the application, ongoing delays, the information submitted by Austino and the outcomes of the meetings between the proponent, Council and the Department, the request does appear to have merit.

Before I make a decision on the matter, I request that Council provide its reasoning why an alternate RPA should not be appointed or alternatively advise that it will submit the proposal for a Gateway determination based on the information available to date. I request that Council provide a response to this request by 13 October 2017.

I have also requested Catherine Van Laeren, Director of the Sydney Region West office to schedule a meeting to discuss these issues. Mrs Van Laeren can be contacted directly on 9860 1520.

Yours sincerely

Marcus Ray
Deputy Secretary
Planning Services
08/09/2017

320 Pitt Street Sydney NSW 2000 | GPO Box 39 Sydney NSW 2001 | planning.nsw.gov.au

NSW GOVERNMENT Planning & Environment

Office of the Secretary

17/14234

Mr Greg Dyer
Interim General Manager
City of Parramatta Council
PO Box 32
PARRAMATTA NSW 2124

Dear Mr Dyer

Thank you for your letter of 4 October 2017 regarding Austino's request for an alternate Relevant Planning Authority (RPA) to be appointed for the planning proposal at 2–18 Epping Road, 2–4 Forest Grove and 725 Blaxland Road, Epping (PGR_2016_HORNS_002_00).

I have carefully considered Council's response and I understand Council has met with Department of Planning and Environment staff to discuss the matter. I have now determined that the Sydney Central City Panel will carry out the role of RPA for this proposal.

The Department will coordinate consultation with Council and the proponent to receive an updated planning proposal to be lodged for a Gateway determination as soon as possible. Given the extensive work and community engagement undertaken to date by Council, and the traffic study for the Epping Planning Review nearing completion, it is anticipated that any Gateway determination will require that the proposal not be placed on community consultation until the traffic study is completed and any necessary amendments to the proposal are made.

I note that Council has advised the traffic study is anticipated to be completed in February 2018. The Department is available to work with Council to ensure this timeframe is met.

I have requested Mrs Catherine Van Laeren, Director of Sydney Region West, to assist if you have any further queries. Mrs Van Laeren can be contacted directly on 9860 1520.

Yours sincerely

Secretary
Department of Planning and Environment

29.11.17

320 Pitt Street Sydney NSW 2000 | GPO Box 39 Sydney NSW 2001 | planning.nsw.gov.au

RELATED PLANNING POLICY MATTERS

Attachment 3 to Council Report on Epping Town Centre Traffic Study – 28 May 2018

A series of policy amendments (both LEPs, DCPs and development contributions plans) have been underway or are complete that have an impact on the Epping Town Centre. These matters are summarized in Attachment #).

Hornsby LEP 2013 – Housekeeping Amendment

1. A Housekeeping Amendment to Hornsby LEP 2013 (commenced by Hornsby Shire Council prior to council boundary changes in May 2016) was notified on 29 September 2017. This Amendment included some minor changes applying to land in and around Epping Town Centre, as follows:
    a. Minor boundary adjustments to the zoning map to align with land parcel boundaries;
    b. A change of attribution for the 72m height limit from "AA" to "AA2" (the 72m height control remains as is); and
    c. Amendment of some minimum lot size requirements at land zoned R3 and R4 (generally around Hazelwood Pl, Essex St, Derby St and Maida Rd) to correspond with previous changes to related planning controls.
2. This Housekeeping Amendment was administrative in nature, and does not impact the Epping Planning Review.

Developer Contributions Plans Relating to Epping Town Centre

3. At its meeting of 13 November 2017 (Item 11.6), Council adopted new Section 94/94A Plans for the area transferred from Hornsby to City of Parramatta as part of council boundary changes in May 2016. These plans were predominantly required to support infrastructure demand resulting from the growth occurring in Epping Town Centre and will ensure that funds collected within the area now located in City of Parramatta are spent in that area. These plans came into effect on 6 December 2017.

Fast Tracked Amendments to Parramatta DCP 2011 – Public Domain

4. The Epping Planning Review Discussion Paper undertook preliminary analysis identifying the need for amendments for ground floor setbacks in parts of the Town Centre. As part of the suite of principles endorsed on 14 August 2017, Council endorsed the following relevant principle:

    That as part of Stage 2 of the Epping Planning Review, that Council prepare appropriate DCP controls and a public domain plan that deliver through-block links and wider footpaths.

5. Draft DCP controls were prepared and exhibited between January and February 2018. On 12 March 2018 (Item 13.4) after reporting on the exhibition process, the DCP was adopted by Council. It came into effect on 4 April 2018.

Amendment to Hornsby DCP 2013 - Tree Preservation

6. On 26 February 2018, Council resolved to adopt amendments to Hornsby DCP 2013 that apply the tree preservation controls in Section 5.4 of Parramatta DCP 2011 to land now contained within City of Parramatta which was previously within Hornsby LGA. The draft amendments also update the controls to ensure consistency with the new *Biodiversity Conservation Act 2016* and *State Environmental Planning Policy (Vegetation in non-rural areas) 2017*. Public notices were subsequently placed in local papers in mid March 2018 which brought the DCP amendments into effect.

7. The Council resolution in relation to this item (Item 13.4) request a report be brought back to Council regarding: (1) tree removal in Forest Park; and (2) the impact of the Austino planning proposal on the trees at the northern side of Forest Park. The relevant resolution parts are as follows:

   (h) ***That*** *a report be brought back to Council regarding which trees in Epping Forest Park have been removed by Council staff and any proposed plantings.*

   (i) ***Further, that*** *a report be brought back to Council regarding the potential impact of proposed development to the north of Epping Forest Park on existing trees.*

8. Council Officer's response is provided in the sub-section below.

Tree removal by Council Staff in Forest Park

9. Forest Park is listed as local heritage item under Schedule 5 of the *Hornsby Local Environmental Plan 2013*. This listing identifies significant tree plantings within the park that contribute to its heritage character, including:

   a. 2 x Hoop Pines and 2 x Bunya Pines (c1910/20s);
   b. 1 x Cypress Pine (c1920s);
   c. Canary Island Pines (c1930s);
   d. Crepe Myrtle / Tibouchina / Bottlebrush / New Zealand Christmas Bush eastern border planting (1930s/40s);
   e. Camphor Laurels (c1950s);
   f. Brush Box along northern boundary (c1950s); and
   g. Group of gums including Spotted Gums (c1960s).

10. Council's Parks Services team has commenced restoration of the heritage landscape elements of the garden along the northern boundary of the reserve. This garden contains a number of plant specimens from the original heritage landscaping that have become overgrown in recent years. Large amounts of weeds have recently been removed to uncover these original plantings. The largest and most recent weed removals included three Cocos Palms (*Syagrus romanzoffianum)*.

11. Removal of these trees commenced in early March, with two of the three trees being removed before works were halted due to concerns from members of the local community. These three trees do not contribute to the heritage significance of the park and their removal will allow for additional plantings consistent with the original landscape character of Forest Park.

12. Following the transfer of Forest Park to the City of Parramatta Council in 2016 on account of Council amalgamations, Council has installed a number of plants consistent with the existing heritage plantings, including:

- 15 x Camellia (Propagated from site);
- 3 x Gordonia;
- 10 x Ozmanthus;
- 5 x Rhododendron (Propagated from site);
- 30 x Ctenanthe ' Grey star';
- 20 x Hydrangea;
- 8 x Magnolia 'Little gem'; and
- 15 x Grevillea.

13. Additional plantings are also scheduled to be undertaken during the current Autumn months. However, this is on hold pending removal of the remaining Cocos Palm to avoid damage to new plants. The additional plantings include:

    - 40 x Philodendrons 'Xanadu';
    - 20 x Camellia (Propagated from site);
    - 6 x Magnolia Little gem';
    - 40 x Gordonia 'Florida';
    - 6 x Tibouchina; and
    - 20 x Azalea (Propagated from site).

14. The above information addresses Council's resolution that "a report be brought back to Council regarding which trees in Epping Forest Park have been removed by Council staff and any proposed plantings."

Potential impact of proposed (Austino) development to the north of Epping Forest Park

15. The discussion on this planning proposal within the Council report (which this attachment relates to) recommends an alternative option/s for this site. The outcome of this should be explored before an assessment of the proposal is undertaken of the potential impact of proposal on existing trees to the north of Epping Forest Park.

**

Epping Town Centre Traffic Study

Land Use Options Testing

Prepared for Parramatta City Council | 10 May 2018

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Land Use Options Testing

Epping Town Centre Traffic Study

Final

Report J17056RP4 | Prepared for Parramatta City Council | 10 May 2018

Prepared by	**Tim Brooker**	Approved by	**Allan Young**
Position	Associate - Transport Planner	Position	Director
Signature		Signature	
Date	10 May 2018	Date	10 May 2018

This report has been prepared in accordance with the brief provided by the client and has relied upon the information collected at the time and under the conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of the client and no responsibility will be taken for its use by other parties. The client may, at its discretion, use the report to inform regulators and the public.

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Document Control

Version	Date	Prepared by	Reviewed by
V1	10 May 2018	Tim Brooker	Allan Young

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Appendices

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1 Introduction

1.1 Background to land use changes at Epping

A number of economic and transport accessibility factors are currently attracting new urban development (primarily higher density residential development) to be located in the Epping Town Centre and surrounding areas.

Foremost in this regard is the North West Metro project, which the NSW Government has acknowledged by implementing significant local area land use zoning changes at Epping in October 2014, and the concurrent redistribution of the local government area boundaries during 2015 and 2016 which has now brought the entire Epping Town Centre area under the land use planning control of Parramatta City Council (except for some major sites where the NSW Government's-Planning Assessment Panels are involved in the planning assessment).

The continuing strong population growth and transport network changes throughout Sydney and the adjoining outer-urban regions of North Western Sydney, will also have a contributory effect in future years on road traffic conditions throughout the Epping Study area, not just the development occurring adjacent to the "Epping Town Centre" road network which is the primary focus of this report.

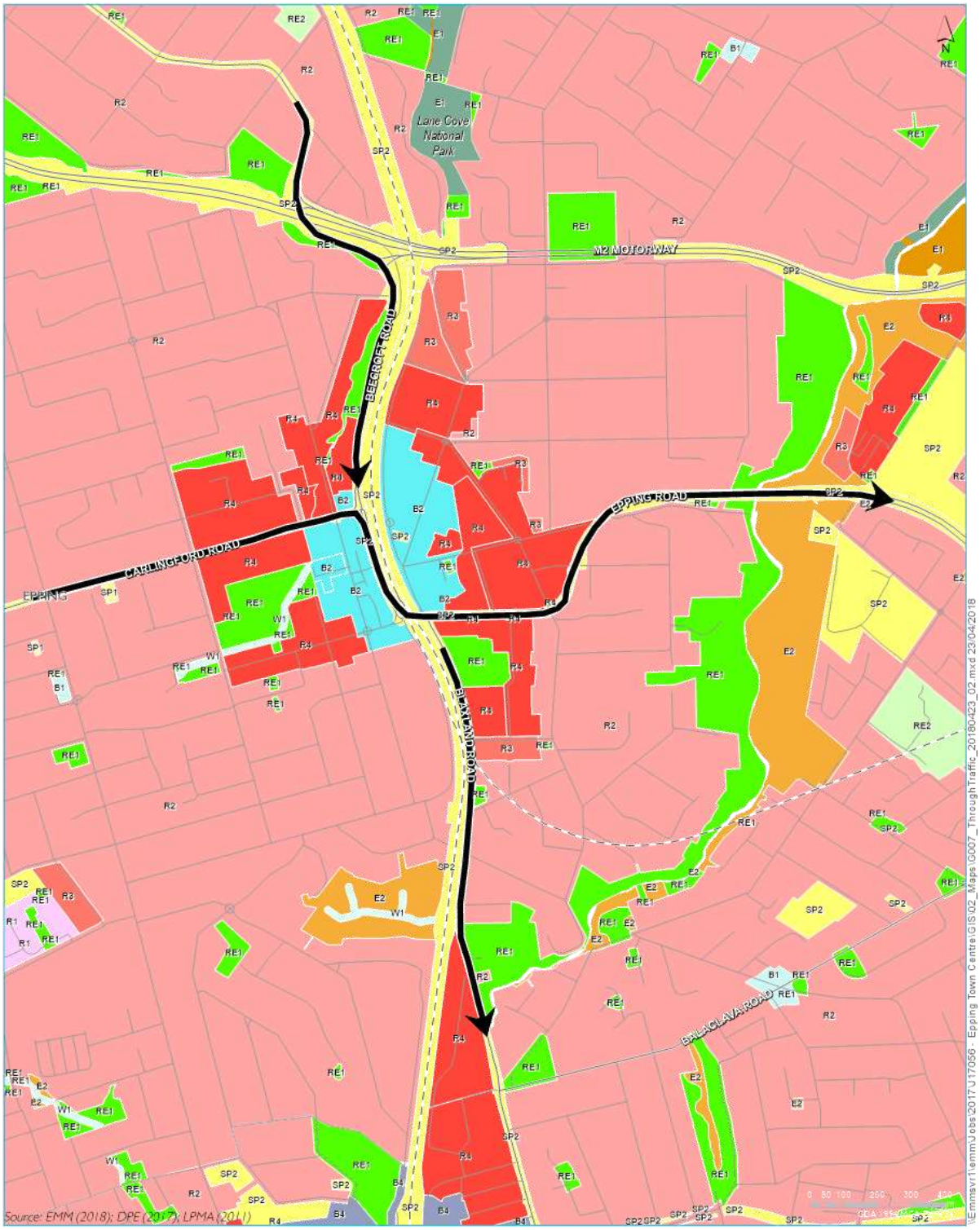
Historically the Town Centre has had a significant employment focus in addition to its retailing and residential development. In recent years, since the new Priority Precinct planning controls were first drafted (from 2011 onwards), the development focus has shifted towards significantly increased residential densities and many proposed residential developments are now potentially displacing the historic employment and retail/commercial uses on key sites within and adjoining the town centre. It is the view of Council that this is not a preferred outcome for the Epping Town Centre where the existing level of retail and commercial development is desired to be at least maintained, to adequately serve the local retail industry and service needs of a growing residential population within and in the vicinity of the Town Centre.

The core commercial and retailing areas of the Town Centre are all within easy walking distance (mostly within 200 m and all generally within 400 m) of the Railway Station at Epping. The primary focus of the existing commercial and retail activity, including the major supermarket (Coles) is currently on the western side of the railway where the three primary retail frontages of Beecroft Road (western side), Rawson Street (eastern side) and Rawson Street (western side) accommodate these businesses. Also, the large Council-owned open air car park, which is located on the western site of Rawson Street, serves as a primary focus for the local vehicular traffic and parking movements which are generated by the Town Centre retail and commercial activity.

1.2 Transport networks

This study has been undertaken as one of a number of related land use planning studies which are critically examining the environmental and other impacts of the potential future urban development at Epping. The Epping study area is strategically located between the Parramatta CBD and Sydney CBD and is well served by regional transport links. These links are described below.

The study area major road network south of the M2 Motorway, which consists of the four major roads, Epping Road, Beecroft Road, Blaxland Road and Carlingford Road, which pass through the Epping Town Centre (refer to Figure 1.1).



KEY

- Through trips
- Rail line
- Main road
- Local road
- NPWS reserve

Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B4 Mixed Use
- E1 National Parks and Nature Reserves
- E2 Environmental Conservation
- R1 General Residential
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP1 Special Activities
- SP2 Infrastructure
- W1 Natural Waterways

Major road network at Epping south of the M2 Motorway

Epping Town Centre traffic study

Figure 1.1

EMM

The M2 Section of the Sydney Orbital Motorway, bypasses the Town Centre in an east-west direction, approximately 800 m north of the core Beecroft Road commercial area. Although the Sydney Motorway Network (including the M2 Motorway) is now heavily congested in the peak travel direction, for extensive periods throughout the normal weekday morning and afternoon traffic peak periods, there are no current plans by RMS for any widening of the M2 Motorway.

