

Author name: Name suppressed

Date of submission: Wednesday, 18 June 2025

Your submission for this review:

Good afternoon Bronwen, See attached our letter submission that responds to IPART's Draft Report which assesses The Hills Shire Council's current amendments to CP15. Kind Regards



18 June 2025

Our Ref: 695-22

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RE: Draft Report – Assessment of The Hills Shire Council Contributions Plan No 15 - Box Hill Precinct – April 2025

Dear Bronwen,

Thank you for the opportunity to comment on IPART's currently exhibited Draft Report assessing Council's proposed amendments to Contributions Plan No.15 (CP15) - Box Hill Precinct.

Colliers International Engineering and Design NSW (CED) has been commissioned by The Hills of Carmel Estate (comprising Mogul Stud Pty Ltd and Jundu Pty Ltd) to review IPART's assessment of CP15 amendments and make a submission on their behalf.

We understand that IPART has not made any recommendations to change the amendments to CP15 as proposed by Council and they are supportive of it given it meets all the Practice Note Criteria issued by the Department of Planning, Industry and Housing (DPHI).

Whilst we agree with the intent of updating the indexation in CP15, there are a number of issues concerning the proposed amendments to CP15 and its escalation of residential and non-residential contribution rates. We request that IPART change its current position on the amendments to CP15 and impose the following recommendations on The Hills Shire Council to reduce the developer contributions for the remaining development in Box Hill:

- A review of all capital work items in CP15 should occur to ensure they are not increased by a margin more than the ~5.4% escalation to CPI, as at least five items were identified as exceeding this (refer to **Section 4.1** for details);
- No further amendments to CP15 should occur without the implementation or confirmation of the preferred deficit funding recovery option/s endorsed by The Hills Shire Council (refer to **Section 4.2.5** for details);
- Accelerated Infrastructure Fund (AIF) grants received for specific CP15 items should be used to reduce / offset the value of those items;
- Disproportionate contribution rate increases between residential and non-residential development (based on the remaining undeveloped land in Box Hill) should be rectified;
- The value of infrastructure items in CP15 and the cost at which these same items were delivered under The Hill of Carmel's executed Voluntary Planning Agreement (VPA) should be reconciled; and
- A review of outdated traffic studies that informed CP15 should be undertaken with the intention of redesigning certain road upgrades and intersection treatments that are considered unnecessary and exorbitant.

Details of our concerns are as follows.

1. CONTEXT

1.1 Proposed Updates to CP15

The Hills Shire Council recently adopted amendments to CP15 in August 2024 that were endorsed by IPART in April 2024. The previous amendments to CP15 increased contribution rates for developers to address increased population projections within the Box Hill Precinct, updated land and capital costs, and to recover the deficit of Local Infrastructure Growth Scheme (LIGS) funds not received by Council from the State Government.

The now adopted changes to CP15 saw the contribution rate rise from approximately \$48,000/lot and \$108/sqm of non-residential GFA in 2020 to \$69,676/lot and \$169/sqm of non-residential GFA in August 2024.

It should be noted that CED NSW issued submissions to Council and IPART during the exhibition of the prior amendments to CP15.

However, despite the recent amendments to CP15 that were adopted, Council advised they still have an infrastructure funding deficit of \$182 million as of June 2023 (now \$207 million according to IPART). According to Council, this is the result of:

- Missed funds from the \$30,000/lot capped contribution rate that applied to development in Box Hill from 2013 to 2020 (refer to **Section 4.1** for details).
- The NSW Government failure to honour their LIGS funding to The Hills Shire Council that makes up the difference between the capped and actual contribution rate, valued at \$89 million.
- IPART did not approve the true value of capital costs for local infrastructure and reduced its cost to lower contribution rates for remaining developers.

The Hills Council considered options to resolve this funding deficit in their Ordinary Meeting held on the 10th of December 2024. These options included the following:

1. Introduce a Special Variation Rate (SRV) for rate payers in Box Hill, increasing the residential rate from \$1,100 to \$5,900 per year.
2. Introduce a SRV for rate payers in the entire Hills Shire Council LGA, increasing residential rates from \$1,233 to \$1,614 per year.
3. Borrow the \$182 million (now \$207 million in June 2024) externally, incurring \$7.1 million in interest per annum.
4. Borrow from other contributions plans to fund the shortfall.
5. Sell Council owned assets.
6. Continue to advocate that the NSW Government pays the \$89 Million it owes Council in missed LIGS funding as a result of capping infrastructure contributions.
7.
 - a. Determine infrastructure items in CP15 that can be delayed so funding can be rerouted to more essential items.
 - b. Seek State Government infrastructure grants as they arise (noting there are 20 grant applications from Council currently being considered).
8. Review CP15 on a frequent and continual basis to ensure the rate is as accurate as possible and avoid any further exacerbation of the funding shortfall.

As a result of this meeting, Council decided that the best course of action was to implement Options 6, 7a, 7b, and 8 concurrently to reduce the infrastructure funding deficit.

In this same meeting, Council also elected to begin implementing these options by proposing draft amendments to CP15 in December 2024 (i.e. executing Option 8). These draft amendments were on exhibition until the 5 February 2025.

1.2 Council's Response to our Submission

Council reviewed our prior submission to the current proposed changes to CP15 in their Ordinary Meeting on 25 March 2025. The meeting agenda prepared by Council provided responses to each of the five matters flagged as concerns in the amendments to CP15. A summary of our prior comments and Council's responses are provided in **Table 1** below.

Table 1: Summary of matters raised in relation to CP15 and Council's response

CED Comments on CP15 Amendments	Council's Response
<p>1. Extent and Justification for Cost Increases</p> <p>Council stated that the increased value of infrastructure contributions in CP15 only relate to changes in CPI (increase of ~5.4%) and some expanded scope for land acquisitions to some items. However, CED noticed that the approved vs proposed value of some capital work items in CP15 have increased more than the CPI escalation; by a margin of 12.4% to 53.7%. These items primarily related to road and stormwater infrastructure works.</p> <p>These items are discussed in detail in Section 4.1.</p>	<p>Council provided explanations for most of the items flagged with capital cost increases. They state that the "cost increases can be attributed to the actual costs incurred in the acquisition of land associated with these items."</p> <p>Note the amended value of some CP15 items were reduced as they were errors in the figures Council produced.</p> <p>Refer to Section 4.1 for details.</p>
<p>2. Treatment of CP15 Funding Gap</p> <p>Council failed to apply for LIGS funding or to have an adopted IPART reviewed plan in place by the required timeframe.</p> <p>Additionally, AIF funding was not attributed towards reducing the value of infrastructure items in CP15.</p> <p>To solve this issue, it was suggested that:</p> <ul style="list-style-type: none"> AIF funding for infrastructure in Box Hill should be used to reduce the value of the relevant items (and contribution rates) in CP15. Council seek the owed LIGS funding and additional grant funding from the State Government; Delay the delivery of less essential infrastructure, such as sportsgrounds; and, if required Slightly increase rates across The Hills LGA to recuperate the funding deficit. 	<p>The current CP15 amendments does not seek to recover any of the identified funding shortfall under the plan.</p> <p>Council maintains that it is entirely unfounded and incorrect that they did not apply or meet the Department's deadline for LIGS funding.</p> <p>They allocate blame to the State Government as their amendments to CP15 (to make them eligible for LIGS funding) was approved in November 2019, however the cut-off date for LIGS Round 19-25 funding was set to September 2019.</p> <p>Additionally, AIF funding has been treated as "revenue" instead of reducing the value of CP15 items the funding was allocated towards. This treatment of funding is supposedly supported by IPART and the Minister.</p>
<p>3. Apportionment of Costs to Non-Residential Development</p> <p>The draft changes to CP15 disproportionately impact non-residential development given that most of this development has not yet been approved.</p>	<p>The proposed amendment to the non-residential rates simply reflects the revised costings and indexations for the infrastructure items within the Plan. Apportionment towards non-residential development has not changed.</p>
<p>4. Hills of Carmel VPA Items</p> <p>The value of CP15 items delivered under The Hills of Carmel VPA should reflect the values identified in the VPA.</p>	<p>Ultimately the value of items under CP15 and this VPA must align, to ensure that the value of offsets and reimbursements is accurate and will not result in a shortfall.</p> <p>However, the value of VPA items in CP15 have been indexed according to CPI.</p>
<p>5. Transport Items – Box Hill Business Park</p> <p>A Traffic Assessment was prepared by Ason Group in support of the submission. It found that road and intersections surrounding the Box Hill Business Park that are listed in CP15 are overdesigned, given the future development anticipated in this area will be less intensive than previously modelled by Council.</p> <p>The Assessment concluded that the design requirements for the roads and intersections surrounding the Box Hill Business Park should be reduced as a means of lowering infrastructure costs in CP15.</p>	<p>Council's previous review of CP15 determined that there is likely to be approximately 11,000 more jobs than originally anticipated in Box Hill.</p> <p>These additional jobs and associated traffic movements would therefore not be expected to reduce the current design requirements for traffic upgrades associated with the Business Park.</p>

IPART in their current draft report that reviews Council's amendments to CP15 accepts that the above comments satisfy our prior concerns raised. CED disagree with this conclusion, and responses to each matter are detailed in **Section 4** for IPART's consideration.

