

16 November 2022

P2280 PP 442 Louth Park Road assessment Draft

Perception Planning  
Maitland Road  
MAYFIELD NSW

**Attn: Erin Daniel**

Dear Erin,

**Traffic Impact Statement, proposed residential development, 442 Louth Park Road, Louth Park, NSW**

Seca Solution Pty Ltd has been commissioned through Perception Planning on behalf of NewPro 25 Pty Ltd to prepare a traffic and parking report for the proposed residential subdivision at 442 Louth Park Road, Louth Park, NSW. The plans for the re-development of the site allow for 31 residential lots to be developed and internal access roads within the development site.

This assessment has been prepared in conjunction with the Austroads Guidelines and Section 2.3 of the RTA Guide to Traffic Generating Developments which provides the structure for the reporting of key issues to be addressed when determining the impacts of traffic associated with a development. The RTA guide indicates that the use of this format and checklist ensures that the most significant matters are considered by the relevant road authority. Note that the RTA is now Transport for NSW (TfNSW) however the document name remains as RTA.

The subject site is located adjacent to Louth Park Road and will be accessed via Dagworth Road near the intersection of Louth Park Road. The location of the site is shown below in Figure 1.

As part of the project, Seca Solution has collected current traffic data at the corner of Louth Park Road and Mount Vincent Road, East Maitland.

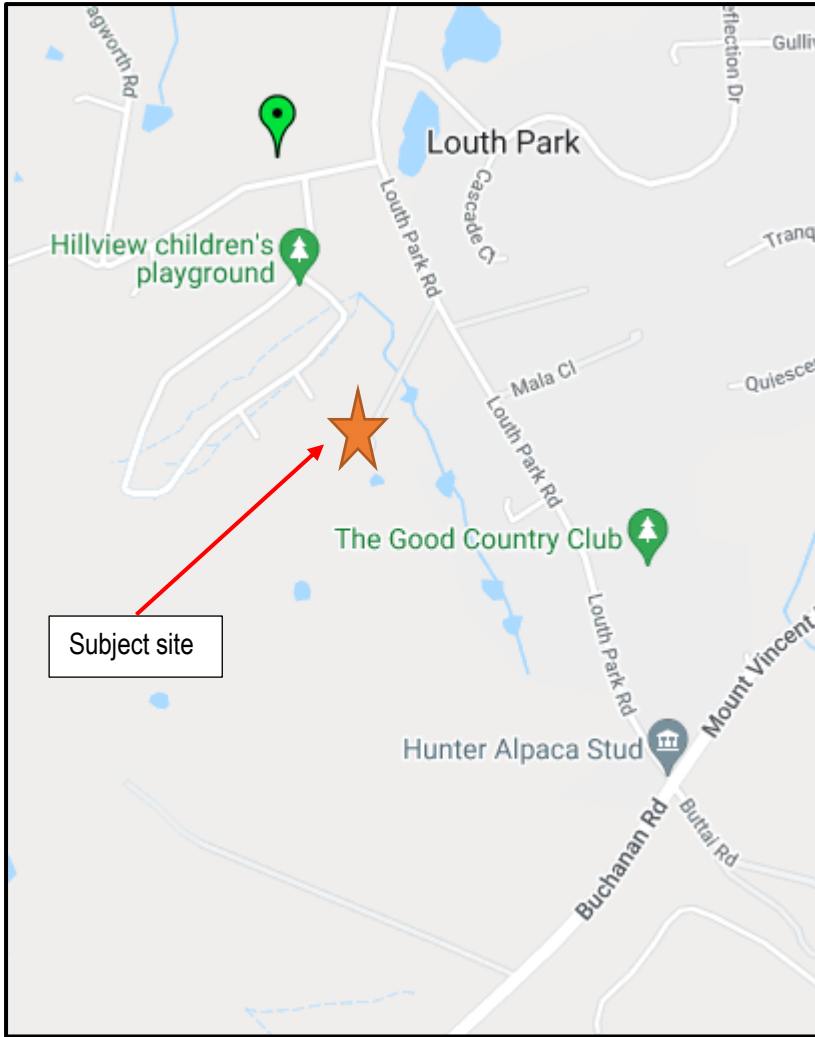


Figure 1 – Site Location

## 1. Traffic Impact Assessment Summary

The following assessment has been completed in accordance with the requirements of the RTA Guide to Traffic Generating Developments and Austroads Guidelines. A summary of issues and their comment is as follows:

| Item                           | Comment  |
|--------------------------------|--|
| <b>2.1 Existing Situation</b>  |  |
| 2.1.1 Site Location and Access | <p>The site is located to the west of Louth Park Road with access via Collaroy Parade and Dagworth Road to connect with Louth Park Road.</p> <p>The site is currently vacant.</p>  |
| 2.2.1 Road Hierarchy           | <p><b>Louth Park Road</b> is a through route road that connects rural / farming properties towards Maitland northbound and to Mount Vincent Road southbound. The road is semi-rural in nature with relatively low vehicle volumes with recent residential development occurring along both sides of the road. It has a narrow road formation in several locations with no shoulders and to the north which can be impacted by flooding during extreme events. There are several intersections along Louth Park Road which are uncontrolled or have a Stop Sign restriction and are subject to poor alignment and sight distance issues. Louth Park Road does not have lane markings for much of its length but allows for a single lane of travel in each direction.</p> <p><b>Dagworth Road</b> is a rural local road which provides a link from adjacent rural / farming properties to Gillieston Heights and Cessnock Road. The road is rural in nature with low vehicle volumes and is in poor condition in several locations, with a narrow road formation along the length of the road. It has a short section of sealed road at its south-eastern end between Collaroy Road and Louth Park Road which has been upgraded as part of the on-going residential development in this area. At the time of preparing this report, Dagworth Road was closed through to Gillieston heights due to flood damage for an indefinite time period.</p> <p><b>Mount Vincent Road</b> is the main collector road for the area, which provides access to East Maitland (and associated services) northbound, and access to the M15 Hunter Expressway (Newcastle) southbound. Mount Vincent Road is a rural road and has one marked lane of travel with edge linemarking in each direction. There are only limited intersections and access points along Mount Vincent Road south of East Maitland. Mount Vincent Road has a speed limit reduction from 80km/h to 60km/h near the intersection with Louth Park Road.</p> <p>The intersection of Louth Park Road and Mount Vincent Road is a Stop Sign controlled intersection. There are sheltered right turn lanes for traffic in both directions when turning into Mount Vincent Road.</p> |
| 2.2.2 Roadworks                | <p>There are currently no planned road works in the general locality of the subject site. It is noted that Dagworth Road is closed through to Gillieston Heights due to flood damage and it is assumed that Council will be completed reconstruction work on this road in the future.</p>  |
| 2.2.3 Traffic Management Works | <p>The opening of the M15 Hunter Expressway in 2014 altered traffic patterns in this area. Mount Vincent Road now acts as a collector road providing access for Louth Park to the Expressway and onto Newcastle and the M1 Pacific Motorway. Previous discussion with Council and a review of Councils meeting minutes indicates that some upgrade works to Mount Vincent Road maybe required, as well as a re-classification of the roads</p>   |

| Item   | Comment  |
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|  | status in the regional road hierarchy. Some shoulder widening has occurred along this road post opening of the Hunter Expressway.  |
| 2.2.4 <i>Pedestrian and Cycling Facilities</i> | Pedestrian facilities are limited or non-existent in the general locality of the subject site reflective of its rural nature. A footpath is typically provided to one side of the local residential roads that allow for connection to the subject site with no footpaths provided on Louth Park Road.<br>The limited traffic volumes on Louth Park Road allow for on road cycling, but there are no facilities due to the limited road shoulder and narrow road width.  |
| 2.2.5 <i>Public Transport</i>                  | There are limited bus services available towards the northern end of the Louth Park Road, over 3 kilometres from the subject site.<br>Maitland (and East Maitland) is serviced by a rail connection on the Hunter Line which provides connection eastwards towards the suburbs of Newcastle, and westwards towards Dungog and Scone.   |
| 2.3 <i>Traffic Flows</i>                       |  |
| 2.3.1 <i>Daily Traffic Flows</i>               | Seca Solution has collected traffic data on Mount Vincent Road as part of this project (10 <sup>th</sup> February 2022) (Attachment B). In the AM peak the 2-way flow on Mount Vincent Road to the south of Louth Park Road was 915 vehicles whilst in the PM peak was 1,022.<br>The corresponding 2-way traffic flows on Louth Park Road were 273 and 276 respectively.<br>Based upon TfNSW guidelines the peak hours typically represent around 10% the daily flows, indicating the daily traffic flows on Mount Vincent Road could be in the order of 9,700 vehicles with daily flows along Louth Park Road being in the order of 2,750 vehicles per day. |
| 2.3.2 <i>Daily Traffic Flow Distribution</i>   | Daily traffic flows are reasonably evenly distributed in both directions along both Mount Vincent Road and Louth Park Road.<br>During both peak periods the surveys indicate a dominance of northbound traffic movements on Mount Vincent Road. This would indicate that there are some local trips diverting along Louth Park Road to head towards Maitland.  |
| 2.3.3 <i>Vehicle Speeds</i>                    | No vehicle speed measurements were completed as part of the project work. However, it is considered that the traffic travelling along Mount Vincent Road exceeds the posted speed limit of 60 km/h. The road environment in this location is rural and there is no change in character in the road characteristics to encourage drivers to slow down to the posted speed limit of 60 km/h in the vicinity of the intersection with Louth Park Road.<br>Vehicles speeds along Louth Park Road would appear to be within the posted speed limit of 60 km/h.  |
| 2.3.4 <i>Existing Site Flows</i>               | The site is currently vacant and does not generate any existing flows.   |
| 2.3.5 <i>Heavy Vehicle Flows</i>               | During the surveys there were limited heavy vehicle movements along Mount Vincent Road with 2-3% only during the peak periods surveyed. This is reflective of it not providing a direct route for heavy vehicles and the alignment discouraging freight through traffic movement.<br>Louth Park Road carries minor heavy vehicles associated with access only and Council refuse collection vehicles.  |