The future North-Connex Motorway diversion for the Pennant Hills Road traffic north of Carlingford may potentially provide some future traffic relief to the peak hour traffic congestion on the M2 Motorway. However due to the generally diverging alignments of the two Motorway routes, which is shown on the Sydney Motorway and Tollways map in Figure 1.2, there will be only a limited range of combinations of traffic origins and destinations for which North-Connex can provide a convenient alternative route to the M2, and the new Motorway route is likely to provide only limited future traffic relief to the existing M2 Motorway traffic congestion.

Map Source: Ben Aveling and Ian Bell

Figure 1.2 Future Sydney orbital motorway and tolled road network

The Sydney heavy rail and future metro rail networks pass through Epping, which is a major junction station on the Sydney Trains network and major stopping point for Inter City train services on the Sydney to Newcastle and Central Coast line. This provides a high and improving level of rail network accessibility and connectivity for the future residential population and workforce at Epping as is shown by the existing and proposed future train service frequency maps in Figures 1.3, 1.4 and 1.5.

However, although the rail network connectivity is good for the major travel destinations to the north east, north west and south east of Epping, there remains a crucial missing link in the rail network connectivity towards the Parramatta direction in the south west, where the NSW Government's decision in 2005 not to proceed with the previously approved Epping to Parramatta Heavy Rail link, continues to have a significant adverse effect on the public transport connectivity and journey times for public transport travel to and from Epping in the Parramatta direction.

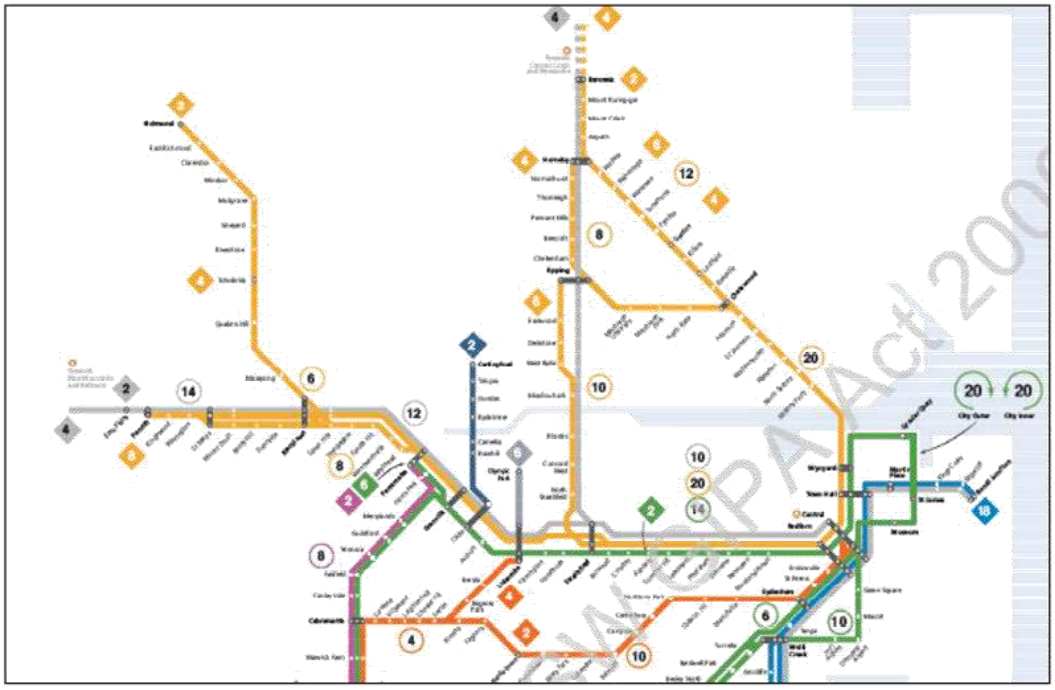


Figure 1.3 Existing Sydney Trains 1 am peak hour train service frequency in 2015

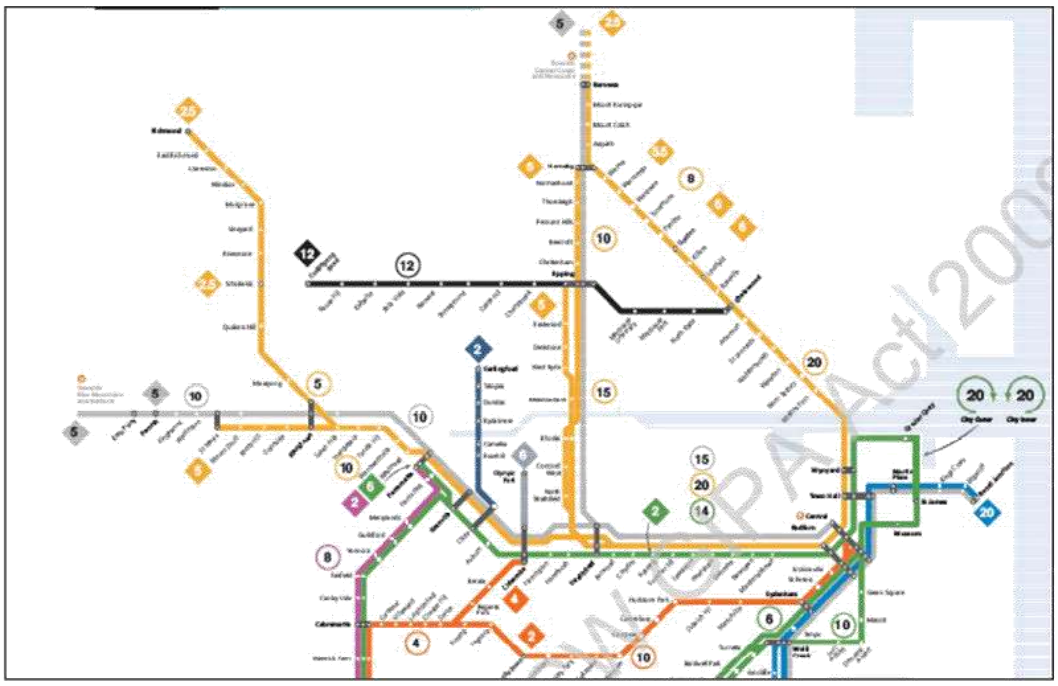


Figure 1.4 Future Sydney Trains 1 hour am peak train service frequency after 2019

The STA (Sydney Buses) local and interregional bus routes network at Epping, which are shown in Figure 1.5, currently service a wide range and frequency of destinations for bus passengers at Epping including longer distance sub-regional connections to Parramatta (routes M54, 546 and 549) and North Sydney or the Sydney CBD (routes 288, 290 and 291).

However even with peak hourly ten minute service frequencies for the buses travelling by these routes, the bus network capacity for peak hourly passenger movements is still only a few hundred passenger per hour, for each route, compared to the likely capacity of between 10,000 to 20,000 passengers per hour which could be achieved by direct metro or heavy rail services travelling to these destinations.

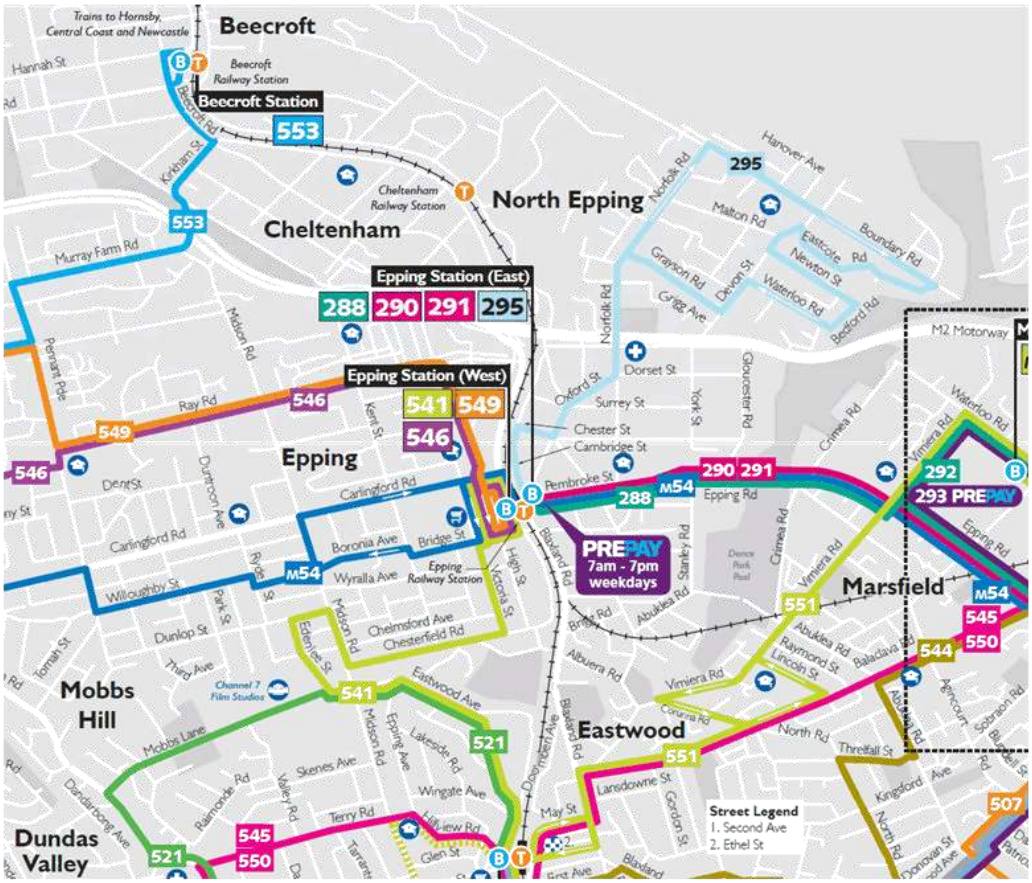


Figure 1.5 Bus routes connecting to the Epping Town Centre and Railway Station

1.3 Project objectives

In a transport modelling context, the two primary aims and objectives of the study are:

- to identify the through (regional) traffic volume growth and its effect on the traffic network; and
- the quantification of the local area road network impacts from local and through traffic growth.

A range of future land use and road network improvement scenarios are including the core locality residential traffic growth scenarios stemming from the recent zoning changes implemented as an outcome of the Epping Town Centre Urban Activation Precinct (UAP) Study 2014.

This analysis is effectively required to further update the work of the Epping Town Centre Transport Studies by Halcrow and GTA (Halcrow Pacific Pty Ltd, 2011 and GTA Consultants-reviewed by AECOM, 2015) which informed the work of the UAP. The Halcrow Study recommendations for road infrastructure improvements to accommodate the short term future development growth scenario for the Epping Town Centre go some way to accommodate the future traffic needs of longer-term development. However, both these earlier studies were based upon future traffic growth estimates for approximately 3,000 additional dwelling units.

The more recent land capability analysis which has been undertaken for this study by Parramatta City Council and EMM has identified the actual future development potential under the new zoning controls is more likely to be approximately 10,000 additional dwellings. Also this growth estimate does not include any additional dwellings proposed as part of planning proposal applications for key sites in the town centre, where several land owners/developers are already requesting further zoning changes which could potentially develop a future total of 2,800 dwellings of which approximately 1,500 dwellings would be in addition to the number of dwellings permitted under current zonings as identified by the land capability assessments which have been undertaken by Parramatta City Council and EMM for this study.

Also, the future land use options which have developed by Parramatta City Council and EMM for assessment in this study are essentially neutral in terms of employment and commercial floorspace development within the Epping Town Centre, which assume no change effectively from the current base year situation. However, it is anticipated that in due course additional town centre development scenarios will be assessed using the Epping Town centre traffic models which have been developed for this study, which also include higher levels of commercial development (and employment) in Epping.

The key objectives of the traffic study process, which have evolved and been refined during the course of the study in numerous discussions with the Council staff, RMS and other key study stakeholders are as follows:

- To develop a series of existing and future year (2017, 2026 and 2036) mesoscopic travel demand and traffic flow/queuing models for the full study area road network (including all the existing and proposed major roads and local roads) for the full future 6.30-9.00 am and 3.30-6.00 pm peak traffic flow periods.

- To further develop the actual 8.00-9.00 am and 5.00-6.00 pm one hour peak period linked intersection traffic flow and delay (queuing) models for the core traffic model area which is effectively the chain of key intersections along the major traffic route, via Carlingford, Beecroft, Epping and Blaxland Roads. This additional modelling uses the SIDRA 7 Linked intersection model

- To accurately calibrate the 2017 peak hourly mesoscopic and traffic flow/queuing models to correctly represent the measured vehicle travel times and traffic queue lengths throughout the Epping Study area, This work has been undertaken in liaison with representatives of RMS. In particular, the calibration and validation of the initial base year 2017 am and pm peak hour study Dynameq traffic models, have been accurately calibrated with regards to:

    - Peak hourly intersection turning movements at the key traffic signal intersections;

    - Morning and afternoon peak hour travel times across the full study area from west to east and south to north via the identified major road travel paths, and

- Morning and afternoon peak hour maximum traffic queues for each cycle of the traffic signal operations on the Beecroft, Carlingford, Epping and Blaxland Road approaches to the two main traffic signal controlled intersections at the Epping Town centre.

- To test the future network congestion and traffic flow implications of a range of future urban development scenarios for the study area, which are broadly consistent with the effects of the priority precinct zoning changes for the study area since 2014, which are effectively

  - The future development of approximately 5,000 net additional dwellings from new residential development within the Epping study area, with all the additional dwellings completed and occupied by the year 2026

  - The future development of approximately 10,000 net additional dwellings from new residential development within the Epping study area, with all the additional dwellings completed and occupied by the year 2036

1.4 Scope of work

To develop the initial study base year 2017, study area network traffic models, the following peak hour traffic volume surveys, travel time surveys and traffic queue length observations were undertaken.

- Peak hourly intersection turning movements at 17 nominated key intersections on Wednesday ;

- Morning and afternoon peak hour travel time surveys across the full study area major road travel paths, and

- Morning and afternoon peak hour maximum traffic queues for each cycle of the traffic signal operations on the Beecroft, Carlingford, Epping and Blaxland Road approaches to the centre

1.5 Study area

1.5.1 Major roads

Particulars concerning all the major roads in the study area are detailed below:

- Beecroft Road – a declared State road under the jurisdiction of the RMS. It is generally a four-lane, two-way road running in a north-south direction between Pennant Hills and Epping. It is signposted with a speed limit of 60 km/hr through Epping. Both sides of Beecroft Road south of the M2 Motorway are clearways during peak hours. It should be noted that RMS has recently completed some widening of Beecroft Road, through and to the north of the Carlingford Road intersection to accommodate one additional southbound right turning lane at the intersection.

- Carlingford Road – a declared State road under the jurisdiction of the RMS. It is also generally a four-lane, two-way road running in an east-west direction between Beecroft Road at Epping and Pennant Hills Road at Carlingford. It is signposted with a speed limit of 60 km/hr through the Epping urban area. In the 90 m section of west of Beecroft Road, to the additional town centre intersection with Ray Road and Rawson Street, the traffic queuing is frequently congested and detailed attention is required to be given to the synchronised phasing of the two adjacent sets of traffic signals to optimise the traffic movement through both intersections. Also the right turn movement is not permitted from Carlingford Road to Ray Road in the westbound direction.