2. DEVELOPMENT SUMMARY

2.1 The Hills of Carmel Estate

The Hills of Carmel estate is the largest landholding in the Box Hill Precinct (the Precinct), generally bounded by Windsor Road, Boundary Road and Old Pitt Town Road. The Hills of Carmel Estate comprises Mogul Stud Pty Ltd, Jundu Pty Ltd and DH Box Hill Pty Ltd who are landowners and developers.

The Hills of Carmel has multiple land use zonings to provide low and medium density residential development, business park development, local parks and sporting fields, environmental conservation, private open space, local centre development, and drainage basins.

It is forecast that the Estate will deliver approximately 2,400 dwellings within the Precinct and will consist of a variety of lot sizes and dwelling products to support housing diversity within the North West Growth Centre. Additionally, the proponents own a significant portion of the B7 – Business Park and B2 – Local Centre zoned land within the Precinct.

Refer to **Appendix A** which illustrates the Site Plan for The Hills of Carmel Estate.

2.2 Hills of Carmel Voluntary Planning Agreement

The Hills of Carmel VPA was entered into on 18 June 2018 between The Hills Shire Council, Jundu as trustee for The Hills of Carmel Estate Partnership, and Mogul Stud Pty Ltd.

The VPA relates to the delivery of local infrastructure mostly within the site. A Deed of Variation to the VPA was entered into on 13 December 2018, which amended the site to which the VPA applies.

A list of the items that have been **delivered** under the VPA are provided in **Table 2** below. Note all of the items in the VPA have been delivered, except for RGBH10 – Raingarden.

Table 2: Items Delivered under the VPA

Contributions Plan Identification	Public Purpose
BH03C Drainage structure	Water management
CR-D Culvert Crossing D	Water management
BHNR01A New Main Road – Mt Carmel Road – Windsor Road to Killarney Chain of Ponds	Transport
BHNR01B New Main Road – Mt Carmel Road – Killarney Chain of Ponds to Mason Road	Transport
BHNR02A New Main Road – Mt Carmel Road – Mason Road to Boundary Road 'Link Road'	Transport
BR-1 Mt Carmel Road Bridge over Killarney Chain of Ponds	Transport
BHT07 Mt Carmel Road / Mason Road (roundabout)	Transport
BHT08 Mt Carmel Road / Boundary Road Link (roundabout)	Transport

BHT09 Mt Carmel Road / George Street (roundabout)	Transport
BHT17 Mt Carmel Road / Future Business Park Road (roundabout)	Transport

3. SUMMARY OF PROPOSED AMENDMENTS TO CP15 SUPPORTED BY IPART

The currently exhibited changes to CP15, identified as 'Amendment 7', as amended by Council following in their Ordinary Meeting resolution on the 25 March 2025, comprises the following changes:

- 1. Indexation of costs for capital items** – from an average of 2.74% and 3.04% per annum in 2006-2021 to 3.19% and 3.28% per annum in 2009-2024;
- 2. Indexation of costs for land acquisition** – from an average of 7.39% per annum in 2008-2023 to 7.59% per annum in 2009-2024;
- 3. Revised land acquisition extents for existing capital items based on updated designs** – an additional 16,177m² of SP2/RE1 land is to be acquired.
- 4. Revised timing of revenue and expenditure projections** – to reflect actual expenditure to FY23/24.
- 5. Reflect actual expenditure since completion of the last review** – this includes the indexation of the value of past land and completed capital items by CPI and the indexation of the unit rate for outstanding capital expenditure. This includes cost escalations to CP15 infrastructure, both for land and capital works.
- 6. Reflect approvals that have been issued since completion of the last review** – account for approvals at the current rates during the IPART review process (up to December 2025).
- 7. Other modelling updates to reflect published IPART guidance.**

It should be noted that Council's recommendations result in the maximum contribution being increased to a maximum of **\$76,360/lot** and **\$178/sqm** of non-residential GFA within the Killarney Chain of Ponds Catchment. **Table 3** below summarises the previous and current maximum contributions Council have proposed for CP15.

Table 3: Currently approved and proposed amendments to the CP15 contribution rates as of FY24/25

	Existing CP15 KCP Catchment	Existing CP15 SPC Catchment	Proposed Amendments to CP15 KCP Catchment	Proposed Amendments to CP15 SPC Catchment
Maximum \$ per Lot/Dwelling Rate	\$69,676	\$58,204	\$77,360 (+\$7,684 / +11.03%)	\$64,684 (+\$8,098 / +11.13%)
Non-residential Rate (\$/sqm of GFA)	\$168.44*	\$148.51*	\$178 (+\$9.56 / +5.68%)	\$158 (+\$9.49 / +6.39%)

**existing rates have been indexed from FY22/23 to FY24/25 (approx. +5.063%)*

4. MATTERS FOR CONSIDERATION: DRAFT AMENDMENTS TO CP15

CED have reviewed IPART's Draft Report and Council's Meeting Minutes from 25 March 2025 regarding amendments to CP15.

It is noted that according to IPART's Draft Report:

- CP15 meets all the DPHI's Practice Note criteria;
- Supports Council in their response to our submissions during their exhibition, which essentially refutes all our recommended changes as being valid;
- Supports the changes to CP15 completely and does not make any draft recommendations on the council's application;
- Found that the costs and apportionment ratios proposed in CP15 are reasonable for all infrastructure categories; and
- The increases to infrastructure contributions for remaining development will not contribute to offsetting any of the funding gap outstanding as a result of absent State Government funding.

CED are not convinced that the amendments to CP15 only pertain to indexation escalations and additional land being acquired by Council. Additionally, the responses provided by Council in respect of our prior comments to the exhibition of CP15 amendments were inadequate.

CED requests that the following matters be taken into consideration by IPART, and they implement the suggested recommendations below to amend the proposed changes to CP15.

4.1 Increases to CP15 Infrastructure Costs and Contribution Rates

Capital Work Escalations

Council's Ordinary Meeting Minutes from 10 December 2024 and 25 March 2025 claims that the current review of CP15 is intended to update the CPI and LVI indexation in the plan to FY24, revise the timing, actual expenditure, and DA approvals since the last review, and increase land acquisition extents for some infrastructure items.

CED NSW also contacted Council on 30 January 2025 to confirm the intricacies of the changes for CP15. According to Council, the changes are generally administrative, and rates have only increased as a result of missed indexation from the June 2023 to June 2024 period when IPART was reviewing the previous amendments to CP15.

In IPART's Draft Report, they affirm Council's position, stating that the infrastructure cost increases are:

*"...driven by higher raw costs in the plan's works schedule, primarily from land acquisition costs due to the larger land areas required, indexation, and actual expenditure that is higher than original estimates, **while works costs remain largely consistent aside from indexation.**"*

Whilst an increase to the total value of CP15 and its contribution rates are expected as a result of the revised indexation and added land acquisition extents, the additional c. \$58.65 million in infrastructure costs does not appear to be attributed to this alone. For example, the increase of capital works costs for CP15 infrastructure items varies between -3.1% to +13.5% instead of a flat escalation of ~5.4% to CPI from 2023 to 2024.

CED NSW has undertaken a comparison between the cost of infrastructure between the existing and proposed amendments to CP15 in light of Council's prior comments.

To Council's credit, corrections were made to Items RGBH03B and CRB as their amended works value was incorrectly stated by Council. It is noted that the works value of both items was corrected by Council on 25 March 2025 and were reduced to reflect an increase of only 5.4% (matching the CPI escalation) instead of 13.3%.

However, despite this positive change from Council, they maintained that the other five CP15 Items flagged with higher capital works costs were only indexed by CPI. This is incorrect and these items were increased in value by 11.6%-13.3% instead of 5.4% without any other reasoning or justification. Refer to **Table 4** below for details.

The value of capital works for these five CP15 items should only be increased to reflect escalations in CPI, as stated by Council.