| Item   | Comment   |
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| 2.3.6 <i>Current Road Network Operation</i>      | The local road network in the vicinity of the site operates well with minimal delays and congestion. The intersection of Mount Vincent Road and Louth Park Road operates well with minor delays.  |
| 2.4 <i>Traffic Safety and Accident History</i>   | <p>A Stop Sign control has been placed at the intersection of Mount Vincent Road and Louth Park Road and the speed limit is 60km/h on Mount Vincent Road to improve safety. An auxiliary right turn lane is provided in both directions on Mount Vincent Road to allow for the passing of turning traffic.</p> <p>From observations on site it is considered that drivers on Mount Vincent Road travel at 60 km/h or more, as the road characteristics do not encourage drivers to slow down.</p> <p>Traffic accident data (Centre for Road Safety) shows that there has been a single vehicle accident at the intersection of Mount Vincent Road and Louth Park Road over a 5 year timeframe with no injuries. There have been two recorded accidents prior to the intersection resulting in serious injuries.</p> <p>There have been no accidents at the intersection of Louth Park Road and Dagworth Road in the period 2015-2020.</p> |
| 2.5 <i>Parking Supply and Demand</i>             |   |
| 2.5.1 <i>On-street Parking Provision</i>         | The new residential roads to the north and west of the site allow for on-street parking.  |
| 2.5.2 <i>Off-street Parking Provision</i>        | Parking is currently provided via off street parking areas within each residential lot in the general locality of the subject site.   |
| 2.5.3 <i>Parking Demand and Utilisation</i>      | There is some parking noted on the adjacent residential roads to the north-west of the site associated with resident and visitor demands.   |
| 2.5.4 <i>Set down or pick up areas</i>           | There are no set down or pick up areas in the vicinity of the site  |
| 2.6 <i>Public Transport</i>                      |   |
| 2.6.1 <i>Rail Station Locations</i>              | The site is located within 5km of the train station at Maitland and East Maitland.  |
| 2.6.2 <i>Bus Stops and Associated Facilities</i> | The site is not serviced by a public bus route at this time. The nearest bus service is located at the northern end of Louth Park Road and is considered to be too remote from the site to be accessible.   |
| 2.6.3 <i>Pedestrians</i>                         | There are no pedestrian facilities along Louth Park Road and a single footpath provided to one side of the new residential roads to the immediate north-west of the subject site. These new roads are designed in accordance with the Council DCP which requires a single footpath to be provided.  |
| 2.7 <i>Other Proposed Developments</i>           | Maitland Development Control Plan Part F – Urban Release Areas provides details about the Louth Park Area Plan with the region broken into 3 precincts of R5 Large Lot Residential subdivision. This development is located in the central precinct, and will be accompanied in the future by a northern precinct and a southern precinct. The precincts will be linked via a new main circulation route through the southern precinct before intersecting with Louth Park Road towards Mount Vincent Road.   |
| <b>3.1 The Development</b>                       |   |
| 3.1.1 <i>Nature of Development</i>               | The proposal is to develop the existing rural / farming land to provide 31 large lot residential subdivision. Internal roads are proposed, with a main circulation route to connect from Dagworth Road to the future southern precinct via third party lands.   |