- Epping Road – a declared State road under the jurisdiction of the RMS. It is also generally a four-lane, two-way road in the Epping study area, although it is wider (generally six lanes) further to the east in the direction of Macquarie Park and Lane Cove. It is signposted with a speed limit of 60 km/hr within the Epping urban area. Both sides of Epping Road are clearways during peak hours and are 'no stopping' at other times. It should be noted that RMS is currently widening Epping Road between Essex Street and Blaxland Road to accommodate an additional westbound lane, and for adding a raised median strip, which will prevent right turning traffic movements in the future at the Epping Road/Smith Street and Epping Road/Forest Grove Road intersections.

- Blaxland Road – a declared State road under the jurisdiction of the RMS. It is generally a four-lane, two-way road running in a north-south direction between Epping and Ryde. It is signposted with a speed limit of 60 km/hr. In the 70 m section of Blaxland Road approaching the intersection with Epping Road, a 'no stopping' restriction applies on both sides of the road, and elsewhere on the western side. On most sections, however, kerbside parking is permitted on the eastern side outside of peak hours. At the four way intersection of Blaxland Road with Epping Road and Langston Place to the north, the future RMS intersection improvements will remove the southbound right turn facility from Langston Place into Epping Road-Beecroft Road heading west, which will free up some additional capacity for other traffic movements at the intersection, but will require the existing locally based traffic which is making this movement via Langston Place, to use other traffic detour routes in the future, most probably via the Epping Road/Essex Street intersection.

1.5.2 Intersections

This traffic study has surveyed the existing peak hourly and turning traffic movements at a total of seventeen intersections throughout the study area, which are shown by the summaries of the am and pm peak period one hourly intersection approach traffic volumes in Appendix A.

In addition the RMS has expressed an interest in specifically reviewing the peak hourly intersection approach and turning traffic movements which are predicted by the study at the six key traffic signal controlled intersections along the major traffic route, which are:

- West of the railway line at:
  - Carlingford Road/Midson Road
  - Carlingford Road/Ray Road/Rawson Street
  - Carlingford Road/Beecroft Road, and
- East of the railway line
  - Epping Road/Blaxland Road/Langston Place
  - Epping Road/Essex Street
  - Epping Road/Pembroke Street

Also shown in Appendix A are the "core network" one hour am and pm peak westbound and eastbound traffic flow volumes along the major traffic route between these intersections, including the calculated mid block traffic flow gains and losses, which represent either:

- Additional traffic joining or leaving the major road from intervening local road intersections or property access driveways, or
- Greater or fewer number of stored vehicles in the traffic queues along the major road, between the beginning and the end of the relevant peak hour period, or
- Possible minor errors in the surveyed intersection turning traffic movements at any intersection

In this study report, the morning and afternoon peak period traffic queuing behaviour along the four major traffic routes approaching Epping has been assessed in detail using the Dynameq traffic queuing model outputs from the year 2017 am and pm peak period base traffic models. A detailed series of traffic queuing outputs for the full study area road network for the overall 2-3 hour am and pm peak traffic periods is presented in Appendix B.

During the morning peak period the combined eastbound and southbound traffic queues on Carlingford Road and Beecroft Road can reach a combined total length of approximately 1.5 km, which is illustrated by Figure 1.6.

The detailed actual Epping town centre peak hour traffic queuing and congestion, is further illustrated by the series of traffic flow and queuing plots in Figures 1.7 to 1.14. Each yellow dot on the maps and figures in Appendix B and Figures 1.7 to 1.15 represents one queued vehicle.

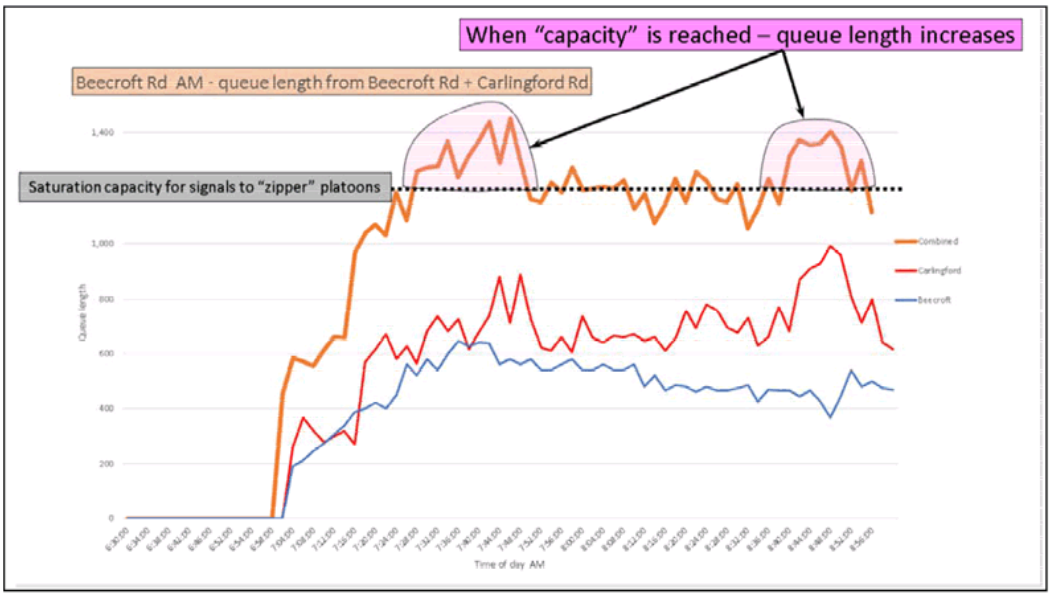


Figure 1.6 Combined morning peak hour Carlingford Road and Beecroft Road traffic queues

The peak traffic queue lengths can generally occur at different times of the peak hour in the morning and afternoons on different approach routes and at different intersections, which is also illustrated by the different peak traffic queue times for Carlingford Road and Beecroft Road in Figure 1.6.

There is also a separate focus of significant traffic queuing and congestion in the western part of the study area, centred around the Carlingford Road/Midson Road intersection, which can only be fully understood by referring to the separate series of traffic flow and queuing plots in Appendix B. These plots show the

greatest development of traffic queues occurring in this locality between 8.45-8.55 am in the morning and 5.45—5.55pm in the afternoon, which is later than the peak traffic queues near the Epping Town Centre.

For Epping traffic model study area overall, the most widespread traffic queuing effects on all areas of the road network are considered to occur at approximately 8.40 am in the mornings and 5.40 pm in the afternoons, which is consistent with the normal Sydney region major road traffic conditions where the peak traffic volumes are normally between 8.00-9.00 am in the mornings and 5.00—6.00 pm in the afternoons