Table 4: Comparison between IPART endorsed and proposed amendments to CP15 items

CP15 Item	Existing CP15 Work Costs	Proposed Amendments to CP15 Work Costs	Difference	CED Amended Works Value (to match CPI increase only)
CP15BH03B - Combined Basin and Raingarden Facilities	\$6,119,785	\$6,934,682	+13.3%	\$6,450,253
CP15RGBH03B - Single Raingarden Facilities and Bridges	\$1,929,567	\$2,033,112*	+5.4%	N/A
CP15CRB - Culvert Crossing	\$5,361,895	\$5,649,626*	+5.4%	N/A
CP15BHR01B - Mt Carmel Rd - KCP to Gardiner Drive	\$6,219,683	\$7,047,883	13.3%	\$6,555,546
CP15BHT07 - Roundabout	\$492,039	\$557,557	13.3%	\$518,609
CP15BHT08 - Roundabout	\$492,039	\$557,557	13.3%	\$518,609
CP15BHT22 - Signalised Intersection at Hynds Rd / The Water Lane	\$7,970,559	\$ 8,894,948	11.6%	\$8,400,969

*works value reduced by Council match CPI escalation of ~5.4%.

Site Specific Land Acquisition Adjustments

The Hills of Carmel has informed CED that:

- The additional 1,136sqm (valued at ~\$1.85 million) required for the BHR06 – Signalisation of Boundary Road/George Street intersection is not required as Council is receiving this land for free from the adjoining property developer as a condition of consent under DA 544/2020/ZB; and
- CP15HWLR - Half-width road construction adjoining non-developable land are ordinarily delivered by the respective developer at no cost to Council and with no credit from Council.

Recommendations

In respect of the above findings, we request that IPART make the following recommendations:

1. Amend the capital works value of certain CP15 items as specified in **Table 4**, that will reduce the total infrastructure expenditure by ~\$1.05 million.
2. Confirm with Council why the items in Table 3 exceed the CPI escalation, or clarify if these are also errors?
3. IPART should remove any additional land acquisition value associated with BHR06.
4. IPART should request additional information from Council concerning CP15HWLR, and to what extent Council is delivering / funding these half roads.

CED NSW's position is that these cost escalations to specific CP15 items appear to potentially recoup some of the funding deficit. This is completely unwarranted, and contrasts the recent recommendations made by IPART in April 2024 and from the Minister's nominee in July 2024. Therefore, any changes to CP15 relating to work cost escalations beyond CPI increases should be removed.

4.2 Funding Gap Recovery and Council Options

As discussed in **Section 4.1** above, the recent amendments to CP15 have been proposed, in part, to assist with making up some of the \$207 million funding gap primarily created by the \$89 million in LIGS funding the NSW Government owes Council.

Whilst CED NSW understands the current amendments to CP15 do not seek to reduce or offset the funding deficit, there is a high degree of uncertainty regarding the future of CP15 and how the gap funding will be recovered. Council is currently stating that they are deferring less critical infrastructure (mostly stormwater basins) until further negotiations take place with the State Government to secure further funding.

CED agrees that Council should seek additional funding from the State Government, however, IPART should be advocating Council to use their existing AIF funding to offset the value of CP15 items the funding was allocated towards.

Further details and recommendations for reducing the gap funding for CP15 are provided below.

4.2.1 Context of Development Contribution Cap and LIGS Deficit

As outlined in Council's Ordinary Meeting Minutes dated 10 December 2024, the NSW Government imposed a 'cap' on \$7.11 (formerly \$94) development contributions for Box Hill and other North West Growth Area precincts. Developer contributions in greenfield precincts were capped at \$30,000/lot, and this was the maximum amount the Hills Shire Council could levy against developers for local infrastructure.

In order for Council to recoup the gap between the 'capped' contribution rates and the true cost of delivering infrastructure within the Precinct, the NSW Government announced the Local Infrastructure Growth Scheme (LIGS) which was intended to fund the difference. This cap to contribution rates was in effect from 2013 when the Box Hill Precinct was rezoned until 2020 when the Scheme was repealed under Amendment B to CP15.

However, the contribution rates listed within CP15 between 2020 and 2023 were based on the assumption that Council *will* receive reimbursement of the outstanding gap funding with respect to all historical consents.

Council stated in its Ordinary Meeting Minutes for the proposed amendments to CP15 that the NSW Government failed to honour these outstanding LIGS funds promised to Council. The missed 'gap' LIGS funding associated with lost income from charging capped contribution payments for consents issued prior to 1 October 2019 is \$89 million.

4.1.2 Missed LIGS Funding

It should be noted that Council, at the time, failed to apply for Rounds 19-25 LIGS funding for consents issued prior to 1 October 2019. The total sum of missed funding is worth \$72.49 million.

Scanned emails obtained via the GIPA between the DPE and Council dated 7 April 2020 (refer to **Appendix B and C**) confirms that Council did not adopt IPART's previously approved CP15 by the due date (end of September 2019). As a result, Council was no longer eligible to receive LIGS funding from the DPE and the application for the \$72.49 million in Rounds 19-25 LIGS funding was rejected.

In Council's Ordinary Meeting Minutes from 25 March 2025, they argue that they were unable to apply for this LIGS Rounds 19-25 funding in time, as their amendments to CP15 to make it eligible for LIGS funding was not approved under November 2019, and the State Government backdated the cut-off date for application to September 2019.

Despite Council's reasoning, the application for LIGS infrastructure funding was the responsibility of Council and the creation of the \$89 million deficit indicated by Council (assuming to mostly comprise the \$72.49 million) was the result of their non-compliance with DPE's requirements under the letter of invitation for Rounds 19-25 LIGS funding, which resulted in the IPART approved CP15 to be adopted by the end of November 2019.

4.2.3 IPART's Final Report Findings

In IPART's Final Report (April 2024) that assessed the previous amendments to CP15, it advised they will only permit up to 29% of the gap funding to be recovered by remaining development and will not accept any cost escalations to CP15 for the purpose of reducing the funding deficit.

4.2.4 Minister Nominee Response

In a letter from the Minister's Nominee, dated 9 July 2024, it clarified that Council and IPART cannot leverage any of the shortfall infrastructure funding from the remaining 29% of development within the precinct.

4.2.5 State Government Grants

Approved Accelerated Infrastructure Funding (AIF)

As documented in the current version of CP15 adopted in August 2024, Council has received \$68.4 million in State Government AIF through Rounds 1, 2 and 3 of the scheme. This funding is to be applied towards certain significant infrastructure items identified in CP15.

Despite this funding, Council states that the AIF funding has been counted as 'income' or 'revenue' and it will not offset or exclude the cost of the relevant items within the work schedule under CP15.

It should be noted that AIF funding should not be directly used by Council to recuperate the remaining shortfall in unclaimed LIGS funding for CP15 infrastructure. AIF funding seeks to assist Council fund select regional infrastructure items and should not be used to offset pre-existing funding deficits.

The correct application of AIF funding can be observed in the draft West Dapto S7.11 Plan (2024) exhibited by Wollongong City Council in December 2023, where their \$25.5 million grant has been applied to fund a portion of West Dapto Road and an intersection. This grant has therefore reduced the overall capital costs for transport infrastructure in West Dapto and will have a positive impact by minimising the contribution rates Wollongong City Council leverages against development.

Current NSW Government Grant Programs

Council has also applied for 20 separate grants via the State VPA Program (Round 4), Housing Support Program and the North West Growth Area Special Infrastructure Contributions Scheme (Round 6). The total value of these grant applications, if successful, is \$118.27 million.

Council has advised that this grant funding will assist in addressing the CP15 funding gap.

4.2.5 CED's Conclusion and Recommendations

Based on the above, it can be concluded that:

- Council failed to prudently apply for \$72.49 million of the \$89 million missed LIGS funding by not accepting IPART's approved CP15 in September 2019,
- The Minister's nominee recommends that none of the remaining development in the Box Hill Precinct should be leveraged any additional contributions to offset the outstanding funding gap, and
- Council has received \$68.4 million in State Government funding for regional infrastructure (with more anticipated in the near future) but has not contributed this funding towards reducing the total capital expenditure required for CP15 infrastructure.

CED agrees with the Minister Nominee's decision, and it is Council's financial responsibility to resource funds for the outstanding funding gap, estimated to be approximately \$122 million at June 2023 according to IPART or assumed to now be roughly valued at \$139 million (i.e 71% of \$207 million).

CED request that IPART consider the following recommendations to impose on Council to resolve the funding deficit in relation to the proposed amendments to CP15 currently on exhibition:

- 1. Deduct AIF funding from the total value of CP15** – Council should recalculate the total value of infrastructure in CP15 to include the \$68.4 million in AIF Rounds 1-3 funding received. This will lower or remove the cost of specific CP15 infrastructure reimbursed by the NSW Government and will positively contribute towards reducing the funding gap.