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| 3.1.2 <i>Access and Circulation Requirements</i>  | <p>The land will be accessed via the residential land to the north to then connect to Dagworth Road to then connect to Louth Park Road.</p> <p>The design of these local residential roads allows for vehicles including Council waste collection vehicles to circulate freely around the locality and allows ease of connectivity to the external road network.</p>  |
| 3.2 Access  | <p>The site plan allows for connection directly to the adjacent residential roads that have been constructed in accordance with the Council DCP for the Louth Park Precinct. The design of the internal road network is consistent with this DCP and allows for future connections to the north and south as per the DCP.</p>   |
| 3.2.1 <i>Driveway Location</i>                    | <p>Driveways will be provided for each individual lot development and will be assessed at the development stage for each residential dwelling. There will be no direct access to Louth Park Road for any of the new dwellings. All driveways are located on the internal roads and will be provided in accordance with Council requirements.</p>  |
| 3.2.2 <i>Sight Distances</i>                      | <p>The main intersection at Dagworth Road and Louth Park Road has sufficient available sight distance based on vehicle speeds in the area. The visibility requirement for the 60 km/h speed zone is 105 metres. The road alignment of Dagworth Road is straight allowing for good visibility of the intersection and the approaches.</p> <p>The connection of the new roads as part of this subdivision allows for a continuation of the existing residential roads and as such visibility is available for drivers to safely manoeuvre in and around the subject site.</p> |
| 3.2.3 <i>Service Vehicle Access</i>               | <p>The road geometry proposed for the development will allow for service vehicle access including Council waste collection trucks. No other regular service vehicles are required due to the residential nature of the development.</p>   |
| 3.2.4 <i>Queuing at entrance to site</i>          | <p>Vehicles entering the subdivision off Dagworth Road will not be subject to vehicle delays and the proposed intersection will limit the impact of turning traffic. The connection between the subject site and the existing adjacent local roads allows for ease of access and with the low traffic flows no queues are expected to occur.</p>  |
| 3.2.5 <i>Comparison with existing site access</i> | <p>The site is currently rural / farming in nature with an unsealed connection to Dagworth Road.</p>  |
| 3.2.6 <i>Access to Public Transport</i>           | <p>Existing bus routes are located too far away from the proposed subdivision to allow convenient access. Train stations at Maitland and East Maitland will be accessed via park and ride or vehicle drop off.</p> <p>The proposed main road circulation route through the subdivision will potentially provide an opportunity for the rerouting of buses to service the subdivision in the future.</p>   |
| 3.3 Circulation                                   |   |
| 3.3.1 <i>Pattern of circulation</i>               | <p>The internal road network of the subdivision allows for access to the surrounding road network via the main road circulation route. The route links into the adjacent southern precinct which will provide access to Mount Vincent Road per the Louth Park DCP Part F.</p>   |
| 3.3.2 <i>Road width</i>                           | <p>Road widths will be provided as per the requirements in the Maitland DCP.</p>  |
| 3.3.3 <i>Internal Bus Movements</i>               | <p>The proposed main road circulation route through the subdivision will provide an opportunity for the rerouting of buses to service the subdivision in accordance with the Louth Park DCP.</p>  |

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| 3.3.4 Service Area Layout                | No service area is required due to the residential nature of the development.   |
| 3.4 Parking                              |   |
| 3.4.1 Proposed Supply                    | As the proposal is residential in nature, parking will be provided off street at each dwelling. No parking details have been provided at this time and will be assessed at the dwelling development stage. Given the large lot size, off street parking can be accommodated within each site.   |
| 3.4.2 Authority Parking                  | Maitland DCP requires a minimum of 1 parking space per dwelling but 2 is desirable.   |
| 3.4.3 Parking Layout                     | Details for individual parking layouts will be provided at the dwelling development stage.  |
| 3.4.4 Parking Demand                     | Parking demand is limited to the demand associated with residential dwellings.  |
| 3.4.5 Service Vehicle Parking            | There is no requirement for service vehicles given the residential nature of the development.   |
| 3.4.6 Pedestrian and Bicycle Facilities  | The DCP indicates required carriageway specifications which would allow for on road cycling given the low traffic volumes expected in the residential area. Grass verges will be provided on the main circulation route which will allow for pedestrian movement within the subdivision.  |
| <b>Traffic Assessment</b>                |   |
| <b>4.1 Traffic Generation</b>            | <p>Standard traffic generation rates provided by the RMS TDT2013/04a Guide to Traffic Generating Developments Updated Traffic Surveys could be applied to the development.</p> <p>The Guide indicates that low density residential dwellings have a daily vehicle trip rate of 9.25 per dwelling in regional areas, with 0.88 trips per dwelling in the AM peak and 0.97 trips in the PM Peaks.</p> <p>The traffic generation has been based on allowing up to 31 lots and provides the following traffic volumes:</p> <p>9.25 trips per dwelling = 287 daily vehicle trips total<br/>           0.88 AM trips = 27 AM peak trips<br/>           0.97 PM trips = 30 PM peak trips</p> <p>These rates reflect a worst-case scenario with all trips external to the site allowing for no containment of trips within the subdivision.</p> |
| 4.1.1 Daily and Seasonal Factors         | Given the residential nature of the development, there will be little variation in daily trips across a typical period.   |
| 4.1.2 Pedestrian Movements               | <p>Residential developments will have limited pedestrian activity apart from recreation. The internal roads allow for a single footpath in accordance with Council design standards and allows for connection to the adjacent residential roads.</p> <p>The relatively remote location of the site will discourage pedestrian activity to external locations such as Gillieston Heights or Maitland.</p>  |
| 4.2 Traffic Distribution and Assignments | <p>Directional splits and origin / destination patterns for the precinct release area adopted for this impact assessment are as follows:</p> <p>AM directional split of 85% outbound and 15% inbound;</p>   |