Figure 1.7 **Early morning peak hour eastbound traffic queuing at 7.05 am**

Figure 1.8 Early morning peak hour eastbound traffic queuing at 7.25 am

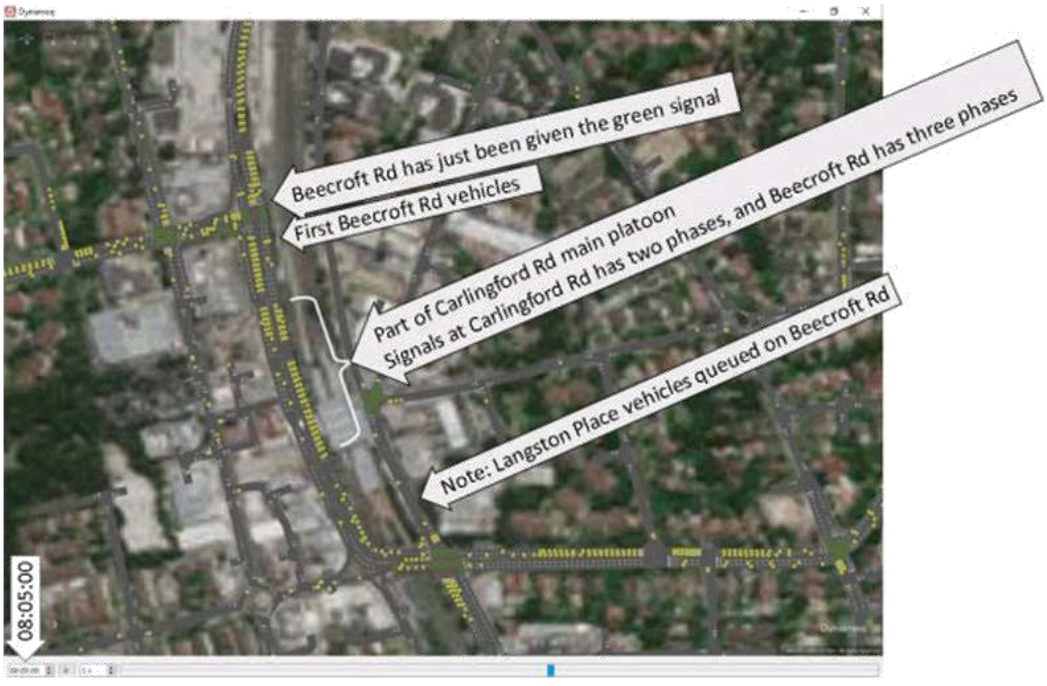


Figure 1.9 Middle morning peak hour eastbound traffic queuing at 8.05 am

Figure 1.10 **Middle morning peak hour eastbound traffic queuing at 8.15 am**

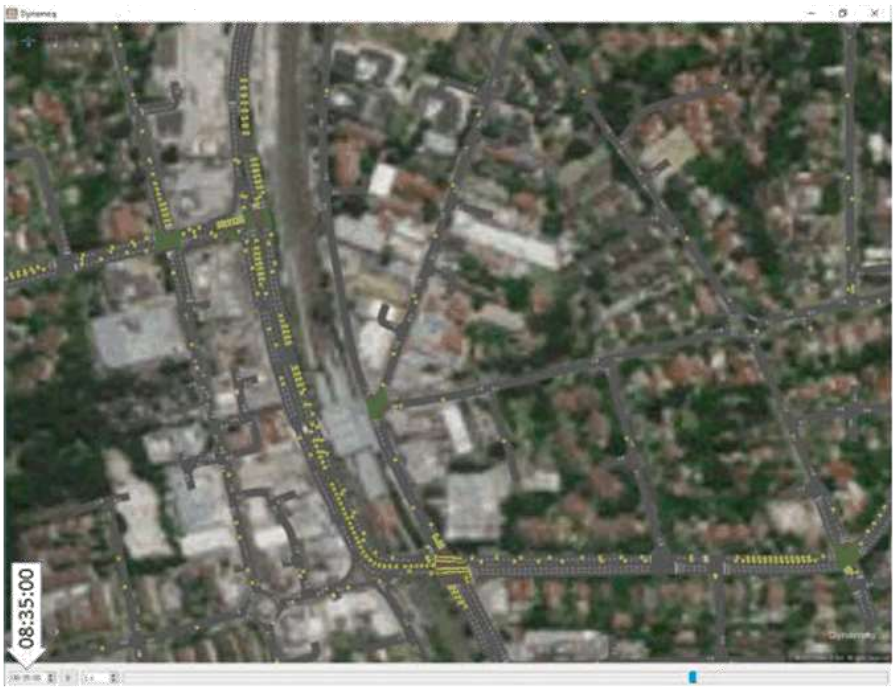


Figure 1.11 **Later morning peak hour eastbound traffic queuing at 8.35 am**

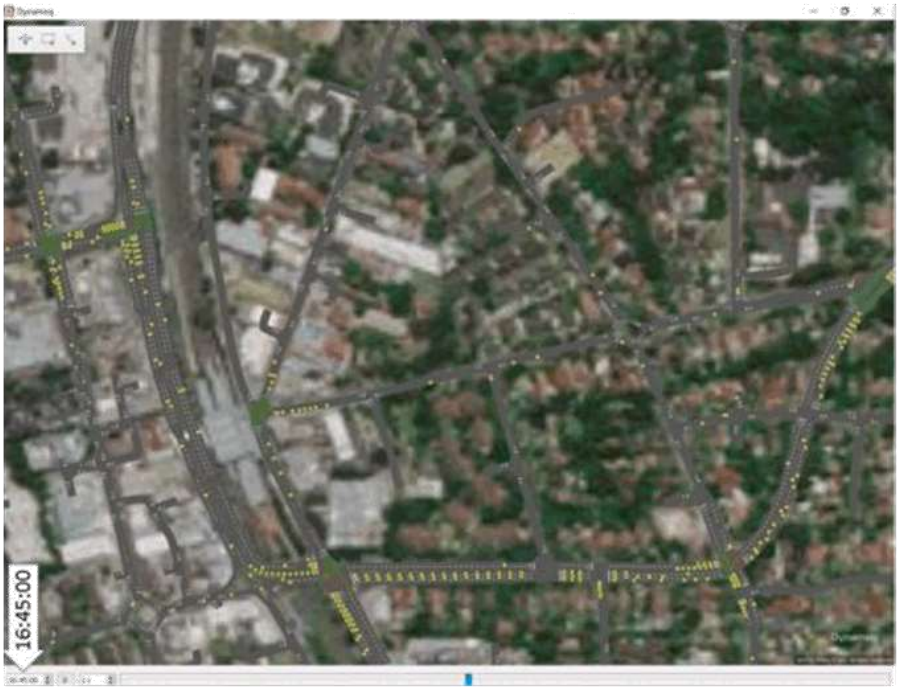


Figure 1.12 Early afternoon peak hour westbound traffic queuing at 4.45 pm

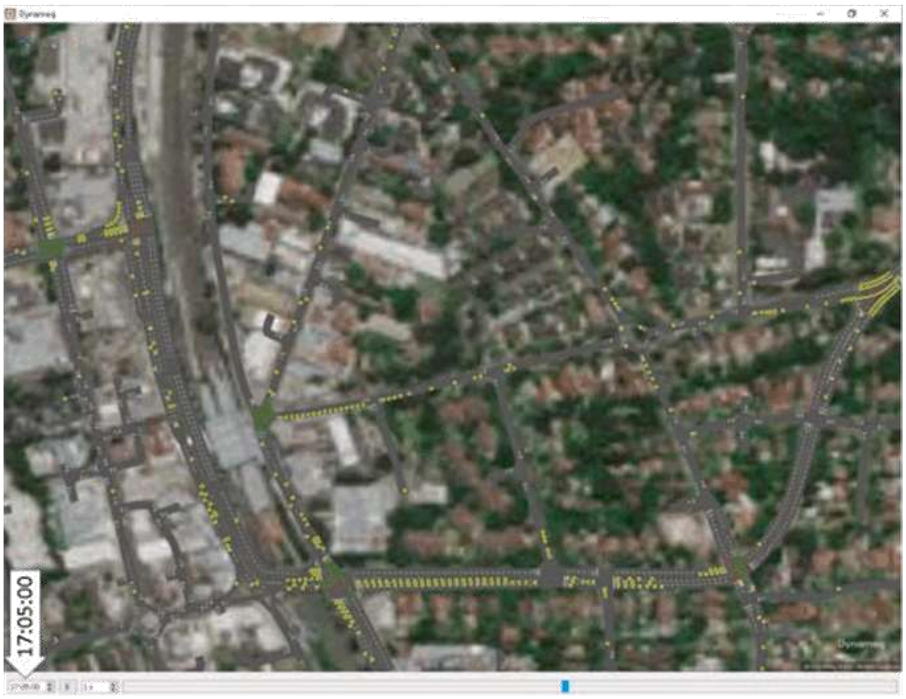


Figure 1.13 Middle afternoon peak hour westbound traffic queuing at 5.05 pm

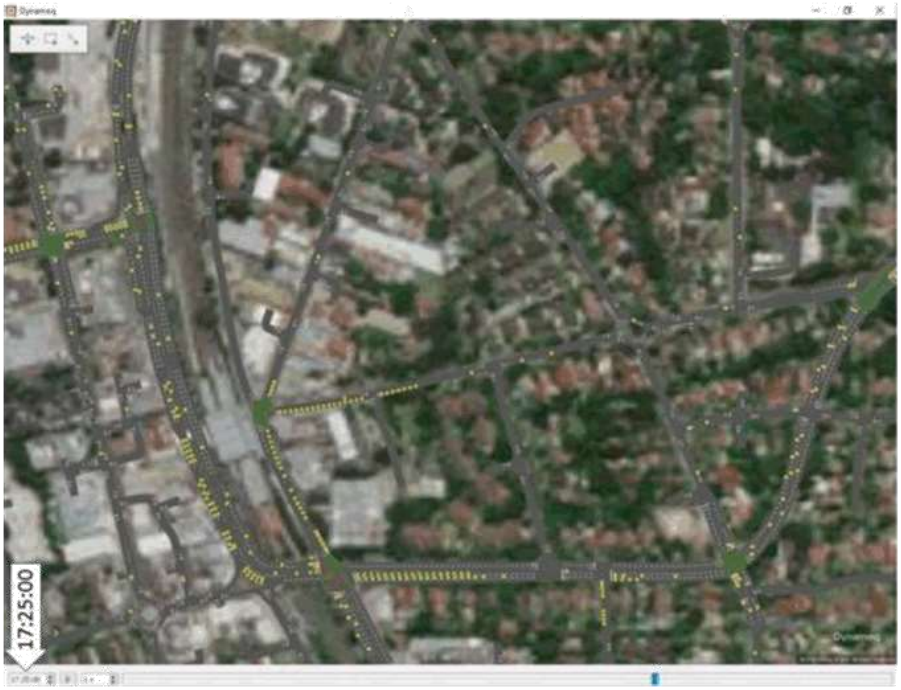


Figure 1.14 Middle afternoon peak hour westbound traffic queuing at 5.25 pm

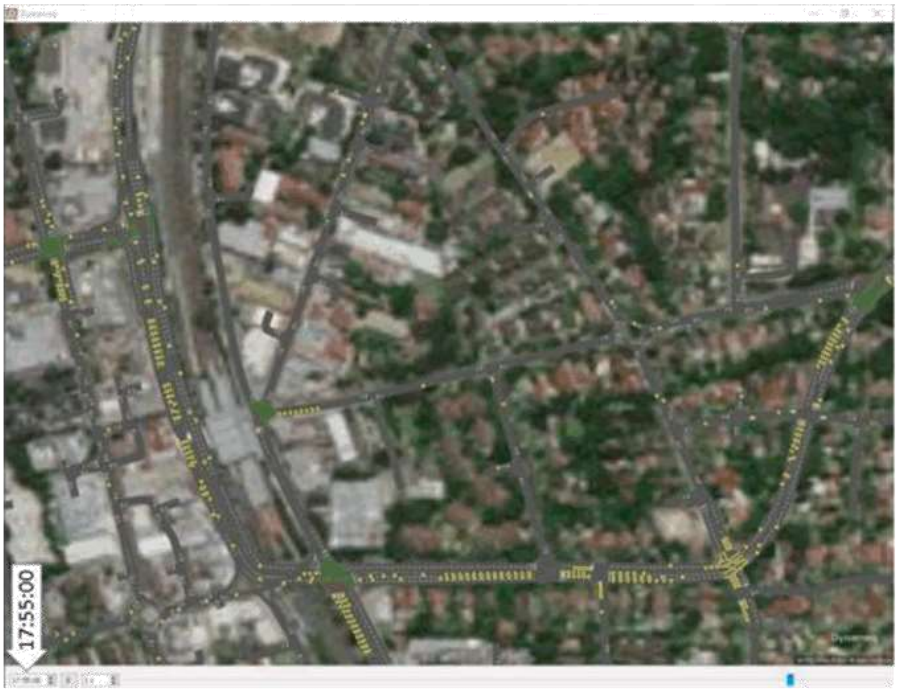


Figure 1.15 Later afternoon peak hour westbound traffic queuing at 5.55 pm

In addition to the Dynameq traffic model queuing analysis, which has been undertaken for the existing base year 2017 am and pm peak traffic models, the existing and future intersection performance and traffic delays at the six key traffic signal controlled intersections of the traffic model "core network" area has been assessed in detail using the SIDRA 7 Linked Intersection model, for the existing 2017 and future year 2026 and 2036 am and pm traffic network models.

For this detailed intersection traffic delay analysis, the unrestrained network travel demand which is determined by the EMME model for the one hour am and pm peak periods, for regional traffic growth, combined with the additional development traffic at Epping, is fed directly into the SIDRA 7 linked intersection model where the SIDRA model responds by applying upstream capacity constraints at each assessed intersection, whereby the peak hourly traffic which is travelling through the intersection is limited according to the actual capacity constraints at the relevant upstream intersections.

1.5.3 Land use patterns

The existing patterns of land use development in the study area, including the current land use zonings, and the sites of recently approved residential developments within and surrounding the Epping Town centre is shown by the map in Figure 1.16, where the identified future development sites are also shown with a red or blue shading.

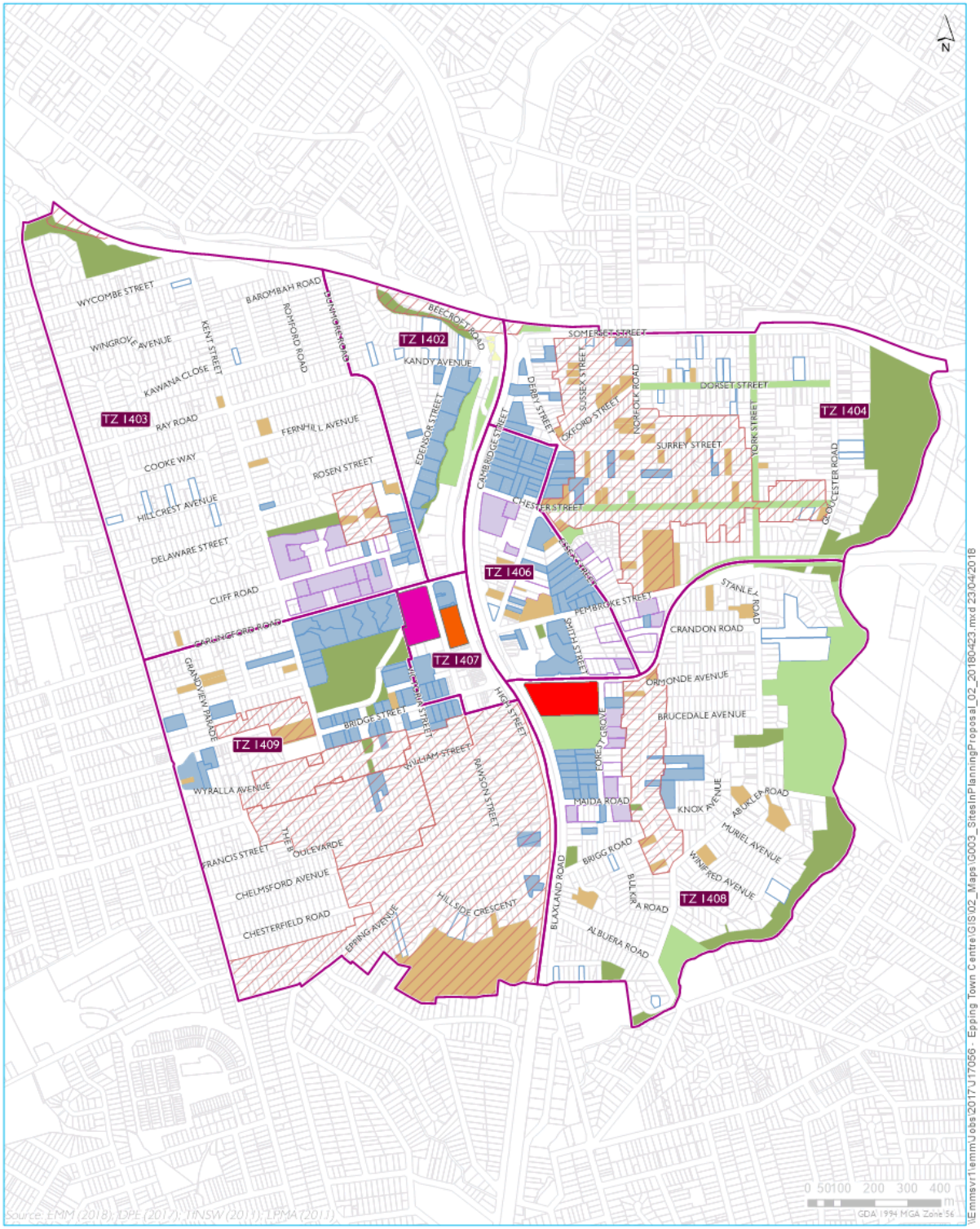
More details of the map which is shown in Figure 1.16 and listings of all the identified development sites and their approved or potential future dwelling numbers in the interim (year 2026) and ultimate (year 2036) future Epping Town Centre land use scenarios are provided in the additional maps and summary tables in Appendix C and Appendix D.

The existing approved developments (as at 19 June 2017) which was defined to be assessed as one of the two core future land use options for the Epping Study area, will effectively result in approximately 5,000 additional dwellings in the study area by 2026 and a further increase to approximately 10,000 additional dwellings in the study area by 2036.

Three further "Planning Proposal" sites, which are either wholly within or adjacent to the Epping town centre commercial areas, and are the subject of known planning proposals to modify the existing zonings and height limits.

These three sites are also shown on the map in Figure 1.17. The requested zoning changes for these three sites, if approved, would permit the construction of a total of approximately 2,800 new dwellings, in comparison to approximately 1,300 new dwellings which would be permitted for these sites currently. This would further increase the potential future Epping study area residential development yield by approximately 1,500 dwellings above the calculated maximum of approximately 10,000 new dwellings, which is forecast to be achieved under the current planning controls.

Figure 1.16 Study area land use analysis and identified development sites



KEY

- BTS Travel zone
- Sites in planning proposal
  - Beecroft/Rawson Street site
  - Epping Road site
  - Rawson Street site
- SILEP heritage
  - Conservation Area - General
  - Item - General
  - Item - Archaeological
  - Item - Landscape
- Strata Plan (LPMA 2014)
- Strata title property (Epping Town Centre Urban Activation Precinct Structure Plan 2011)
- DA approved
- DA approved - under construction
- Parks / open space
- Cadastre

Land use analysis and sites with planning proposals

Epping Town Centre traffic study

Figure 1.17

EMM

1.6 Report outline

The structure of this report follows the report guideline table of contents for "Option Testing Report" which has been published by RMS as part of Technical Direction – Traffic Management TTD 2017/001 published on 17 May 2017.

The key details of the study traffic model development have previously been presented in two traffic model calibration reports which were prepared by EMM/Paul van den Bos in July 2017 and December 2017. The additional study traffic model results for the increased study area networks travel demand in 2026 and 2036 and the further detailed SIDRA intersection modelling to calculate future intersection traffic delays, is described in detail in this report under the following chapter headings.

- Chapter 2 Land use and network option testing
- Chapter 3 Traffic modelling assumption
- Chapter 4 Future growth in travel demand
- Chapter 5 Base year network operations
- Chapter 6 Future Base year network operations
- Chapter 7 Future land use and network operation results
- Chapter 8 Operational assessment comparison
- Chapter 9 Conclusion

2 Option testing conditions

2.1 Regional context

Sydney's future population growth and urban development projections, and now published separately for the three "connected cities" of central, eastern and western Sydney.

Epping is included in the Parramatta LGA which is part of the central city area and which has anticipated future population growth of 550,000 persons over the 20 year future period (from 2016 to 2036). This represents average population growth of 27,500 persons per year over this period.

The anticipated future annual growth demand for new dwellings is a total of 207,500 dwellings, which corresponds to an average growth of 10,375 dwellings per year over the 20 year period.

The forecast range of future housing types for the projected new dwellings is as follows:

- 60% detached dwellings = 6,225 additional dwellings per year;
- 15% medium density = 1,556 additional dwellings per year; and
- 20% apartments = 2,075 additional dwellings per year

Within the Epping town centre study area, the 10,000 additional dwellings which are likely to be constructed over the next 20 years will be either medium density housing or apartments. These additional dwellings will contribute towards meeting the overall "central city" future housing 20 year growth target of 72,625 additional medium density or apartment dwellings which is required (35% of the 207,500 total dwellings required) over the future period from 2016 to 2036.

There has been only moderate recent population growth in the suburb of Epping between the 2011 and 2016 census and the suburb was recently recorded in the 2011 census as having a total of 7,322 existing households, with approximately 31.4% of the working population usually travelling to work by public transport (28.6% by train and 2.8% by bus).This data is summarised in Table 2.1.

The likely future development of an additional 10,000 dwellings at Epping will represent a 137% increase in the number of existing households at Epping, which will have far reaching implications for the range of transport infrastructure and all other community facilities and services which are required to support this level of population growth, in the areas within and around the Epping Town Centre.

Table 2.1 Key demographic indicators for Epping at the 2011 Census

	Epping	Parramatta LGA
Number of households	7,322	70,438
Key methods of travel to work	Train – 28.6%	Train – 18.7%
	Bus – 2.8%	Bus – 5.0%
	Car – as driver – 47.7%	Car – as driver – 54.1%
	Car as Passenger – 3.8%	Car as Passenger – 4.2%
	Bicycle – 0.4%	Bicycle – 0.3%
	Walked only – 2.4%	Walked only – 3.6%

The future supporting transport infrastructure which is proposed to be provided by the NSW government at Epping includes both road and public transport network improvements, including the North West metro line to Rouse Hill and the as yet unspecified future radial public transport connection between Parramatta and Epping, shown on the map extract from the central city district plan, in Figure 2.1.