IPART should advocate for this recommendation, as to consider all State infrastructure funding as 'revenue' that does not reduce the value of the relevant infrastructure items in CP15 is an incorrect use of resources and is counterproductive to minimising the gap funding.

- 2. Rescind updates relating to infrastructure cost hikes in CP15** – The current amendments to CP15 represents "Option 8", one of the four options recommended and supported by Council to resolve the \$207 million funding gap. As noted in **Section 4.1**, the specific amendments to CP15 that relate to escalations to infrastructure costs and contribution rates for remaining development should be withdrawn / removed as:
 - b. Council is still liaising with the State Government to honour their \$89 million LIGS debt which will contribute to relieving the funding gap (Option 6), and
 - c. Council has applied for 20 State funding grants worth \$118.27 million that, if successful, could significantly reduce the funding gap (Option 7b).

3. **Additional funding recovery options** – Provided the combined recommendations above do not completely resolve the funding gap, IPART should consider the following options as contingencies to recover any remaining funding:
 - b. Partially implement Option 7a proposed by Council and delay some of infrastructure that has been shortlisted, specifically the sportsgrounds and reserves that combined are worth ~\$59 million, or
 - c. As a last resort, and as previously recommended by IPART in April 2024, Council can apply slight increases to Council rates across the Hills Shire Council LGA (i.e. Option 2) that would constitute less than a 31% increase (i.e. a maximum of \$381 / year for 7 years).
4. **Missed LIGS Funding should be excluded from the deficit by Council** – Council failed to comply with the Department's Rounds 19-25 LIGS funding guidelines due to its own actions directly causing \$72.49m of the current claimed funding shortfall. As such, the burden of this portion of the claimed funding shortfall should not be placed onto **landowners and developers by the Council** for not prudently complying with the Department's requirements.

IPART should request clarification from Council as to how and when the gap funding will be recuperated in light of the Minister Nominee's determination and in the event further State Government funding is not secured to cover the debt.

Implementing these recommendations will ensure remaining development is fairly and reasonably charged S7.11 contributions in the Precinct. This will have the benefit of preventing the stagnation of development activity in Box Hill by maintaining reasonable contribution rates and ensures impacts to the delivery of new housing and commercial development in the Precinct are minimised.

4.3 Apportionment of Non-Residential Costs

As mentioned above, CED supports the Minister Nominee's prior recommendation to apportion none of the total shortfall of infrastructure costs to the remaining residential and non-residential development. However, non-residential development contribution rates will rise again under these changes by 9% between Council's existing and updated maximum \$/sqm GFA rate in CP15.

This is because the amendments to CP15, particularly regarding increased land acquisition areas, will increase the total cost of infrastructure by \$58,649,775 (+5%). However, as noted in IPART's draft report, 86% of non-residential development in Box Hill has not yet been developed or paid its S7.11 liabilities as opposed to 26% of residential development.

Council's recommendation, although not intentional, disproportionately impacts non-residential development since the vast majority of non-residential land has not been developed compared to residential land. Although perceptively minor, this represents an unreasonable apportionment of costs on future non-residential development which breaches the DPE's Practice Note criteria.

Recommendations

Council needs to ensure contributions for non-residential development are fairly apportioned between all remaining development and contribution rates only be increased to reflect changes to indexation.

4.4 Value of Items in VPA and Council's proposed amended costs in CP15

According to Council's Ordinary Meeting Minutes dated 25 March 2025, they advised that:

*"Ultimately **the value of items under CP15 and this VPA must align**, to ensure that the value of offsets and reimbursements is accurate and will not result in a shortfall."*

CED NSW have conducted a comparison of costs between the same items included in The Hills of Carmel VPA and Council's draft amendments to CP15 (refer to **Table 5** below). It was identified that six items in the VPA have already been delivered / credited at a lower value than referenced in the current amendments to CP15.

Table 5 – Comparison of items in Hills of Carmel VPA and Council's draft amendments for CP15 (Amendment 7)

Item Identification	Council's amended value of VPA items in CP15	Actual value of VPA Items credited by Council	Difference
BHNR01A New Main Road – Mt Carmel Road – Windsor Road to Killarney Chain of Ponds	\$10,562,641.00	\$10,530,765.79	+\$31,875.21
BHT09 Mt Carmel Road / George Street (roundabout)	\$567,175.00	\$565,463.41	+\$1,711.59
BHT17 Mt Carmel Road / Prosper Street (roundabout)	\$4,857,803.00*	\$565,463.41	+\$4,292,339.59
Land – BHNR01A	\$2,486,694.00	\$1,492,248.09	+\$994,445.91
Land – BHNR01B	\$636,498.00	\$625,007.98	+\$11,490.02
Land – BHNR02A	\$2,092,076.00	\$1,578,516.08	+\$513,559.92
Total:	\$21,202,887.00	\$15,357,464.76	+\$5,845,422.24

**note that the prior amendment to CP15 has changed this roundabout into a signalised intersection.*

Table 5 demonstrates that there has been an unexplained increase of \$5,845,422.24 in value for the abovementioned CP15 items compared to the values these items were credited at under the VPA. These increases to VPA items are not attributed to variations to CPI values, and the increases in land items do not relate to any additional land acquisition area.

It is noted that most of the increase (approx. \$4.3 million) is attributed to BHT17 being upgraded from a roundabout to a signalised intersection in the prior amendments to CP15. Council's decision to upgrade this intersection was informed by flawed traffic modelling and the signalised intersection is considered over-designed and inappropriate for this area (refer to **Section 4.5** for details). Even when excluding BHT17, there is still over approx. \$1.55 million in additional costs added to the above listed VPA items in the proposed changes to CP15.

The costs for each item in CP15 should reflect the amount specified in the VPA, as stated by Council, as the VPA is a realistic construction / dedication rate that is already indexed and the items listed above have now been delivered either by The Hills of Carmel or other developers. In fact, IPART historically has considered it unreasonable to recuperate costs that are higher than in a VPA.

Recommendations

Therefore, IPART is requested to adjust the values of Items in CP15 to reflect the actual cost they were delivered for under the VPA (as per **Table 5** above).

4.5 Transport Infrastructure for the B7 Zone

The Hills of Carmel have engaged Ason Group who has prepared a Traffic Study Review Technical Note (see **Appendix D**) that assesses the merit of the following documentation:

- Box Hill Business Park Traffic Impact Assessment prepared by Gennaoui Consulting Pty Ltd in 2022 (the traffic study); and
- Traffic and Warrant Study Intersections in Box Hill Business Park (the warrant study) prepared by The Hills Shire Council.

This independent review of the traffic and warrant study has been undertaken as it relates to the B7 Business Park zone region of Box Hill that The Hills of Carmel primarily owns and is of relevance to this submission as the studies may have been used as a reference by Council to nominate and price certain transport infrastructure items in CP15.

The findings of Ason Group's Technical Note are summarised below:

Traffic Generation

- The traffic study mainly considered a single office land use across the entire business park (98% of all development in the B2 and B7 zones in Box Hill) and did not account for the diverse range of land uses business parks typically accommodate.
- The traffic study adopted traffic generation rates of 9 trips per 100m² of GFA in the AM and PM peak periods. This assumption of only using office traffic volumes is highly conservative and overestimated, given business parks have a more balanced distribution of traffic volumes throughout the day.
- Ason Group determined that either of the following trip generation rates were more appropriate:
 - 0.49 and 0.33 vehicle trips per car space required for commercial development in the AM and PM peak periods, respectively, based on DCP parking rate and GFA assumptions used in the traffic study. This will result in a 25% and 36% reduction to AM and PM traffic generation, respectively.
 - 1.11 and 1.00 vehicle trips per 100m² GFA in the AM and PM peak periods, respectively, based on the Guide to Transport Impact Assessment 2024. This will result in a 31% and 17% reduction to AM and PM traffic generation, respectively.

Traffic Distribution

- The traffic study generally adopted an even distribution of traffic in all four directions which is not discernibly justifiable.
- Actual traffic distribution based on Journey to Work 2021 data shows that most traffic movements (60%) are directed to the east of the Box Hill Business Park, reflective of existing housing in the area.
- The range of future business park uses will generate both local and larger catchment multi-purpose trips that will affect distribution variables and time of day demand.