| Item  | Comment   |
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|   | <p>PM directional split of 15% outbound and 85% inbound;</p> <p>Based on the local attractions and the greater road network, the following split in traffic movements for the project have been determined. It is considered that a significant portion of the traffic will use Buchanan Road/ Mount Vincent Road south bound to access the Hunter Expressway to travel towards Newcastle. It is also considered a similar amount of traffic will use Buchanan Road/ Mount Vincent Road to access East Maitland and New England Highway (to then access major centres such as Greenhills and Thornton).</p> <p>Some traffic has also been assumed to use Louth Park Road to access the New England Highway for access to Maitland. Given the nature of this road and the lack of direct access into the centre of Maitland the volume of traffic expected to use this route is low.</p> <p>A small amount of traffic could head along Dagworth Road once reopened to access Cessnock Road, with this route not being popular due to the capacity constraints of Dagworth Road / Cessnock Road during the peak periods as well as the road width and lack of sealed road surface for part of the length of the road. The following splits have therefore been used for this assessment:</p> <ul style="list-style-type: none"> <li>• 20% will enter / exit from the north along Louth Park Road</li> <li>• 40% will enter / exit from the south along Mount Vincent Road (Buchanan Road)</li> <li>• 40% will enter / exit from the north along Mount Vincent Road</li> </ul> <p>It is noted that some vehicles may choose to travel west along Dagworth Road to connect with Cessnock Road although this would only represent a very small percentage of the total site flows and will not impact upon the operation of this road. The above assignment allows for a conservative approach to ensure a robust assessment is completed for the project at the critical intersection of Louth Park Road and Mount Vincent Road as well as at the intersection of Louth Park Road and Dagworth Road.</p> <p>It is also noted that in the initial stages of development, all vehicles will enter / exit the precinct via the access point at Dagworth Road. In the future when the southern precinct is complete, the main entry point will be via the new main road circulation route and exit directly onto Louth Park Road and will reduce turning volumes at the Dagworth Road / Louth Park Road intersection.</p> |
| <p>4.2.1 Origin / destinations assignment</p> | <p>Traffic wishing to head south from the development towards the Hunter Expressway (for access to Newcastle or the upper Hunter Valley) would travel along Louth Park Road and turn right onto Mount Vincent Road.</p> <p>Traffic wishing to head north towards East Maitland, Maitland and Rutherford could use Louth Park Road or Dagworth Road or Mount Vincent Road. For the purposes of this assessment the majority (80%) of this traffic has been assumed to travel via Mount Vincent Road.</p>   |
| <p>4.3 Impact on Road Safety</p>              | <p>The major impact of the development will be at the intersection of Mount Vincent Road and Louth Park Road. This intersection allows for all turning movements and this intersection was upgraded in 2018 to allow for right</p>  |



| Item                                     | Comment  |
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|  | <p>turn lanes to be provided on Buchanan Road / Mount Vincent Road to improve the capacity and remove historic accident risks in this location. Accident data off TfNSW shows that over the last 5 years there has been a single accident at this location, a significant reduction on the more historic accident data at this location. It is considered that the additional traffic associated with the project shall have an acceptable impact upon safety at this location. The remaining roads in this location are recently constructed and have been designed and constructed in accordance with Council design standards and as such are considered to provide a safe road environment for all users.</p>  |
| 4.4 Impact of Generated Traffic          |  |
| 4.4.1 Impact on Daily Traffic Flows      | <p>The proposed development will increase daily flows in the area by an additional 287 trips. Allowing for the traffic distribution and assignment above, this would increase the daily two-way vehicle volumes along Dagworth Road towards Louth Park Road by 287 vehicles (between the subject site connection to Dagworth Road and the intersection of Dagworth Road and Louth Park Road). There will be a directional split at Louth Park Road, with the majority of vehicles (80% of daily volumes) heading towards Mount Vincent Road. The increase of daily two-way traffic volumes will be in the order of 230 along the southern section of Louth Park Road. Existing daily traffic flows on Louth Road are in the order of 2,750 vehicles and the increased traffic travelling towards Mount Vincent Road (230 per day) will provide daily traffic flows on Louth Park Road in the order of 2,980 vehicles per day. With total peak hour flows in the order of 300 vehicles per hour under rural limits the level of service for Louth Park Road will remain at B, indicating stable traffic flows and drivers able to select their own desired traffic speed with minimal delays for road users. Overall, the additional traffic generated by the development will have an acceptable impact upon the overall capacity of the local road network and general operation of the road network.</p> |
| 4.4.2 Peak Hour Impacts on Intersections | <p>The major impact created by the proposed development will be at the intersection of Louth Park Road and Mount Vincent Road. As part of this project work Seca Solution has collected traffic data at this intersection during the critical morning and afternoon peak periods to allow for an assessment of the potential impacts at this location. The operation of the intersection has been assessed for the current situation (2022 flows) with and without development as well as the future 2032 situation allowing for background growth. The results of the Sidra assessment are discussed below. The Sidra modelling shows that based upon the existing alignment of the intersection, no road upgrades are required to increase the capacity of this intersection. The modelling shows that the critical right turn movements work at a level of service of C during the peak hours, with minimal delays and congestion for the current design year of 2022. The traffic modelling completed has been for the current design year plus the future design year of 2032. The growth factor applied allowed for normal background growth of 2%, which is reflective of the normal factors applied in the Lower Hunter.</p>   |