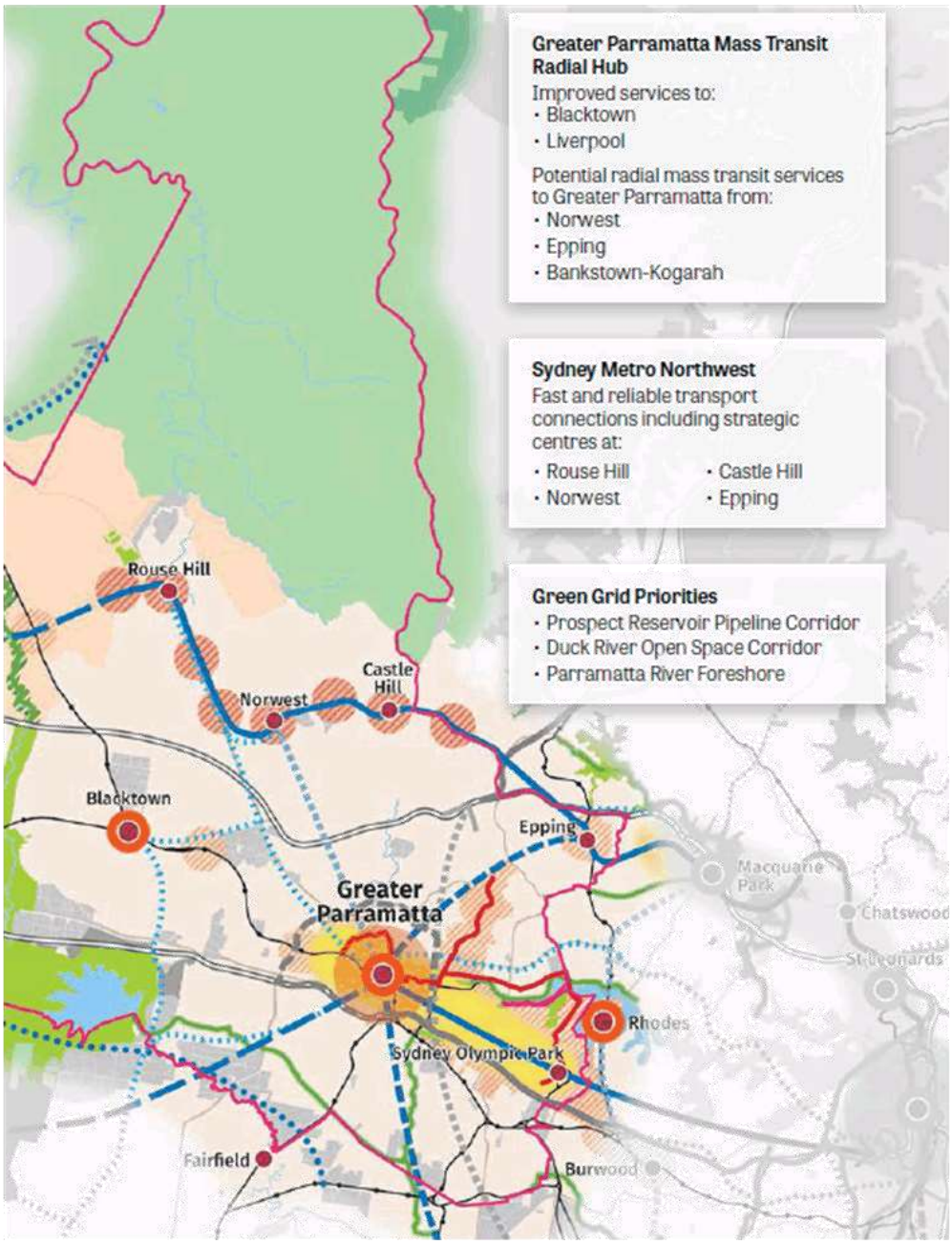


Figure 2.1 **Future public transport connections for Central City including Parramatta-Epping**

2.2 Land use options

Existing land use in the study area comprises of a mix of commercial and residential uses. Existing retail and office activity is concentrated within a 400 m radius of the Epping Train Station. Some residential uses exist in the area, in mixed use buildings with retail on the ground floor. Building heights in this area are generally eight to nine storeys. The Epping Business Park and Cambridge Office park, which are small scale commercial business parks are located on the western and eastern side of the rail line respectively.

There are a number of public and social infrastructure facilities in the area including parks, churches and other community facilities.

Land immediately adjoining the town centre core consists predominately of medium density residential uses including three to four storey apartment buildings. The remaining portion of the Epping town centre study area consists of mostly low density detached buildings with consistent character and built form, in well established areas.

Further details of the identified locations of development sites for 5,000 additional dwellings in the study area by 2026 and a further 5,000 additional dwellings between 2026 and 2036 are shown in Appendix C and Appendix D. The proposed locations of the new dwellings are cross referenced to a fine grain system of new traffic network nodes, which are shown on the study area map in Figure 2.2, which are also cross referenced to the broader TFNSW system of 'TZ' travel zones for network traffic models in Figure 2.3.

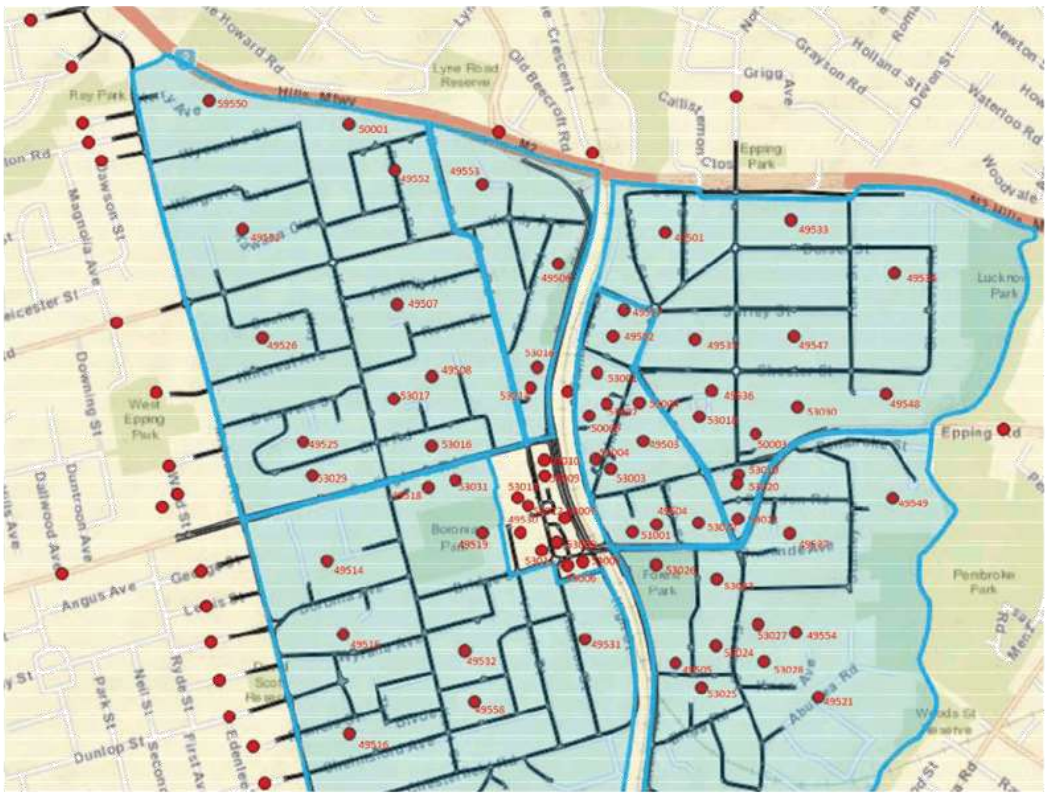
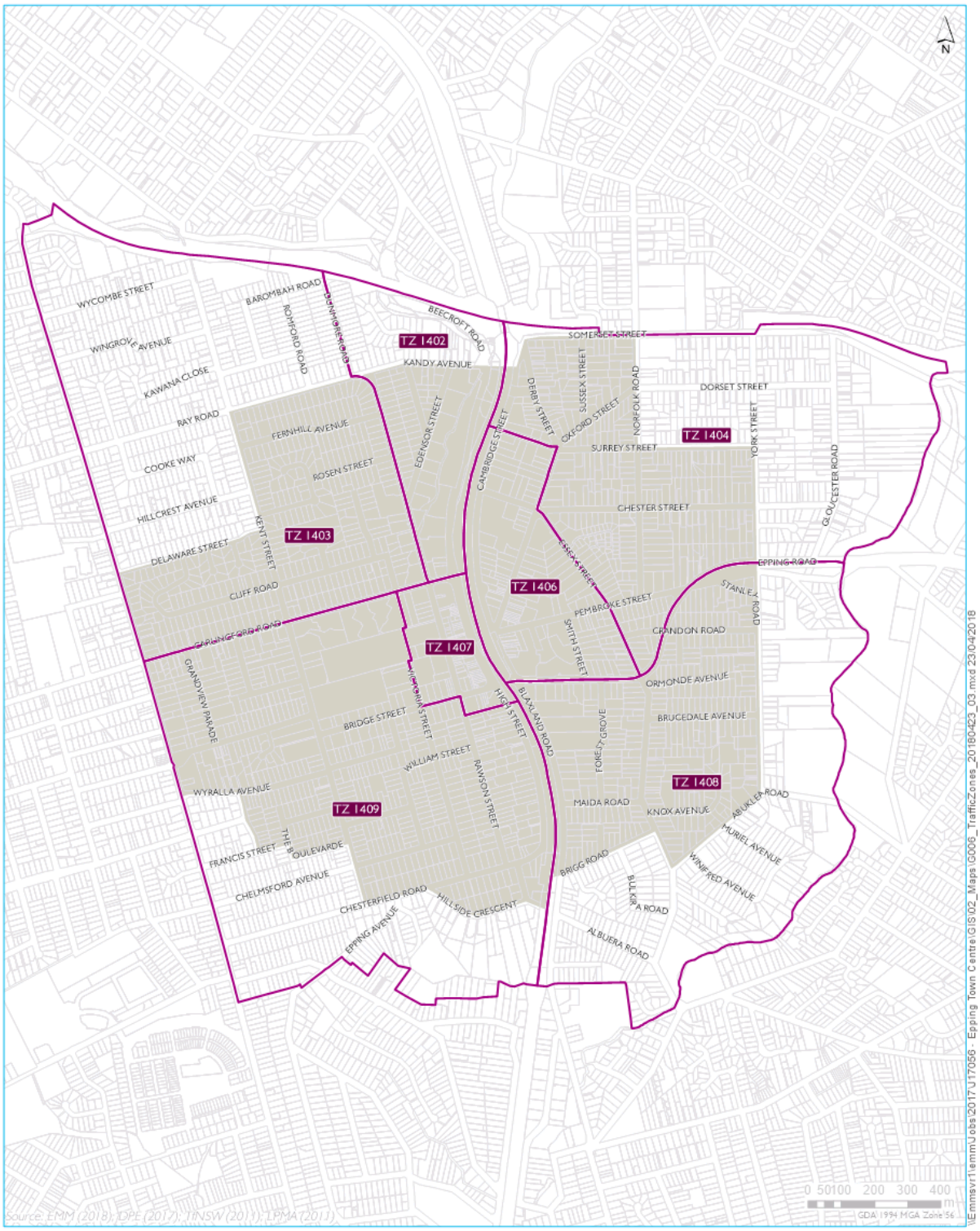


Figure 2.2 Fine grained network of nodes for new residential development at Epping



KEY

- BTS Travel zone
- Cadastre
- Epping precinct boundary

TfNSW land use traffic zones for the study area

Epping Town Centre traffic study

Figure 2.3

EMM

The future land use options which have developed by Parramatta City Council and EMM for assessment in this study are essentially neutral in terms of their future employment and commercial floorspace development scenarios within the Epping Town Centre and assume no change effectively from the current base year situation. However, it is anticipated that in due course additional town centre development scenarios will be assessed using the Epping Town centre traffic models which have been developed for this study, which will also include higher levels of commercial development (and employment) in the Epping Town Centre.

One of the additional future planning proposal sites which is shown on Figure 1.17, the Austino site, is located at 2-18 Epping Road, 2-4 Forest Grove Road and 725 Blaxland Road. An additional site specific assessment has also been undertaken for this site to determine the general future road network and intersection delay impacts from allowing additional residential development at this site, above that which is permitted under the current zonings. The preliminary results from this analysis are discussed and presented in Chapter 7 and Appendix M of this report.

2.3 Road network options

The future assumed base levels of road network improvements for the study area are as follows:

- the RMS committed program of main road improvements along the Epping Road to Carlingford Road and Beecroft Road route, through the Epping Town centre, which are linked with the "interim future baseline" year 2026 study area residential development scenario for +5,000 dwellings in the year 2026 network traffic model, and

- a further series of local road network improvements which have been identified by Parramatta City Council, which are assumed to be implemented in addition to the RMS committed program of main road improvements for the "longer term future baseline" year 2036 study area network traffic model with +10,000 dwellings.

A series of maps and other details describing the RMS committed and Council identified future road network improvements are provided in Appendix E and Appendix F of this report.

The Council identified future road network improvements include a total of twelve items of future roadworks, including the previous RMS proposal for one additional traffic lane westbound on the Epping Road bridge which crosses the railway line, which is no longer included in the current RMS committed program of roadworks for the Epping Town Centre (Appendix E) although the previous traffic studies which were undertaken by Halcrow and GTA in 2011 and 2015 both identified this bridge widening was required to accommodate future traffic growth estimates for approximately 3,000 additional dwellings within the Epping Town Centre locality.

In addition a further preliminary analysis of two further road network options has been undetaken:

- the reopening of the former M2 bus tunnel link to Epping Station as a one way westbound link with left turn egress only at Beecroft Road and

- a new East west road link connecting between Ray Road and Beecroft Road, through the NSW Government land which is on the western side of Beecroft Road

where the year 2026 and 2036 future traffic network models have determined the potential future traffic usage and road network traffic delay improvements elsewhere for locally based traffic accessing the major road network at Epping, when these additional road network connections are provided.

The preliminary network traffic analysis results for these additional road network options are presented and discussed in Chapter 7 and Appendix N and Appendix O of this report. The full future traffic analysis details including the SIDRA intersection modelling results for these two options will be reported in a further supplementary report to this report.

3 Assumptions

3.1 Strategic network development

The full details of the Epping Town centre traffic model and study area baseline road network assumptions have been provided in the two previous traffic model calibration reports which were prepared by EMM/Paul van den Bos for review by RMS in July 2017 and December 2017.

The assumed core road network travel speeds for each link in the road network are shown on the map in Figure 3.1, which confirms the maximum (uncongested) travel flow speeds for traffic travelling through and within the study area are effectively:

- 60 km/hr for the major road (Epping, Beecroft, Carlingford and Blaxland Roads);
- 50 km/hr for all local roads except for the roads where school zone speed limits apply; and
- 40 km/hr for the local roads, where school zone speed limits apply.

Figure 3.1 Map of base network travel speeds for each network link

The base year 2017 network traffic modelling assumptions for the combined EMME and Dynameq am and pm peak period and peak hourly traffic models were developed through extensive consultation with the traffic engineering and strategic planning officers at Parramatta City Council and the network traffic

modelling and development consultation specialists at RMS. RMS have generally endorsed the base year 2017 network model methodology and assumptions, although the final level of calibration of the detailed core area Dynameq traffic model results do not meet the full RMS microsimulation calibration standard for the core areas of network models, but they do meet the RMS calibration standard for the overall network area. This level of calibration accuracy is considered by the Parramatta City Council planning officers to be adequate for the purposes of the Epping Town Centre study which is primarily a strategic level transport planning study which examines the future road network and traffic capacity implications for the study area from developing either 5,000, 10,000 or possibly an even greater number of additional dwellings over a 10 to 20 year future time horizon.

In this study, the 2017 morning and afternoon peak period vehicle following and queuing behaviour has been extensively investigated for the four major traffic routes approaching Epping using the Dynameq traffic queuing model as a "post processing" for the core unrestrained network travel demand which is calculated using the EMME model. This analysis has been continued using the Dynameq model for the core network travel demand analysis in the EMME model where the real time intersection traffic capacity constraints in the Dynameq model effectively limit the peak hourly volumes of traffic which are able to enter the network, so the core output from the Dynameq traffic model for the 2026 and 2036 future year scenarios is effectively the peak hourly volumes of traffic which are kept waiting and are effectively unable to enter the network.

For intersection analysis outputs for the base year 2017 am and pm peak one hour traffic models, the existing intersection performance and traffic delays at the six key traffic signal controlled intersections of the traffic network model "core area" has been assessed in detail using the SIDRA 7 Linked Intersection model, and this analysis has also been extended to the future year 2026 and 2036 am and pm peak one hour traffic network models. The future year SIDRA 7 Linked intersection model layout for the assessed linked intersections (including the future year road network options assessed) is shown in Figure 3.2 and Figure 3.3 for the future road networks in 2026 and 2036.

The unrestrained network travel demand which is determined by the EMME model for the one hour am and pm peak periods provides the inputs to the SIDRA 7 Linked intersection model to assess the regional traffic growth in 2026 and 2036 in combination with the additional development traffic at Epping.