Intersection Designs

- Ason Group advised that many major intersections with a nexus to the business park, particularly those along Windsor Road, could be considered overdesigned in terms of appropriately facilitating business park access (e.g. removal of dual right turning lanes on several intersections).
- This is because the extent of upgrades is dictated by the tidal flow of vehicles, and the traffic study assumed conservative office land use rates.
- Consideration of various land uses in the business park will result in less peak traffic generation and a more even distribution of two-way traffic flows.

It is noted that Council maintains that the additional 11,000 jobs expected in the Box Hill Precinct warrants no change to transport infrastructure in Box Hill.

However, based on the findings above, Ason Group advised that traffic flows to and from the Box Hill Business Park will be more evenly distributed and peak traffic generation will be reduced.

Recommendations

IPART should recommend that Council revises their traffic assessment for Box Hill that considers the above findings that suggests there will be less peak traffic generation which would likely translate to less onerous intersection treatments to those currently approved.

Provided Council's traffic engineering support the findings of the Traffic Study Review Technical Note prepared by Ason Group, another option (i.e. Option 9) can be considered to assist reduce the funding gap and the total value of CP15 by reducing the design requirements and costs for major intersections that have a nexus with the Box Hill Business Park. This includes:

- Reverting Item BHT17 at Mt Carmel Road / Prosper Street from a signalised intersection back to a roundabout (as per older versions of CP15 and the agreed works in the VPA). Note this has already been built as a roundabout under the VPA and would save approximately \$4.3 million from the total infrastructure value in CP15 that would decrease contribution rates.
- BHT23 at Terry Road could be redesigned to be a collector road roundabout as opposed to a signalised intersection. As the amended capital works cost of this item is \$13,455,201, and the roundabout construction would cost less than \$1 million, this could save over \$12 million from the total value in CP15.

5. CONCLUSION

CED and The Hills of Carmel thanks IPART for the opportunity to provide a submission to the exhibited draft report that advocates the amendments to Contributions Plan No. 15 – Box Hill Precinct.

A summary of key recommendations and requested changes to CP15 are listed below:

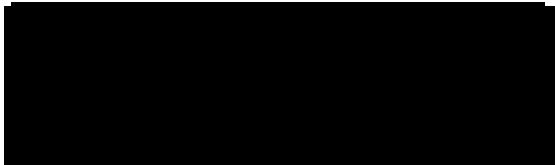
- The \$68.4 million in AIF funding received for the relevant infrastructure items listed in CP15 should be recognised and offset in the plan.
- IPART should amend the capital works values for certain CP15 items as stated in **Table 3** to ensure cost escalations are only attributed to increases in LVI and CPI and do not assist to recover the funding deficit.
- IPART should recommend that Council pursue Options 6 and 7b, that both seek additional funding from the State Government, as the best options to recuperate the funding gap before any further cost escalation amendments to CP15 are made.
- The burden of Rounds 19-25 LIGS funding (\$72.49 million) of the claimed overall funding shortfall should not be placed onto landowners and developers by the Council now or into the future and Council should confirm contingency options to source gap funding from rate payers in the event the State Government does not issue sufficient funding.

- Council needs to minimise further escalations to contributions for non-residential development to ensure infrastructure costs are fairly apportioned between remaining residential and non-residential development.
- The value of items in CP15 listed in The Hills of Carmel VPA should remain as the value they were delivered / credited at and should not increase in cost; and
- Council should reassess traffic conditions and potentially minimise design requirements for BHT17 and BHT27 around the Box Hill Business Park to reflect a development outcome consistent with landowner objectives and planning objectives.

IPART is requested to consider the matters raised in this submission and update the proposed amendments to CP15 as outlined above. This will ensure that infrastructure contributions in the Box Hill Precinct are consistent with existing VPAs and remain reasonably priced for the remaining developers and landowners, including The Hills of Carmel.

We look forward to IPART's response on these matters.

Sincerely,



*NSW State Director
Colliers International Engineering and Design NSW Pty Ltd*

Appendix A: Site Plan – The Hills of Carmel (dated 1 February 2019)



Stage 10 – DA 2076/2018/ZB
126 residential lots + 1 residue lot
Lodged: 23/05/18

Stage 11 – DA 1839/2018/ZB
124 residential lots + 2 residue lots
Lodged: 13/04/18

Stage 12 – DA 1839/2018/ZB
137 residential lots (incl. 1 large lot) + 4 residue lots
Lodged: 13/04/18

Stage 9 – DA 844/2018/ZB
183 residential lots
Lodged: 2/11/17
Approved: 29/06/18

Stage 8 – DA 1415/2017/ZB
164 residential lots
Lodged: 21/03/17
Approved: 13/09/17

Stage 7 – DA 1260/2018/ZB
228 residential lots + 1 residue lot (for medium density)
Lodged: 22/12/17

Medium Density – DA 1037/2019/ZB
157 residential lots
Lodged: 21/12/18

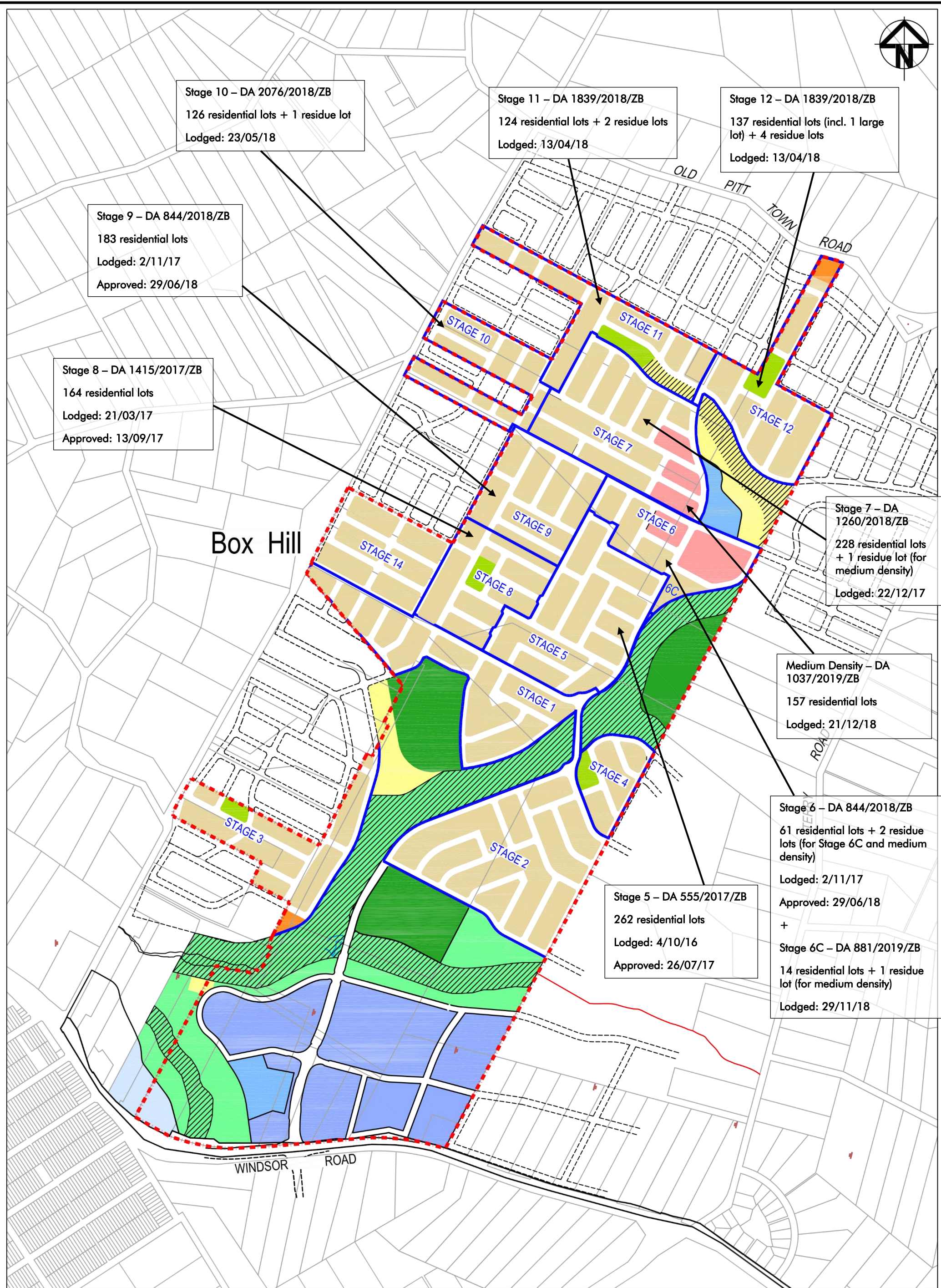
Stage 6 – DA 844/2018/ZB
61 residential lots + 2 residue lots (for Stage 6C and medium density)
Lodged: 2/11/17
Approved: 29/06/18
+
Stage 6C – DA 881/2019/ZB
14 residential lots + 1 residue lot (for medium density)
Lodged: 29/11/18