| Item   | Comment   |
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|  | <p>For the future design year of 2032, allowing for 20% background growth for traffic along Mount Vincent Road, the right turn out of Loth Park Road may operate at a level of service of D. This is due to the background growth of traffic on this road – if this rate of 2% does not occur then the intersection can continue to operate to a satisfactory level. The overall level of service in 2032 with the development traffic is A and the only potential issue is the right turn out which could operate with a level of service of D.</p> <p>Based on the current flows on Louth Park Road and the traffic on Dagworth Road, the current layout of this intersection will continue to operate to a satisfactory level with acceptable delays and minor queues.</p>   |
| <p>4.4.3 <i>Impact of Construction Traffic</i></p>         | <p>The majority of construction activities will occur within the development site. A construction traffic management plan will be required for the project and will be provided as part of the DA process with Council.</p>   |
| <p>4.4.4 <i>Other Developments</i></p>                     | <p>The proposed road network will allow for continuation of the identified southern precinct land release area and is consistent with the Council DCP for the area.</p> <p>The DCP indicates that the new intersection point should complement the northern precinct. As the intersection will become a four-way intersection in the future with Dagworth Road and the future main road circulation route, it is anticipated that this intersection should be a roundabout control at this stage. The introduction of a roundabout at this location will ensure sufficient capacity for all turning movements and will improve road safety at the location. The roundabout will only be required when the fourth leg for the northern precinct is created.</p> <p>There are no other major developments approved within the immediate vicinity of the subject site that will have a direct impact upon the operation of the road network in the immediate vicinity of the subject site.</p> |
| <p>4.5 Public Transport</p>                                |   |
| <p>4.5.1 <i>Options for improving services</i></p>         | <p>The proposed main road circulation route through the subdivision will provide an opportunity for the rerouting of buses to service the subdivision per the DCP.</p>  |
| <p>4.5.2 <i>Pedestrian Access to Bus Stops</i></p>         | <p>The proposed road alignment for the main road circulation route will provide a grass verge to allow pedestrian access. Traffic volumes within the subdivision will be of a low enough level to allow for safe access for pedestrians across intersections to access the circulation route. This is reflective of the current road design in the vicinity of the subject site and Council's design guide.</p>   |
| <p>4.6 Recommended Works</p>                               |   |
| <p>4.6.1 <i>Improvements to Access and Circulation</i></p> | <p>No improvements are proposed to allow for access and circulation. The current design takes into account the traffic flows in the locality and the principals within Council's guidelines.</p>  |
| <p>4.6.2 <i>Improvements to External Road Network</i></p>  | <p>No direct upgrade to the external road network is required as a consequence of this development.</p> <p>The DCP identifies that the new access point should provide an intersection to compliment the northern precinct. It is anticipated that a</p>  |

| Item   | Comment  |
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|  | roundabout will be required once the fourth leg is provided to the northern precinct.  |
| 4.6.3 Improvements to Pedestrian Facilities                    | No improvements are suggested for pedestrian facilities in the locality. Given the low traffic flows and the design of the road network no dedicated pedestrian facilities are required. |
| 4.6.4 Effect of Recommended Works on Adjacent Developments     | No impact upon adjacent development.   |
| 4.6.5 Effect of Recommended Works on Public Transport Services | No impacts upon public transport.  |
| 4.6.6 Provision of LATM Measures                               | None proposed.   |
| 4.6.7 Funding  | All road works associated with the development will be funded by the applicant.  |

#### Sidra analysis – Intersection of Louth Park Road and Mount Vincent Road

The operation of the intersection of Louth Park Road and Mount Vincent Road has been assessed with Sidra and the results of the analysis are presented below.