The EMME model traffic volume outputs for all the linked intersections along the major traffic route, is fed directly into the SIDRA 7 linked intersection model, and the SIDRA model responds by applying upstream capacity constraints at each assessed intersection, whereby the peak hourly traffic which is travelling through both intersections is limited according to the actual capacity constraints at the relevant upstream intersections.

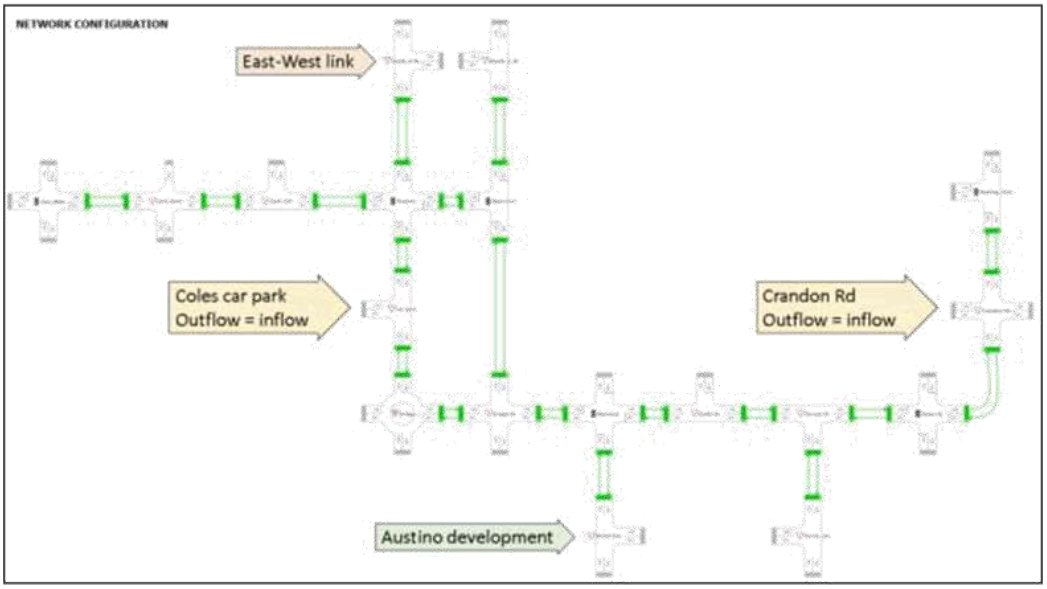


Figure 3.2 Future SIDRA linked intersections assessed in 2026 network model

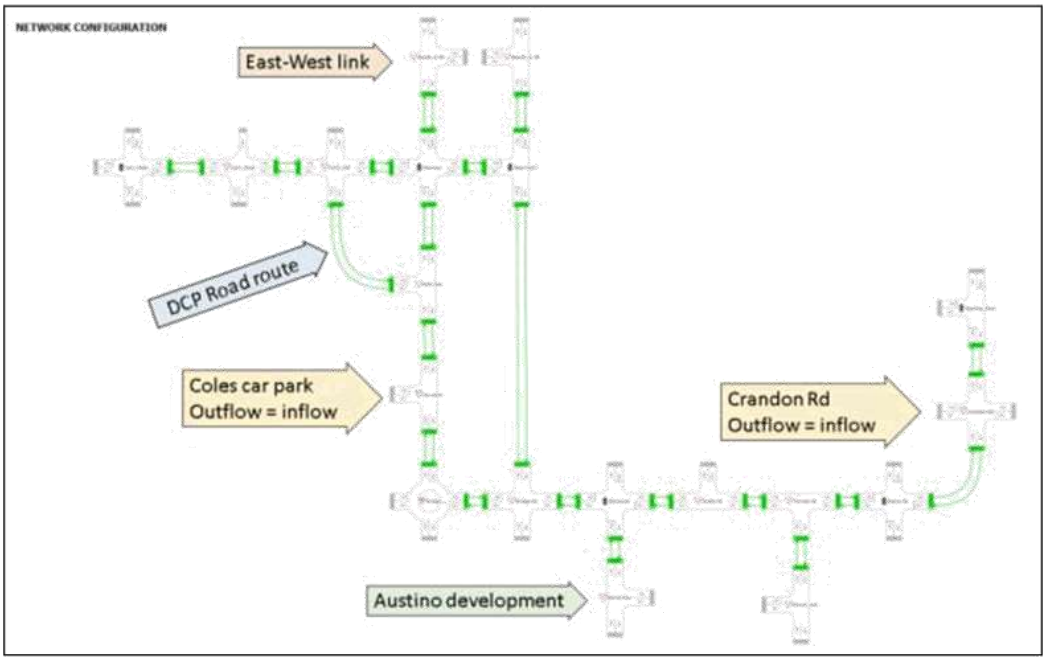


Figure 3.3 Future SIDRA linked intersections assessed in 2036 network model

4 Future year demand

4.1 Dwellings growth

The future dwelling growth scenarios which have been used to develop the future road network traffic demand scenarios for this study have been determined by future land capability analysis by EMM and Parramatta City Council strategic planners and are as follows:

- the future development of approximately 5,000 net additional dwellings from new residential development within the Epping study area, with all the currently approved additional dwellings completed and occupied by the year 2026
- the future development of approximately 10,000 net additional dwellings from new residential development within the Epping study area, with all the additional dwellings completed and occupied by the year 2036

As at 19 April 2018, a total of over 5,500 new dwellings have either been fully approved by Parramatta City Council or the former Hornsby Council (3,940 dwellings) or are in various stages of assessment (1,613 dwellings), since the Epping Town centre land use zoning changes in 2014. The two development scenarios of 5,000 and 10,000 additional dwellings in this study represent effectively the limits of the likely range of realistic minimum and future maximum residential development scenarios for the study area, in the absence of any further zoning changes through planning proposals, which would further increases the maximum residential development yield beyond 10,000 additional dwellings.

4.2 Traffic generation and distribution

For the additional development traffic, the methodology which has been used to calculate traffic generation is based on the distance between a development and the train station. Four concentric zones (see Figure 4.1) were defined based on the distance to the train station, with each zone assigned traffic generation rates corresponding to distances of either (0 - 200, 200 – 400, 400 - 800 or over 800 m to the train station).

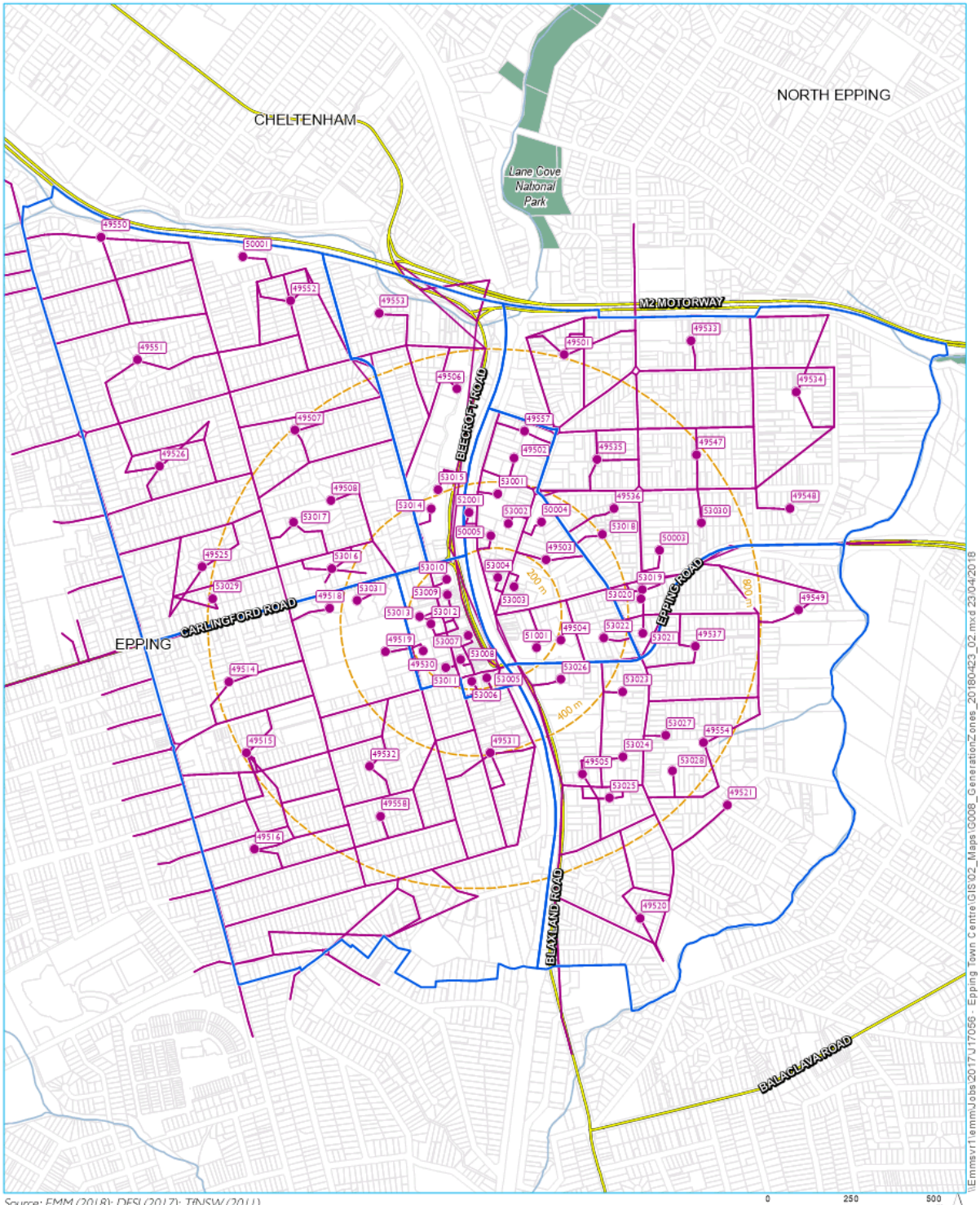
The future residential traffic generation rates for zone 1 residential development, within 200 m from the railway station, correspond to the lowest, most recent RMS (year 2013) traffic generation rates for higher density residential development, which are as summarised below:

- Morning peak traffic generation: 0.19 vehicles per hour per dwelling; and
- Afternoon peak traffic generation: 0.15 vehicles per hour per dwelling.

The future residential traffic generation rates for zone 2 residential development, between 200 to 400 m from the railway station, correspond to the earlier, RTA/RMS (year 2002) general traffic generation rates for higher density residential development in metropolitan centres, which are:

- Morning and afternoon peak traffic generation: 0.23 vehicles per hour per dwelling;

The future residential traffic generation rates for zone 3 residential development, between 400 to 800 m from the railway station also correspond to the earlier, RTA/RMS (year 2002) traffic generation rates for higher density residential development in metropolitan “sub-regional” centres, which are:



Source: EMM (2018); DFSI (2017); TfNSW (2011)

0 250 500 m
GDA 1994 MGA Zone 56

KEY

- Travel zone
- Access buffers
- Node / zone
- Emme links
- Main road
- Watercourse / drainage line
- Cadastral boundary
- NPWS reserve

Traffic generation zones

Epping Town Centre traffic study

Figure 4.1

EMM

- Morning and afternoon peak traffic generation: 0.29 vehicles per hour per dwelling;

The future residential traffic generation rates for zone 4 residential development, over 800 m from the railway station, correspond to the earlier RTA/RMS (year 2002) traffic generation rates for medium density residential development, for which the mid point of the likely range is:

- Morning and afternoon peak traffic generation: 0.48 vehicles per hour per dwelling;

4.3 Increased travel demand

The unrestrained growth in the future road network travel demand has been determined using the EMME model for the additional traffic volumes generated by additional residential development, combined with the regional traffic growth (excluding any component which related to the previously assumed Epping Town Centre growth) which was already incorporated in the year 2026 and 2036 versions of the EMME base model.

The overall study area road network plots for the current (year 2017) and the future year 2026 and 2036 baseline (with assumed growth of 5,000 and 10,000 dwellings respectively) are provided in Appendix G, Appendix H and Appendix I of this report. The hourly traffic volumes on each link of the road network are adjusted by + or - up to 50 vehicles, to round to the nearest 100 hourly vehicles, which is an appropriate level of summarisation for network level traffic volume plots of this nature.

A summary of the consequent predicted future growth in the morning and afternoon peak hour traffic volumes on the respective north-south and east-west major road traffic routes through Epping is presented in Table 4.1 and Table 4.2.

Table 4.1 Comparison of future growth in the morning peak hourly traffic volumes 8-9 am

Road	Direction	2017 am peak	2026 am peak	Growth % (from 2017)	2036 am peak	Growth % (from 2017)
Beecroft Rd	Southbound	1,800	2,900	61%	3,000	67%
N/Carlingford Rd	Northbound	900	1,400	56%	1,700	89%
	Combined	**2,700**	**4,300**	**60%**	**4,700**	**74%**
Blaxland Rd	Southbound	900	1,900	111%	2,200	144%
	Northbound	600	1,100	83%	1,100	83%
	Combined	**1,500**	**3,000**	**100%**	**3,300**	**120%**
Carlingford Rd	Eastbound	1,400	1,800	29%	2,100	50%
W/Kent Rd	Westbound	900	1,300	44%	1,500	67%
	Combined	**2,300**	**3,100**	**35%**	**3,600**	**57%**
Epping Rd	Eastbound	2,200	2,300	5%	2,400	9%
E/Blaxland Rd	Westbound	800	1,300	63%	1,600	100%
	Combined	**3,000**	**3,600**	**20%**	**4,000**	**33%**
Epping Rd	Eastbound	2,900	4,000	38%	4,400	52%
at Terrys Creek	Westbound	900	1,000	11%	1,200	33%
	Combined	**3,800**	**5,000**	**32%**	**5,600**	**47%**

The future traffic growth rates from the study EMME network traffic model, which include both through traffic growth and locally based development traffic growth are generally greater on the north-south

traffic routes (via Beecroft Road and Blaxland Road) compared to the east west traffic routes (via Carlingford Road and Epping Road).

Table 4.2 Comparison of future growth in the afternoon peak hour traffic volumes 5-6 pm

Road	Direction	2017 pm peak	2026 pm peak	Growth % (from 2017)	2036 pm peak	Growth % (from 2017)
Beecroft Rd	Southbound	900	1,000	11%	1,900	111%
N/Carlingford Rd	Northbound	1,100	2,100	91%	2,200	100%
	Combined	**2,000**	**3,100**	**55%**	**4,100**	**105%**
Blaxland Rd	Southbound	300	1,400	366%	1,600	433%
S/Epping Rd	Northbound	500	1,600	220%	1,700	240%
	Combined	**800**	**3,000**	**275%**	**3,300**	**313%**
Carlingford Rd	Eastbound	700	1,500	114%	1,700	142%
W/Kent Rd	Westbound	1,100	1,700	55%	1,900	73%
	Combined	**1,800**	**3,200**	**78%**	**3,600**	**100%**
Epping Rd	Eastbound	1,000	1,000	0%	1,300	30%
E/Blaxland Rd	Westbound	1,500	2,700	80%	3,200	113%
	Combined	**2,500**	**3,700**	**48%**	**4,500**	**80%**
Epping Rd	Eastbound	1,100	1,400	27%	1,700	55%
at Terrys Creek	Westbound	1,300	2,600	100%	3,100	138%
	Combined	**2,400**	**4,000**	**67%**	**4,800**	**100%**

The overall averages of the range of future traffic volume growth rates from the range of locations considered are much higher for the north-south travel routes, which is probably because there are no direct motorway alternative routes for this travel demand, and the network base traffic volumes are lower (in particular for Blaxland Road) so the future proportional traffic increases are much greater. The predicted proportional traffic increases for the affected major road routes at Epping are:

- For the North-South travel routes
  - +55 to 60% for Beecroft Road in 2026, 74-105% in 2036
  - +100 to 275% for Blaxland Road in 2026, 120-313% in 2036
- For the East-West travel routes
  - +35 to 78% for Carlingford Road in 2026, 57-100% in 2036
  - + 20 to 67% for Epping Road in 2026, 33-100% in 2036

These traffic volume increases illustrate the extent of the additional traffic capacity which is required for the major road network at key intersections in the study area, if the road network is to adequately accommodate (in either 2026 or 2036) the extent of the likely peak hour traffic growth from the combination of the regional through traffic growth and traffic generated by new residential developments in the Epping study area, which includes both the town centre and surrounding residential precincts.