Stage 5 – DA 555/2017/ZB
262 residential lots
Lodged: 4/10/16
Approved: 26/07/17

Box Hill

WINDSOR ROAD

OLD PITT TOWN ROAD



FILE:HX1111295 - WINDSOR RD BOX HILL PLANNING FEASIBILITY 1256-F138.DWG LAST SAVED BY:ANGELO CAVALIARO

FIRST	DESIGN	DRAWN	CHECK	APPR.	DATE
PL	PL	AC	PL		12/07/2018

CLIENT:
MOGUL STUD P/L & JUNDU P/L

AUTHORISED FOR ISSUE:
BY: PETER LEE
Business Unit Manager - Planning

SIGN:
DATE:



PROJECT
WINDSOR ROAD & BOUNDARY ROAD
BOX HILL

DRAWING TITLE
MASTERPLAN

SCALE
0 50 100 150 200 250 300 350 400
SCALE 1:5000 (A1) SCALE 1:10000 (A3)

PROJECT No. X11295-F139
DRAWING No. STAGE REVISION
0

Appendix D: Box Hill Business Park – Traffic Study Review Technical Note prepared by Asson Group, dated 18 December 2024

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Suite 17.02, Level 17,
1 Castlereagh Street,
Sydney, NSW 2000

ABN: 81 168 423 872

TO	Alex Rybak and Chris Houghton (Mogul Stud Pty Ltd)
FROM	Rhys Hazell and Jae Jeon (Ason Group)
SUBJECT	Box Hill Business Park – Traffic Study Review Technical Note

Dear Alex,

Mogul Study Pty Ltd engaged Ason Group to provide traffic and parking related advice as it relates to planning for Box Hill Business Park. A traffic assessment has prepared by Gennaoui Consulting for the wider estate, with the subsequent traffic and warrants assessment completed by The Hills Shire Council.

This technical note reviews the transport related documents prepared as part of the business park Master Plan. It outlines the findings and presents alternative and arguably more considered methods that could be considered to more accurately estimate traffic associated with estate planning.

A summary of the key findings is presented below.

The traffic assessment was prepared to assess the traffic impacts associated with development of the business park which, given the land uses permissible in the zoning would be likely to comprise a range of land uses. The traffic study has however only considered a single office land use across the entire business park. This is considered impractical and results in an obvious and conservatively high traffic-based assessment. There was no consideration to account for vehicle trips internal to the business park, multi-purpose trips and time of day demand which all provide justifiable opportunity to practically reduce traffic volumes during the road network peak periods. Office land uses also typically result in short tidal peak periods and can trigger the need for onerous and unnecessary infrastructure upgrades.

In assessing the traffic study, reference to various statutory and planning documents has been made to present more realistic methods in which to estimate future traffic. This approach confirms that the estimated traffic volumes could be noticeably reduced by a factor of between 25 and 68 per cent during the weekday AM peak period and between 17 and 53 per cent during the PM peak period. Overall, it is recommended that the traffic study be revisited and investigated further to present a more practical assessment of the estimated traffic generation across the estate and external road network. This would likely meaningfully change the study outcomes and perhaps limit the extent of infrastructure works.

In compiling this assessment, the following documents have been referenced:

- *Box Hill Business Park Traffic Impact Assessment Final Report* prepared by Gennaoui Consulting Pty Ltd, 24 August 2022.
- *Box Hill Business Park Traffic Impact Assessment Final Addendum Report* prepared by Gennaoui Consulting Pty Ltd, 10 October 2022.
- *Traffic and Warrant Study Intersections in Box Hill Business Park, Box Hill* prepared by The Hills Shire Council.
- Other documents and statutory controls as they relate to the Box Hill Release Area.

Traffic Impact Assessment Review

Overview

The following is a summary of the traffic assessment completed by Gennaoui Consulting (traffic study) and the traffic and warrants assessment undertaken by The Hills Shire Council (warrants assessment).

The Box Hill Business Park has been divided into 11 zones as provided by Council's Planning Department. The concept road network and traffic zones relied upon are reproduced in **Figure 1** with the Gross Floor Area (GFA) breakdown summarised in **Table 1**. Two scenarios were considered as part of the traffic study, defined as follows:

- High Growth scenario based on 1.5:1 capacity and ultimately capable of delivering 817,000m² GFA.
- Low Growth scenario based on 75 per cent of the High Growth achieving 615,750m² GFA.

Both assume 98 per cent commercial land uses and two per cent retail/ shopping centre.

Given that The Hills Shire Council warrants assessment only considered the low growth scenario, this review focuses on this only and mostly disregards the high growth scenario on the basis that we consider this to reflect Council's preferred way forward.



Figure 1: Box Hill Business Park zone layout

TABLE 1: LOW SCENARIO BUSINESS PARK FLOOR AREA

Zone	Low Scenario	Jobs
1 – Shopping Centre	11,190	320
1	16,012	534
2	60,887	2,030
3	35,274	1,176
4	25,779	859
5	82,608	2,754
6	23,338	778
7	61,019	2,034
8	120,446	4,015
9	43,594	1,453
10	36,776	1,226
11	98,827	3,294
Total	615,750	20,472

The traffic study assessed the impacts of various scenarios, including:

- **Scenario 1** – No connection from Road 1 to Terry Road and to Boundary Road.
- **Scenario 1a (Low Capacity)** – No connection from Road 1 to Terry Road and to Boundary Road.
- **Scenario 2** – Connect Road 1 to Windsor Road with movements restricted to left-in / left-out.
- **Scenario 2a (Low Capacity)** – Connect Road 1 to Windsor Road with movements restricted to left turns.
- **Scenario 3** – Connect Road 1 to Windsor Road and provide signal control.
- **Scenario 3a (Low Capacity)** - Connect Road 1 to Windsor Road and provide signal control.
- **Scenario 4** – Provision of new central road between Roads 1 and 2 and connected to Windsor Road with new signalised intersection. Road B to have a four-lane divided carriageway between Terry Road and Mount Carmel Drive with traffic signals at Terry Road, Central Road and Mount Carmel Drive. Service roads between Road 1 and Central Road, and between Road 2 and Central Road to facilitate circulation.
- **Scenario 4a (Low Capacity)** - Provision of new central road between Roads 1 and 2 and connected to Windsor Road with new signalised intersection. Road B to have a four-lane divided carriageway between Terry Road and Mount Carmel Drive with traffic signals at Terry Road, Central Road and Mount Carmel Drive. Service roads between Road 1 and Central Road, and between Road 2 and Central Road to facilitate circulation.

As discussed, the warrants assessment completed by The Hills Shire Council only considers **Scenario 4a** therefore this assessment focuses on this scenario.

Vehicle Trip Generation Rate

The traffic study references the TfNSW Technical Direction TDT 2013/04a to determine traffic generation rates for the office land use. The generic traffic generation rate of 1.6 and 1.2 trips per 100m² GFA was adopted for all office GFA included in the study.

The adopted retail traffic generation rate was 9.0 trips per 100m² GFA for the PM peak hour. This is consistent with the Norwest Business Park Master Plan Study (Gennaoui, 2003). 50 per cent of the afternoon peak hour trip was adopted for the morning peak hour.

On this basis, the assessment estimated that the business park would generate about 10,050 vehicle trips in the AM peak hour and 8,000 trips in PM peak hour. This confirms that all zones other than Mount Carmel Village (identified as zone 1) were assumed to comprise office land uses only.

While TDT 2013/04a detailed the latest survey data for office and business park land uses at the time the report was prepared, traffic generation associated with isolated office-based developments vary noticeably from large business parks. **Should the business park rates of 0.52 and 0.56 trips per 100m² GFA in the AM and PM peak periods be adopted, they would equate to 68 per cent and 53 per cent reductions on the volumes detailed in the traffic study.**

To better estimate future traffic generation, reference to the Guide to Transport Impact Assessment 2024 (GTIA) is relevant as it references the latest and substantive survey data, including specifics as it relates to the following:

- Business parks refer to developments that permit a range of land uses in an integrated complex. The developments generally incorporate a mix of office, retail and wholesale stores, warehousing, workshop, manufacturing, light industrial, showrooms and scientific research establishments.
- Trip generations vary substantially depending on the type and size of land uses incorporated in the business park, particularly office and retail uses which generally result in a higher volume of trips. In this regard, the GTIA details site peak trip generation rates in lieu of network peak rates.
- Business parks are estimated to generate 1.11 and 1.00 vehicle trips per 100m² GFA in the AM and PM peak periods respectively. **If applied, these rates would equate to 31 per cent and 17 per cent reductions in vehicle trips in each peak hour when compared with the traffic study.**

As further detailed in the GTIA, business parks typically incorporate a variety of land uses. Box Hill Business Park is understood to be zoned B7 Business Park (SP4 Enterprise within the Hills Local Environmental Plan 2019) and therefore permits a range of land uses including, but not limited to, business premises, food and drink premises, hardware and building supplies, hotel or motel accommodation, light industries, neighbourhood shops, office premises serviced apartments and drinks premises. These are both diverse and complementary.