Table 1 – Sidra analysis, 2022 current situation

| Approach                          | Level of Service                        | Delay (seconds)                                 | Queue (metres) |
|-----------------------------------|---|---|----------------|
| <b>Buchanan Road (south)</b>      | A / A                                   | 1.2 / 0.7                                       | 0.0 / 0.1      |
| <b>Buttai Road</b>                | B / B                                   | 18.0 / 2.6                                      | 0.2 / 0.2      |
| <b>Mount Vincent Road (north)</b> | A (A for right turn) / A (A right turn) | 0.8 (8.2 right turn) / 1.3 (7.7 right turn)     | 1.1 / 2.4      |
| <b>Louth Park Road</b>            | B (B right turn) / B (B right turn)     | 16.0 (21.4 right turn) / 23.0 (27.8 right turn) | 9.5 / 15.0     |

Note- results for AM / PM peak

The analysis above demonstrates that the intersection currently works well with minimal delays and congestion.

Table 2 – Sidra analysis, 2022 current flows plus development flows

| Approach                          | Level of Service                        | Delay (seconds)                                 | Queue (metres) |
|-----------------------------------|---|---|----------------|
| <b>Buchanan Road (south)</b>      | A / A                                   | 1.3 / 0.7                                       | 0.0 / 0.1      |
| <b>Buttai Road</b>                | B / B                                   | 18.3 / 2.6                                      | 0.2 / 0.2      |
| <b>Mount Vincent Road (north)</b> | A (A for right turn) / A (A right turn) | 0.8 (8.2 right turn) / 1.3 (7.7 right turn)     | 1.2 / 2.4      |
| <b>Louth Park Road</b>            | B (B right turn) / B (B right turn)     | 16.7 (22.1 right turn) / 23.0 (27.8 right turn) | 11.9 / 15.0    |

Note- results for AM / PM peak

The above results demonstrate that the intersection will continue to work well with minimal delays and congestion. The additional traffic demands associated with the project shall have a minor and acceptable impact upon this intersection.

The intersection was then modelled for the future scenario of 2032, allowing for 10 years background growth along Mount Vincent Road. An annual growth rate of 2% per annum was allowed on Mount Vincent Road reflective of the overall population growth within the LGA. The results of this assessment are presented below.

Table 3 – Sidra analysis, 2032 base flows (NO development flows)

| Approach                          | Level of Service                        | Delay (seconds)                                 | Queue (metres) |
|-----------------------------------|---|---|----------------|
| <b>Buchanan Road (south)</b>      | A / A                                   | 1.1 / 0.6                                       | 0.0 / 0.1      |
| <b>Buttai Road</b>                | B / C                                   | 23.0 / 31.2                                     | 0.2 / 0.3      |
| <b>Mount Vincent Road (north)</b> | A (A for right turn) / A (A right turn) | 0.7 (9.0 right turn) / 1.2 (8.3 right turn)     | 1.2 / 2.7      |
| <b>Louth Park Road</b>            | B (B right turn) / C (D right turn)     | 20.1 (28.0 right turn) / 35.8 (42.8 right turn) | 12.4 / 22.6    |

Note- results for AM / PM peak

The above results show that the intersection will operate satisfactorily in the future 2032 design year, but noting that the right turn out of Louth Park Road will operate at a level of service of D.

Table 4 – Sidra analysis, 2032 base flows plus development flows

| Approach                          | Level of Service                        | Delay (seconds)                                 | Queue (metres) |
|-----------------------------------|---|---|----------------|
| <b>Buchanan Road (south)</b>      | A / A                                   | 1.1 / 0.8                                       | 0.0 / 0.1      |
| <b>Buttai Road</b>                | B / C                                   | 23.5 / 32.2                                     | 0.2 / 0.3      |
| <b>Mount Vincent Road (north)</b> | A (A for right turn) / A (A right turn) | 0.8 (8.9 right turn) / 1.4 (8.5 right turn)     | 1.3 / 3.3      |
| <b>Louth Park Road</b>            | B (C right turn) / C (D right turn)     | 21.6 (29.5 right turn) / 38.9 (46.9 right turn) | 16.5 / 25.6    |

Note- results for AM / PM peak

The results show that the impact of the additional traffic associated with the project shall have a minor impact upon the overall operation of this intersection. The right turn out of Louth Park Road shall suffer from a minor increase in delay (+3.1 seconds) in the PM peak and the queue shall increase on this approach by 3 metres.