4.4 Vehicles waiting to enter the network

During the morning peak periods for the 2017, 2026 (+5,000 dwellings) and 2036 (+10,000 dwellings) full study area EMME network volumes, the Dynameq model has been used to examine the overall effect of the network capacity constraints at the key intersections, where for the predicted future traffic growth, when the on-road traffic queuing capacity becomes fully occupied, vehicle are kept waiting and unable to enter the traffic model network.

A series of additional Dynameq traffic model output charts and graphs from these model years is also included with the overall EMME one hour peak network travel demand plots in Appendix G, Appendix H and Appendix I of this report.

These additional vehicles waiting, which are unable to enter the Dynameq traffic model network show that the local significance of this factor at Epping does not generally affect the key network model output results for the key intersections in 2017, but does become progressively more significant in 2026 and becomes highly significant in 2036.

A summary of the Dynameq network model "vehicles waiting" plots in Appendix G, Appendix H and Appendix I of this report, is shown in Table 4.3, which illustrates the development of this limiting network capacity factor (which shows effectively the amount of traffic that is able to actually enter the study area Dynameq road network model in either 2017 or the future year 2026 and 2036 networks.

Table 4.3 Summary of key Dynameq traffic model outputs for future year networks

Network Model Year and analysis period	Peak quarter hourly demand for traffic entering the network	Peak quarter hourly vehicles waiting to enter the network	Effect of vehicles waiting on the study area intersection traffic flow results
2017 am peak	2,836 vehicles	7 vehicles	Not significant
2026 am peak	3,320 vehicles	109 vehicles	Marginally significant
2036 am peak	3,442 vehicles	3,273 vehicles	Highly significant

The geographic distribution is also shown in Appendix I for the progressive development of the additional vehicles queued awaiting access to the road network (as defined by the study area road network boundary shown in Figure 2.2) at 7.30, 8.00, 8.15, 8.30 and 8.45 am during the future weekday morning peak hour 2036 analysis. This show the progressive development over the full morning peak period and the range of locations at which additional traffic is not actually able to enter the Dynameq model network. At the peak waiting time, which is 8.45 am, the main locations of the additional waiting vehicles are at:

- Beecroft Road, north, 1014 vehicles
- Carlingford Road, west, 719 vehicles
- Cliff Road. 165 vehicles
- Essex Street, north, 144 vehicles
- Midson Road, north, 132 vehicles, and
- Essex Street, south, 116 vehicles

5 Base network model operational results

5.1 Intersection performance

The performances of the intersections with traffic signals in the immediate vicinity of the site were analysed using a SIDRA-linked intersection model. To the west of the railway line, these included:

- Carlingford Road/Midson Road;
- Carlingford Road/Rawson Street; and
- Carlingford Road/Beecroft Road.

To the east of the railway line, the assessed intersections included:

- Epping Road/Blaxland Road;
- Epping Road/Essex Street; and
- Epping Road/Pembroke Street.

The RMS SIDRA intersection level of service (LoS) vs. delay standards for traffic signal controlled intersections which are specified in the RTA-RMS Guide to Traffic Generating Developments (RTA 2002) are summarised below. In addition to LoS, the existing operation of the intersection is also described in terms of the following factors:

- Degree of Saturation (DoS) which is the ratio of the traffic volume to the capacity of the intersection;
- the Average Vehicle Delay (AVD) in seconds per vehicle for all traffic movements at the intersection; and
- the length of the maximum traffic queue (95th percentile traffic queue) for any traffic movement at the intersection.

Table 5.1 RMS SIDRA intersection level of service and delay standards

Description	LoS (RMS definition)	Average Vehicle Delay (s)
Very Good	A	<14.5
Good	B	14.5 to ≤28.5
Satisfactory	C	28.5 to ≤42.5
Near Capacity	D	42.5 to ≤56.5
At Capacity	E	56.5 to ≤70.5
Over Capacity	F	≥70.5(1)

In discussions with the Council staff, it has been decided (for the purposes of this study only) that the absolute maximum acceptable intersection delays for under level of service F for the future traffic conditions at any Epping Town Centre intersection should be defined as two complete cycles of the peak hour traffic signals (300 seconds). This is effectively an average 5 minute waiting time at traffic signals.

With this in mind, the peak hour intersection analysis for the 2017 base traffic scenario (for both the modelled case and the actual surveyed case) is presented in Table 5.2 and Table 5.3 with the unacceptable intersection delays which exceed the maximum study intersection delay of 300 seconds, highlighted in yellow:

Table 5.2 Base year 2017 AM intersection performance (surveyed/modelled)

Intersection	Vehicle demand (Veh per Hr) (Survey/Model)	Vehicle throughput (Veh per Hr) (Survey/Model)	Level of Service (Survey/Model)	Average Delay (Seconds) (Survey/Model)	Degree of Saturation (Survey/Model)	Queue length (metres) (Survey/Model)
Carlingford Road / Midson Road	3,251 / 2,787	3,229 / 2,713	F / D	87.3 / 46.0	1.003 / 0.874	301 / 114
Carlingford Road / Rawson Street	2,639 / 2,693	2,617 / 2,623	F / F	304.4 / 210.6	5.771 / 2.401	405 / 223
Carlingford Road / Beecroft Road	4,505 / 4,531	4,334 / 4,402	F / F	153.8 / 255.1	1.244 / 1.540	816 / 816
Epping Road / Blaxland Road	4,545 / 4,601	4,155 / 4,309	C / E	31.1 / 59.3	0.882 / 1.014	132 / 312
Epping Road / Essex Street	3,243 / 3,195	2,972 / 2,959	B / F	26.0 / 277.5	0.888 / 1.380	196 / 196
Epping Road / Pembroke Street	3,343 / 3,341	3,077 / 2,968	F / F	99.5 / 85.3	2.057 / 1.788	492 / 450

Table 5.3 Base year 2017 PM intersection performance (surveyed/modelled)

Intersection	Vehicle demand (Veh per Hr) (Survey/Model)	Vehicle throughput (Veh per Hr) (Survey/Model)	Level of Service (Survey/Model)	Average Delay (Seconds) (Survey/Model)	Degree of Saturation (Survey/Model)	Queue length (metres) (Survey/Model)
Carlingford Road / Midson Road	2,906 / 3,115	2,798 / 3,110	D / E	51.1 / 63.2	0.905 / 0.891	191 / 258
Carlingford Road / Rawson Street	2,496 / 2,365	2,396 / 2,360	F / C	193.8 / 34.1	3.373 / 0.913	378 / 114
Carlingford Road / Beecroft Road	3,991 / 3823	3,830 / 3823	F / D	86.5 / 43.3	1.111 / 1.035	571 / 332
Epping Road / Blaxland Road	4,025 / 4,172	3,823 / 4,171	E / C	66.4 / 42.1	0.997 / 0.891	326 / 326
Epping Road / Essex Street	2,628 / 2,932	2,614 / 2,928	F / B	93.2 / 26.2	1.073 / 0.909	369 / 209
Epping Road / Pembroke Street	2,338 / 2,819	2,322 / 2,816	A / A	13.2 / 8.8	0.631 / 0.537	120 / 103

In Table 5.2, the intersection analysis for the base year 2017 morning peak hour shows some (though generally not significant) variance between the surveyed and the modelled network flows. Most of the intersections considered are over capacity (level of service F).

However, to consider intersections with average delays of up to 300 seconds as acceptable (in the context of this study) only the Rawson Street intersection (as surveyed) exceeds the 300 second average delay threshold. The overall major road network at Epping in 2017 is nevertheless largely at or over capacity for the morning peak hour, which indicates there is very little spare capacity for additional vehicles on the current road network.

In Table 5.3, the intersection analysis for the base year 2017 afternoon peak hour shows some variance between the surveyed and the modelled network flows. Generally, modelled flows are less congested than surveyed flows. Many of the intersections considered (as surveyed) are over capacity (level of service F). In particular, the Rawson Street intersection has an average delay of 193.8 seconds (as surveyed).

However, as the Council study steering group has indicated that it is prepared to consider intersections with average delays of up to 300 seconds as acceptable, when taking this into account, all intersections for the afternoon peak hour have currently acceptable operations.

Overall the major road network at Epping in 2017 also has very little spare capacity for additional vehicles during the afternoon peak hour.

6 Future base year network operational results

6.1 Future base year 2026 network model results

The peak hour intersection analysis for the 2026 future baseline traffic scenario, with the additional traffic growth from 5,000 new dwellings at Epping is presented below In Table 6.1 and Table 6.2:

Table 6.1 Future base year 2026 AM intersection performance

Intersection	Vehicle demand (Veh/Hr)	Vehicle throughput (Veh/Hr)	Level of Service	Average Delay (Seconds)	Degree of Saturation	Queue length (metres)
Carlingford Road / Midson Road	5,305	4,461	F	488.1	1.577	2,119
Carlingford Road / Rawson Street	5,271	3,366	F	1,197.8	13.456	245
Carlingford Road / Beecroft Road	8,342	6,622	F	4,218.7	14.709	816
Epping Road / Blaxland Road	8,116	5,024	F	273.6	1.508	382
Epping Road / Essex Street	5,056	3,104	F	285.5	1.376	897
Epping Road / Pembroke Street	5,289	3,014	F	328.5	2.164	933

Table 6.2 Future base year 2026 PM intersection performance

Intersection	Vehicle demand (Veh/Hr)	Vehicle throughput (Veh/Hr)	Level of Service	Average Delay (Seconds)	Degree of Saturation	Queue length (metres)
Carlingford Road / Midson Road	4,838	3,973	F	234.7	1.232	818
Carlingford Road / Rawson Street	4,369	2,985	F	508.7	3.614	245
Carlingford Road / Beecroft Road	7,301	5,006	F	1,413.2	4.906	816
Epping Road / Blaxland Road	7,437	5,727	F	609.1	2.063	326
Epping Road / Essex Street	4,296	3,132	F	181.7	1.213	505.6
Epping Road / Pembroke Street	4,300	4,055	F	368.7	1.543	2249.8

The intersection analysis of the future base year 2026 scenario for the morning peak hour shows a low level of network performance at all considered intersections. All intersections are over capacity (level of service F). However, the Council has indicated that it is prepared to consider intersections with average delays of up to 300 seconds as acceptable.

Even so, the Midson Road, Rawson Street, Beecroft Road and Pembroke Street intersections all have average delays over this threshold. Most notably, the Beecroft Road intersection has an average delay of 4,219 seconds (or 70.5 minutes).

It should also be noted that the vehicle demand for the intersections considered is consistently higher than actual vehicle throughput – which suggests that there are a number of vehicles that cannot even pass through the network. Overall, the morning performance of the network for the base 2026 scenario is such that it is unlikely that there will be any spare capacity for additional vehicles.

The intersection analysis of the future base year 2026 scenario for the afternoon peak hour shows a similarly low level of network performance at all considered intersections. All intersections are over capacity (level of service F). The Rawson Street, Beecroft Road, Blaxland Road and Pembroke Street intersections all have average delays over 300 seconds.

Again, the Beecroft Road intersection has the highest average delay at 1,413 seconds (or 23.5 minutes) which is highly significant, though not as extreme as for the morning peak. Again, vehicle demand for the intersections considered is consistently higher than actual vehicle throughput. Overall, the afternoon performance of the network for the base 2026 scenario is such that it is unlikely that there will be any spare capacity for additional vehicles.

6.2 Future year 2036 network model results

The Future peak hour intersection analysis for the 2036 future development traffic scenario, for a total of 10,000 new dwellings at Epping is presented below In Table 6.3 and Table 6.4:

Table 6.3 Future base year 2036 AM intersection performance

Intersection	Vehicle demand (Veh/Hr)	Vehicle throughput (Veh/Hr)	Level of Service	Average Delay (Seconds)	Degree of Saturation	Queue length (metres)
Carlingford Road / Midson Road	5,941	4,963	F	1,046.9	2.530	3,064
Carlingford Road / Rawson Street	5,825	2,849	F	174.4	1.191	163
Carlingford Road / Beecroft Road	9,340	6,671	F	4,643.5	15.202	816
Epping Road / Blaxland Road	9,178	5,153	F	291.6	1.527	515
Epping Road / Essex Street	5,747	3,398	F	459.7	1.524	1,228
Epping Road / Pembroke Street	5,898	3,202	F	206.1	1.640	843

The intersection analysis of the future base year 2036 scenario for the morning peak hour shows a low level of network performance at all considered intersections. All intersections are over capacity (level of service F). As mentioned in Section 6.1, the Council has indicated that it is prepared to consider intersections with average delays of up to 300 seconds as acceptable. Even so, the Beecroft Road and Essex Street intersections both have average delays over this threshold.

Most notably, the Beecroft Road intersection has an average delay of 4,644 seconds (or 77 minutes). It should also be noted that the vehicle demand for the intersections considered is consistently higher than actual vehicle throughput – which suggests that there are a number of vehicles that cannot even pass through the network.

Overall, the morning performance of the network for the base 2036 scenario is such that it is unlikely that there will be any spare capacity for additional vehicles. While, broadly, average delays are predicted to improve by 2036 from the 2026 base scenario as a result of the additional Council proposed road improvements which are anticipated to be implemented during this period, the most crucial intersection – Beecroft Road – actually experiences a higher average delay in 2036 than for the 2026 case.

Table 6.4 Future base year 2036 PM intersection performance

Intersection	Vehicle demand (Veh/Hr)	Vehicle throughput (Veh/Hr)	Level of Service	Average Delay (Seconds)	Degree of Saturation	Queue length (metres)
Carlingford Road / Midson Road	5,545	4,398	F	330.0	1.370	1,140
Carlingford Road / Rawson Street	4,834	2,500	C	37.7	0.730	163
Carlingford Road / Beecroft Road	8,322	5,185	F	627.3	2.706	816
Epping Road / Blaxland Road	8,645	5,923	F	602.3	2.061	365
Epping Road / Essex Street	5,176	3,505	F	261.5	1.355	767
Epping Road / Pembroke Street	5,076	4,711	F	525.6	1.799	2,994

The intersection analysis of the future base year 2036 scenario for the afternoon peak hour shows a similarly low level of network performance at all considered intersections. All intersections except Rawson Street are over capacity (level of service F). The Midson Road, Beecroft Road, Blaxland Road and Pembroke Street intersections all have average delays over 300 seconds. Again, the Beecroft Road intersection has the highest average delay at 627 seconds (or 10.5 minutes) which is a significant, though not as extreme delay, as for the morning peak.

Again, vehicle demand for all the intersections considered is consistently higher than the actual vehicle throughput. Overall, the afternoon performance of the network for the base 2036 scenario is such that it is unlikely that there will be any spare capacity for additional vehicles.