On this basis, the following factors are key when considering the potential impact of business park traffic on the surrounding road network:

- Differing land uses generate varying trip rates, with office land uses one of the highest trip generators where site peaks commonly coincide with broader road network peaks.
- Assuming office land uses with no consideration for any other permissible land uses is viewed as unnecessarily conservative (and unrealistic) and likely to result in overestimated traffic volumes.
- Ignoring any such reduction factor to account for diverted and/ or linked trips is not appropriate and results in unrealistically high traffic volumes.
- Varying land uses experience site peaks at different times across the day and week and naturally results in a more balanced distribution of traffic volumes.

Traffic generation based on turnover of parking spaces is also a valid method in which to estimate future vehicle trips in large estates. This is driven by noticeable variations in parking rates across Sydney, access to public transport services and housing density/ catchments in the region.

While the applicable DCP includes a commercial parking rate of one space per 25m² GFA, the Mount Carmel Village commercial development was approved in 2023 with a commercial parking rate of one space per 40m² GFA. This rate is considered more appropriate and has been adopted for the purposes of this assessment. Application of this to the 615,750m² GFA results in a parking requirement of about 15,400 spaces across the business park.

TDT 2013/04a details a trip generation rate for commercial developments of 0.49 and 0.33 vehicle trips per car space during the AM and PM peak periods respectively. Application of these rates results in about 7,550 and 5,100 vehicle trips in the AM and PM peak periods. **These volumes are 25 per cent and 36 per cent lower than the volumes estimated in the traffic study. These should also be considered theoretical maximums given the volumes would be expected to decline further once a more realistic land use mix is understood.**

It is acknowledged that the Box Hill region is planned to experience more growth over the next 10+ years. Based on the projections shown in **Figure 2** as extracted from the Box Hill Release Area data, and considering the projected approved population over the period to 2036, a background traffic growth rate of two per cent per annum could conservatively be applied to future years. This accounts for the growth centres projections and exceeds the typically accepted maximum 1.5 per cent growth rate as preferred by TfNSW across the middle and outer ring metropolitan Sydney.

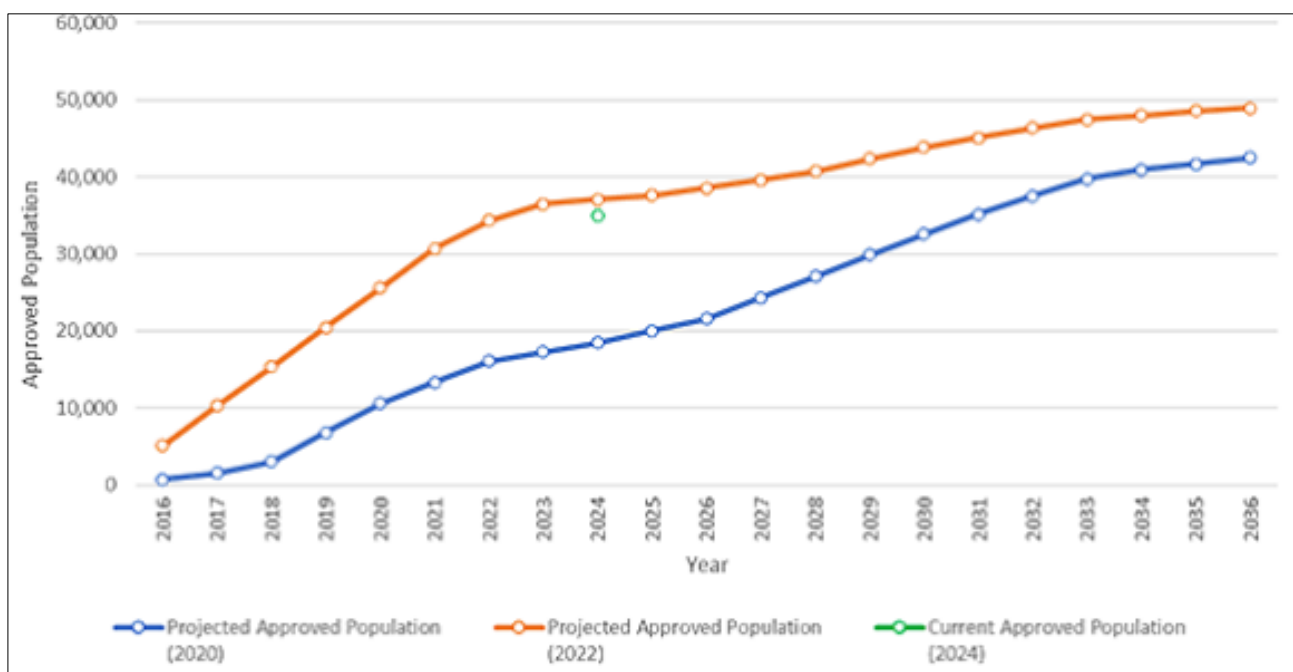


Figure 2: Approved Population Projection for Future Years

Source: The Hills Shire Council, thehills.nsw.gov.au/Business-Building/Sydneys-Growth-Centres/

From our assessment of the trip distribution figures included in the traffic study, no consideration has been provided to account for internal and/ or multi-purpose trips. These are expected and should be accounted for, with the permitted deductions applied. There is also no evidence of application of any such background traffic growth rate to estimate future year traffic volumes.

Overall, the basis of the traffic study could be considered overtly conservative on the basis that it assumes a single office land use across the entire business park. This land use similarly generates peak activity at a time that typically coincides with the surrounding road network peak.

With a range of permitted land uses in the business park, this outcome is highly unlikely, as evidenced by the potential for a Tavern and fast food on the western lot fronting Windsor Road and Mount Carmel Drive (lot 3) and the proposed Bunnings at the eastern end (lot 10). Such land uses would generate differing traffic volumes and mostly outside road network peak hours. This is common and expected in business parks and definitively not considered in the traffic study. Other complementary land uses would also generate more reason for internal trips, which would further reduce overall business park traffic volumes, or the number of 'new' vehicle trips through all key intersections, especially those on the periphery.

Traffic Distribution

Vehicle trip distribution assumptions form an integral part of traffic impact assessments as it dictates the key route and the intersections that the development traffic will impact the most. This is especially important for masterplanning purposes for large estates such as Box Hill. These are determined based on several factors including existing traffic volumes and directional distribution, Journey to Work data and/ or extracts from the Sydney Traffic Forecasting Model (STFM). In this regard, it appears that **the traffic study includes no discernible justification for the directional distribution adopted.**

The following inbound and outbound distribution were adopted in the traffic study for the peak periods:

- Office / Commercial
 - AM Peak 80% arrival / 20% departure.
 - PM Peak 20% arrival / 80% departure.
- Shopping Centre
 - AM Peak 60% arrival / 40% departure.
 - PM Peak 40% arrival / 60% departure.

The following directional distribution was generally adopted:

- East 21%
- West 20%
- North 30%
- South 29%.

This obviously relies on a relatively even distribution of traffic across the road network and does not appear to align with existing and planned households in the region, density and population to the east and importance of Windsor Road as they key road corridor through the area. We would particularly query the 30 per cent distribution of traffic to and from the north noting that this could be associated with a reliance on local trips that would need to be largely internal to the Box Hill land release area boundaries (given the general lack of housing density elsewhere in that area). While this could be based on valid data, this is not evident in the traffic study.

In the absence of any such traffic survey data for the key intersections, a review of the Journey to Work 2021 for the Box Hill-Nelson region indicates the following directional distribution could be more accurate:

- East 60%
- West 15%
- North 5%
- South 20%

This distribution recognises the existing housing density and Windsor Road hierarchy with the STFM likely able to provide TfNSW generated trips in the area that incorporates future expansion. This is likely to result in a more accurate estimation of future traffic distribution.

The inbound and outbound traffic distributions applied to the office and retail land uses assessed in the traffic study are generally appropriate however, with the business park likely to include several different land uses over and above those assessed, these are expected to vary noticeably. This includes both directional distribution and proportional splits.

The traffic study notes that the assumed directional distribution was applied to trips generated in each of the 11 zones without detailing any such other key assumptions such as access locations for the respective zones and on this basis, the appropriateness of the adopted distribution cannot be effectively assessed.

The range of permissible land uses within a business park will also generate traffic from a range of locations. Some land uses generate local and multi-purpose trips while others will attract a larger user catchment. All this contributes to not only variables distributions though also time of day demand. These variables have not been detailed as part of the traffic study and with improved assessment would likely result in less onerous intersection treatments to those already documented.

Intersection Layouts

A review of the warrants assessment prepared by The Hills Shire Council indicates that the following intersections are ultimately proposed to be upgraded or delivered:

- Mount Carmel Drive / Windsor Road.
- Mount Carmel Drive / Crossiron Street.
- Central Road / Crossiron Street.
- Central Road / Windsor Road.
- Crossiron Street / Alan Street / Terry Road.
- Terry Road / Windsor Road.

The locations of these intersections are shown in **Figure 3**. It is also noted that the traffic and warrant study recommend that Windsor Road be widened to three lanes in each direction (six lane divided carriageway).

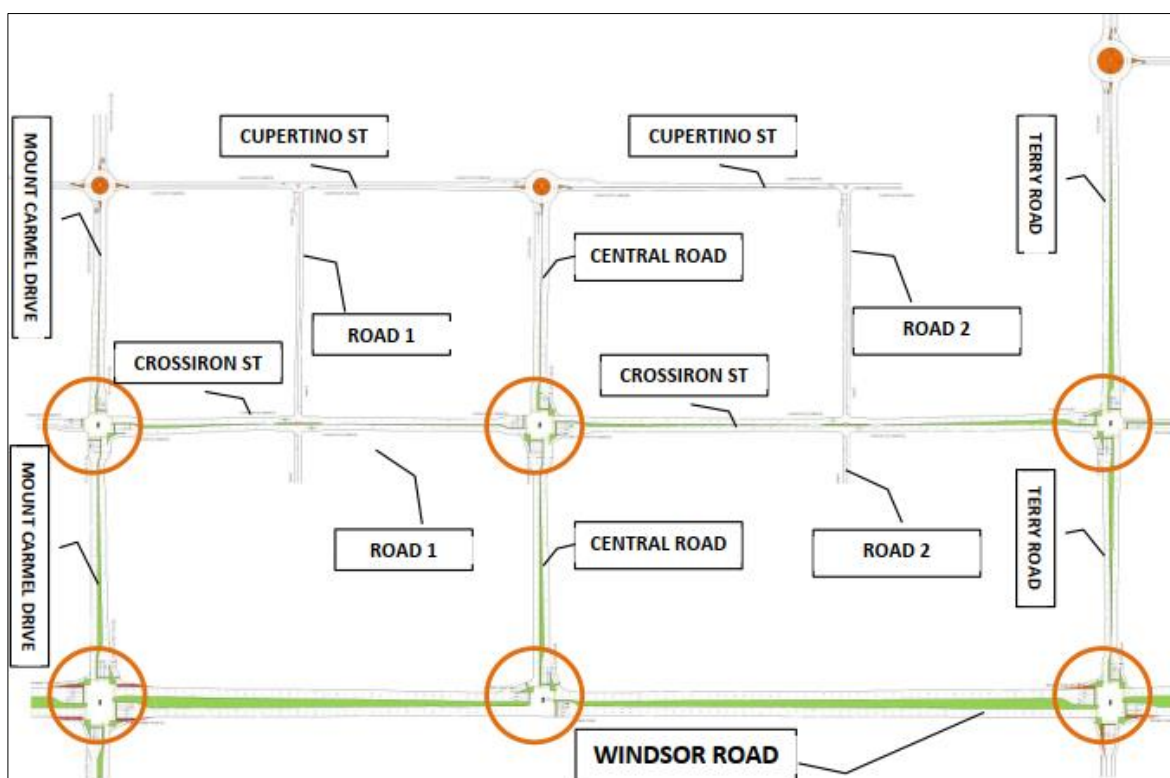


Figure 3: Signalised intersections in the proposed Box Hill Business Park
(Source: Traffic and Warrant Study prepared by The Hills Shire Council)

The proposed intersection and road network upgrades have been reviewed and based on the details of this assessment, could be considered oversized in terms of appropriately facilitating business park access. The extent of the upgrades is largely dictated by the tidal flow of vehicles due to the assumptions adopted in the traffic study on account of the assumed single office land use assessed. This is evident with the planned introduction of dual right turns at several intersections, including the northern and eastern approaches to the Windsor Road intersections at both Terry Road and Mount Carmel Drive. The Council endorsed layouts of these intersections are shown in **Figure 4**.

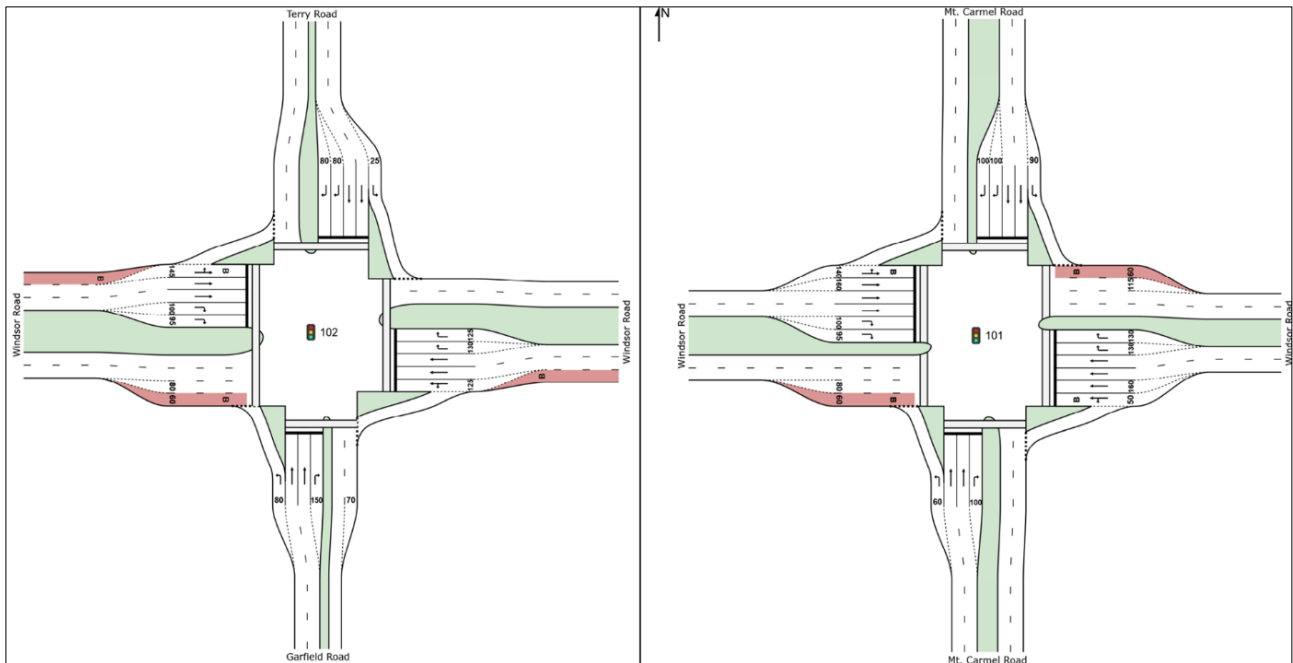


Figure 4: Windsor Road/ Terry Road Intersection (left) & Windsor Road/ Mount Carmel Drive Intersection (right)

As discussed, and with consideration to the various land uses possible in the business park, the inbound and outbound traffic distribution during the network peak periods will likely vary on account of many developments generating different site peak periods. This would typically result in less 'peak' traffic conditions and more even distribution of two-way traffic flows. This means less tidal traffic conditions and hence, potentially less onerous intersection upgrades. SIDRA Intersection modelling would be necessary to confirm any such amended outcomes.

It is noted that the warrants assessment concludes that, despite the intersection upgrades at Mount Carmel Drive / Windsor Road and Terry Road / Windsor Road intersections, both intersections are projected to perform at a LOS F. Therefore, it is likely inevitable that some upgrade, albeit a lesser degree than currently expected as per the warrants assessment, will be necessary to service the business park as necessary. It is perhaps telling that the intersection treatments, while significant still work hard to accommodate the traffic volumes estimated by the traffic study.