7 Future land use and network options examined

7.1 Introduction

This report has primarily only investigated the two future baseline development scenarios for the Epping town centre of +5,000 additional dwellings by the year 2026, and +10,000 additional dwellings by the year 2036.

Further road network investigations by EMM and Paul van Den Bos are ongoing for the additional potential residential development at the Austino site, which is described further in Section 7.2 below and the future road network benefits of two additional local road link connections options for the Epping town centre, which are described further in Sections 7.3 and 7.4 below.

7.2 Land use development scenario option 1: The Austino site

The proposed Austino residential development at 2-18 Epping Road, 2-4 Forest Grove and 725 Blaxland Road may have some impacts on the local road network. A preliminary future traffic network analysis for the site has been undertaken by EMM and was reported previously in a draft Austino Planning Proposal TIA review report which was prepared by EMM in February 2018. The February 2018 Austino site traffic analysis was based on a slightly lower future baseline year 2026 additional dwelling forecast for the Epping Town centre than the forecast which has been used for this report. However the general findings of the EMM TIA review analysis are still generally valid and are summarised here in this report.

The detailed year 2026 SIDRA intersection analysis results for the proposed Austino planning proposal development are included as Appendix M to this report and indicate that the most significant intersection performance deteriorations as a result of the additional potential dwellings for the Austino development would occur at the Epping Road/Essex Street and Epping Road/Blaxland Road intersections. This analysis which is now in the process of being updated by EMM for the latest study area dwellings forecast is presented below in Table 7.1:

Table 7.1 Summary of intersection performance changes due to the Austino proposal

Approach	2017 average delay (seconds) (am/pm)	2017 level of service (am/pm)	2026 base average delay (seconds) (am/pm)	2026 base level of service (am/pm)	2026 (with Austino) average delay (seconds) (am/pm)	2026 (with Austino) level of service (am/pm)
Epping Road/Essex Street intersection						
South approach left turn	66.6 / 91.6	E / F	64.3 / 74.6	E / F	60.3 / 74.6	E / F
South approach through	61.1 / 77.8	E / F	247.0 / 295.2	F / F	294.1 / 282.8	F / F
South approach right turn	66.8 / 82.1	E / F	71.9 / 155.4	F / F	68.2 / 206.6	E / F
East approach left turn	13.7 / 241.6	A / F	44.6 / 247.2	D / F	56.8 / 284.4	E / F
East approach through	8.2 / 236.3	A / F	41.6 / 247.7	C / F	54.9 / 284.9	D / F
East approach right turn	13.7 / 242.0	A / F	Movement removed	Movement removed	Movement removed	Movement removed
North approach left turn	49.0 / 62.7	D / E	37.1 / 289.5	C / F	38.0 / 296.6	C / F
North approach through	53.5 / 57.1	D / E	31.9 / 284.1	C / F	32.5 / 291.1	C / F
North approach right turn	66.0 / 254.3	E / F	292.9 / 297.3	F / F	300.1 / 320.6	F / F

Table 7.1 Summary of intersection performance changes due to the Austino proposal

Approach	2017 average delay (seconds) (am/pm)	2017 level of service (am/pm)	2026 base average delay (seconds) (am/pm)	2026 base level of service (am/pm)	2026 (with Austino) average delay (seconds) (am/pm)	2026 (with Austino) level of service (am/pm)
West approach left turn	23.0 / 22.1	B / B	30.9 / 11.2	C / A	35.2 / 11.2	C / A
West approach through	17.6 / 20.5	B / B	165.3 / 6.5	F / A	190.8 / 6.5	F / A
West approach right turn	23.3 / 33.5	B / C	Movement removed	Movement removed	Movement removed	Movement removed
Epping Road/Blaxland Road intersection						
South approach left turn	17.3 / 74.6	B / F	72.6 / 1060.2	F / F	77.1 / 1118.7	F / F
South approach through	53.8 / 73.6	D / F	695.3 / 1191.6	F / F	701.4 / 1233.9	F / F
East approach left turn	48.8 / 72.8	D / F	38.1 / 35.4	C / C	38.1 / 35.4	C / C
East approach through	43.3 / 67.0	D / E	773.5 / 1325.2	F / F	813.2 / 1313.2	F / F
North approach left turn	58.4 / 98.0	E / F	64.9 / 68.6	E / E	64.4 / 67.5	E / E
North approach through	52.9 / 92.5	D / F	746.8 / 1182.4	F / F	772.0 / 1106.4	F / F
North approach right turn	58.6 / 98.1	E / F	Movement removed	Movement removed	Movement removed	Movement removed
West approach left turn	5.6 / 4.9	A / A	5.6 / 6.2	A / A	5.5 / 6.2	A / A
West approach through	27.3 / 8.6	B / A	13.6 / 11.3	A / A	12.9 / 11.6	A / A
West approach right turn	44.8 / 39.8	D / C	798.4 / 1269.6	F / F	791.8 / 1277.1	F / F

As was concluded by the EMM Austino site planning proposal TIA review report of February 2018, and is further illustrated by the results in Table 7.1, the actual additional intersection performance deterioration due to the Austino development with the planning proposal zoning changes, is relatively small.

However, the significant intersection performance deterioration from the 2017 base to the 2026 future base traffic situation renders any further traffic generating development in this location unacceptable without further capacity improvements to the locality major road and local road network capacity, in particular at the Epping Road/Blaxland Road intersection, and to a lesser extent at the Epping Road/Essex Street intersection.

7.3 Network development scenario option 2: Reopening the bus tunnel link

Further locality major road and local network investigations by EMM and Paul van Den Bos are ongoing for the potential additional local road link connection for the Epping town centre, which could be provided by reopening the former bus tunnel connection which crosses under the railway line to the north of Epping Station, for one way westbound use, primarily by local traffic, with a left turn only movement permitted for the traffic egress at Beecroft Road.

The future road network 2026 and 2036 am and pm peak hour vehicle "difference plots" are shown in Appendix N for the future road networks in 2026 and 2036, either with or without this additional road network connection. The future predicted morning and afternoon traffic volumes which would be using the future bus tunnel (westbound traffic only) would be.

- 151 vehicles per hour during the 2026 am peak hour;

- 121 vehicles per hour during the 2026 pm peak hour
- 234 vehicles per hour during the 2036 am peak hour
- 192 vehicles per hour during the 2036 pm peak hour

These peak hourly traffic volumes of primarily locally based traffic using the former bus tunnel connection, would result in equivalent peak hourly traffic reductions for the southbound right turning traffic at the Epping Road/Essex Street intersection and the westbound through traffic movement at the Epping Road/Blaxland Road/Langston Place intersection, which would probably have significant network traffic benefits in terms of reducing the future peak hourly intersection traffic delays at these intersections.

The full future year 2026 and 2036 SIDRA intersection analysis has not yet been undertaken for these traffic changes so it is not possible to confirm the exact extent of the future traffic benefits from the additional local traffic connection at Epping via the former bus tunnel. However this analysis is due to be completed soon to confirm this benefit.

7.4 Network development scenario option 3: New Ray Road to Beecroft Road link

This future road network connection is different in principle to the potential former bus tunnel local traffic connection at Epping, which was examined in Section 7.3, in that it is already included in the assumed future 2036 Council recommended road improvements for the Epping Town Centre, which are listed in detail in Appendix F.

The future road network 2026 and 2036 am and pm peak hour vehicle "difference plots" for the road network with and without this east-west link are shown in Appendix O. The future predicted morning and afternoon traffic volumes which would be using the future east-west link road connection are:

- 246 vehicles per hour during the 2026 am peak hour;
- 229 vehicles per hour during the 2026 pm peak hour
- 143 vehicles per hour during the 2036 am peak hour
- 139 vehicles per hour during the 2036 pm peak hour

These peak hourly traffic volumes of primarily locally based traffic using the proposed east-west link would result in equivalent peak hourly traffic reductions for the other traffic movements using either the Carlingford Road/Beecroft Road or Carlingford Road/Ray Road/Rawson Street intersections, which could have significant network traffic benefits in terms of reducing the future peak hourly intersection traffic delays at these intersections.

The full future year 2026 and 2036 SIDRA intersection analysis has not yet been undertaken for these traffic changes so it is not possible to confirm the exact extent of the future traffic benefits from the additional east west local traffic connection between Ray Road and Rawson Street at Epping. This further analysis is due to be completed soon and will be presented in an additional supplementary report by EMM for more formally assessing the future benefit of these road proposals.

8 Operational assessment comparison

8.1 Future land use options

This report has primarily only investigated the two future baseline development scenarios for the Epping town centre of +5,000 additional dwellings by the year 2026, and +10,000 additional dwellings by the year 2036.

The future intersection delay results from these traffic scenarios show significant and generally unacceptable traffic delays at the key intersections on the major traffic routes through the Epping town centre for east-west and north-south through traffic movements and also for the additional locally generated traffic which will be trying to gain access to the major road network at Epping in these future years.

Further road network investigations of additional road link options for the Epping town centre as identified in Chapter 7, have identified some further potential for additional local road network improvements to improve the future accessibility to the major road network for local traffic. However, until these further investigations are completed, further land rezoning on the key sites within and adjoining the Epping town centre should not be approved until adequate future road network capacity can be identified to accommodate the additional generated traffic demand from these sites.

8.2 Future road network operations

The two primary capacity controlling intersections in the Epping town centre are and will generally remain, the Carlingford Road/Beecroft Road and Epping Road/Blaxland Road intersections. The future operations for these two intersections are summarised below, based on the study SIDRA analysis results which are presented in Chapter 6:

Table 8.1 Summary of two key intersections and their future operations

Intersection	Vehicle demand (Veh/Hr) (am/pm)	Vehicle throughput (Veh/Hr) (am/pm)	Level of Service (am/pm)	Average Delay (Seconds) (am/pm)	Degree of Saturation (am/pm)	Queue length (metres) (am/pm)
Base year 2026						
Carlingford Road / Beecroft Road	8,342 / 7,301	6,622 / 5,006	F / F	4,218.7 / 1,413.2	14.709 / 4.906	816 / 816
Epping Road / Blaxland Road	8,116 / 7,437	5,024 / 5,727	F / F	273.6 / 609.1	1.508 / 2.063	382 / 326
Base year 2036						
Carlingford Road / Beecroft Road	9,340 / 8,322	6,671 / 5,185	F / F	4,643.5 / 627.3	15.202 / 2.706	816 / 816
Epping Road / Blaxland Road	9,178 / 8,645	5,153 / 5,923	F / F	291.6 / 602.3	1.527 / 2.061	515 / 365

As is shown above in Table 8.1, there are some improvements in the average delays in the intersections considered from 2026 to 2036, in particular during the afternoon peak hour at the Carlingford Road/Beecroft Road intersection. These improvements may be attributed to the proposed construction of the east-west link between Ray Road and Beecroft Road and the additional DCP Link Road connection to Carlingford Road on the south side opposite Cliff Road.

However, there is still a large amount of network performance deterioration overall, especially during the morning peak hour. This is primarily due to the fact that the proposed network upgrades will only alleviate local traffic issues, while inter-regional traffic will continue to put pressure on these intersections.

The reopening of the bus tunnel (for westbound traffic only) is not included in the above analysis results and this may lead to some small but significant improvements in future network traffic delays, although primarily only at the Epping Road/Blaxland Road and Epping Road/Essex Street intersections.

9 Conclusion

9.1 Future road network implications for future baseline development

This analysis of the existing (year 2017) traffic situation and two proposed future year residential development scenarios (in 2026 and 2036) for the Epping Town Centre has identified significant levels of predicted future traffic growth that will have significant implications for the future levels of traffic congestion and delays on the major road network, even after considering the currently identified program of road improvements (by both RMS and Parramatta City Council) that have been identified by previous studies to provide additional road traffic capacity to meet the needs of forecast residential development in the Epping area.

The future year 2026 and 2036 land use options which have been assessed by this study are essentially neutral in terms of their employment and commercial floorspace development projections for the Epping Town Centre and assume no change from the current base year situation. However, it is anticipated that in due course additional town centre development scenarios will be further analysed using the Epping Town centre Dynameq and SIDRA traffic models which have been developed for this study, to also assess the future generated traffic impacts of higher levels of commercial development (and employment) in Epping.

The analysis of the key major road intersection delays (assuming the implementation of all the identified RMS and Council road improvements) has been undertaken SIDRA 7 intersection model which models the co-ordinated operation of a chain of linked intersections, for four existing and future traffic network model and land use scenarios, which are:

- The existing actual peak hour intersection traffic volumes which were surveyed in March 2017;
- The modelled base case 2017 intersection traffic volumes from the EMME model;
- The modelled +5,000 dwellings growth scenario intersection traffic volumes from 2026, and
- The modelled +10,000 dwellings growth scenario intersection traffic volumes from 2036,

The key findings of the preliminary Dynameq and detailed SIDRA traffic model investigations which have been undertaken for this study are:

- Three or four of the six key intersections on the four major traffic routes (via Beecroft Road, Blaxland Road, Carlingford Road and Epping Road) are all operating at over saturated (level of service F) traffic conditions with the March 2017 surveyed morning and afternoon peak hour traffic volumes. The increasing major road traffic congestion which is now occurring in the Epping Town Centre area, is adversely affecting both the regional through traffic movements and the delays for local traffic access to the major road network at Epping.
- In the future years of 2026 and 2036, when the increased through and local residential traffic growth is modelled, the future peak hour traffic conditions on the major road network will continue to worsen even when the full programs of the identified RMS and Council road improvements have been implemented. In the assessed future road networks, either five or six of the assessed six intersections will have future traffic conditions operating at oversaturated (level of service F) during both the morning and afternoon traffic peak periods.

- The provision of one additional lane westbound on the western side of Epping Bridge will primarily benefit the afternoon peak hour westbound regional traffic movements which are travelling through the Epping Town Centre. However, if the bridge were to operate with future tidal flow traffic conditions such as four lanes eastbound during the morning peak periods with two lanes westbound and three lanes in each direction during the afternoon peak periods, this future improvement could provide significant travel flow benefits during both these peak periods.

9.2 Future Epping area land use development implications

The potential traffic network implications of predicted residential growth in the Epping Town Centre have been reviewed by this report for two different levels of proposed development (either +5,000 or +10,000 additional dwellings) which effectively represent the likely minimum and future maximum residential development scenarios which are likely to occur within the Epping study area:

- This future traffic analysis updates the work of the previous Epping Town Centre Transport Studies by Halcrow and GTA (Halcrow Pacific Pty Ltd, 2011 and GTA Consultants, reviewed by AECOM, 2015) which previously identified short term road infrastructure treatments to accommodate Town Centre growth scenarios of up to 3,750 additional dwelling units.

- More recent land capability analysis undertaken by City of Parramatta Council informing this traffic study has identified the actual future development potential under the new zoning controls is likely to be in the order of 10,000 additional dwellings. As a result the identified future roadworks programs which have been determined by both the Halcrow and GTA studies for up to 3,750 additional dwellings, are now inadequate and have been reviewed by both Parramatta City Council and RMS.

- However the network traffic analysis which has been undertaken for this report has identified that even with all the RMS committed and Council proposed road improvements the future 2036 road network would be inadequate to accommodate the full future predicted traffic demand from approximately 10,000 additional dwellings in the Epping Town Centre and adjoining areas.

References

Epping Town Centre Transport Study Outcomes Report Halcrow Pacific Pty Ltd 2011

Greater Sydney Commission, Draft Central City District Plan, March 2018

JBA Planning 2011, *Epping Town Centre Study*. Report prepared by JBA Urban Planning Consultants Pty Ltd

Proposed Epping Town Centre Redevelopment, Rawson Street Epping, Traffic Study by GTA, reviewed by AECOM, November 2015