2. Site Photos



Photo 1 – Louth Park Road approach to Mount Vincent Road



Photo 2 – View to right for driver exiting Louth Park Road onto Mount Vincent Road



Photo 3 – View to left for driver exiting Louth Park Road onto Mount Vincent Road



Photo 4 – Right turn lane on Mount Vincent Road for traffic turning into Louth Park Road



*Photo 5 – Existing residential roads to immediate north of the subject site. Note single footpath on right hand side of photo*

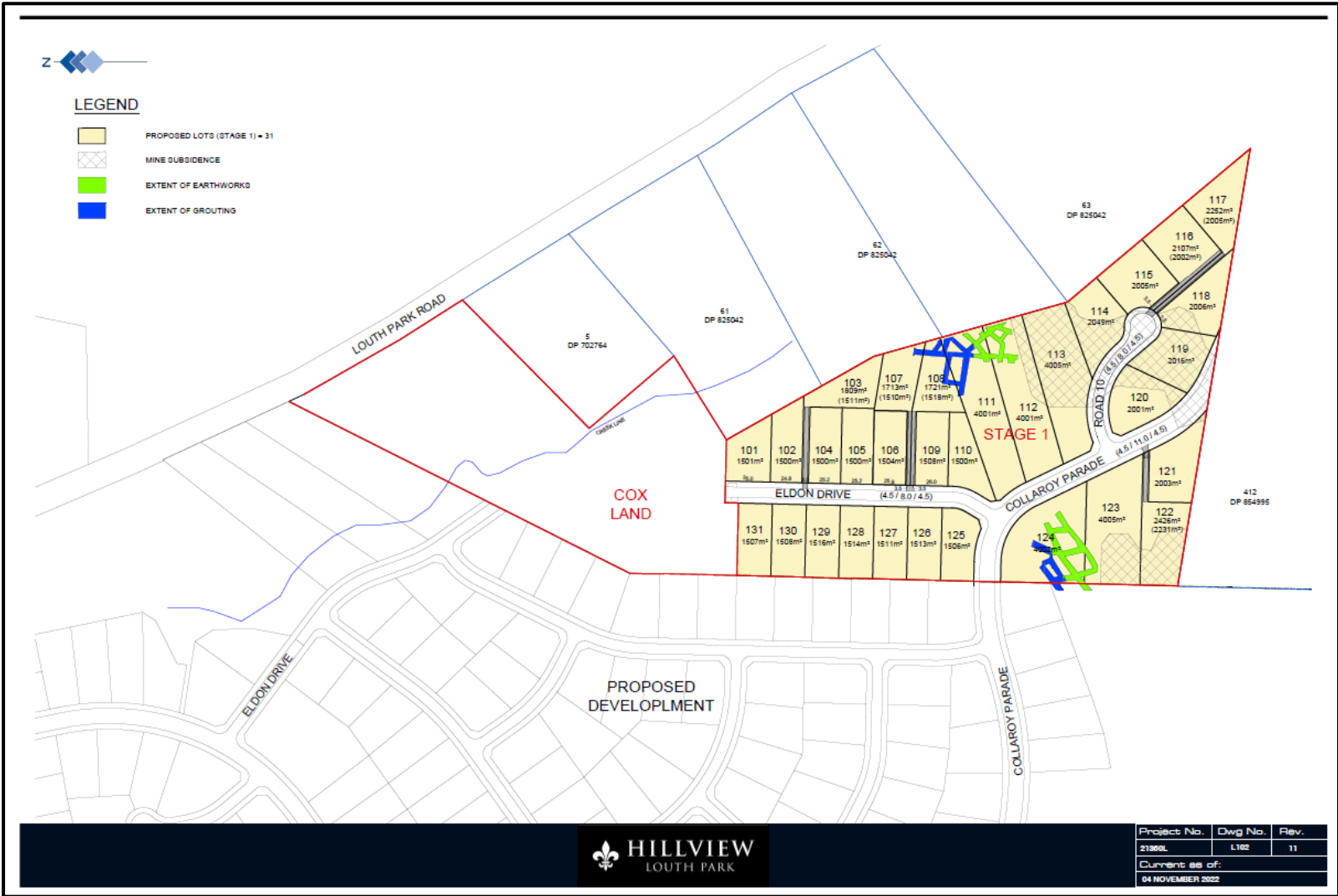
### 3. Conclusion

From the site work undertaken and the review of the development proposal and associated plans against the requirements of the RMS Guide to Traffic Generating Developments and Austroads Guide to Traffic Management together with the Louth Park DCP, it is considered that the proposed development application should be approved on traffic and access grounds. The additional traffic movements generated by the development will have a minimal and acceptable impact on the surrounding road network and site access can operate with minimal delay or congestion. It is considered that the development is consistent with the requirements of the Louth Park Development Control Plan in relation to traffic, parking and access.

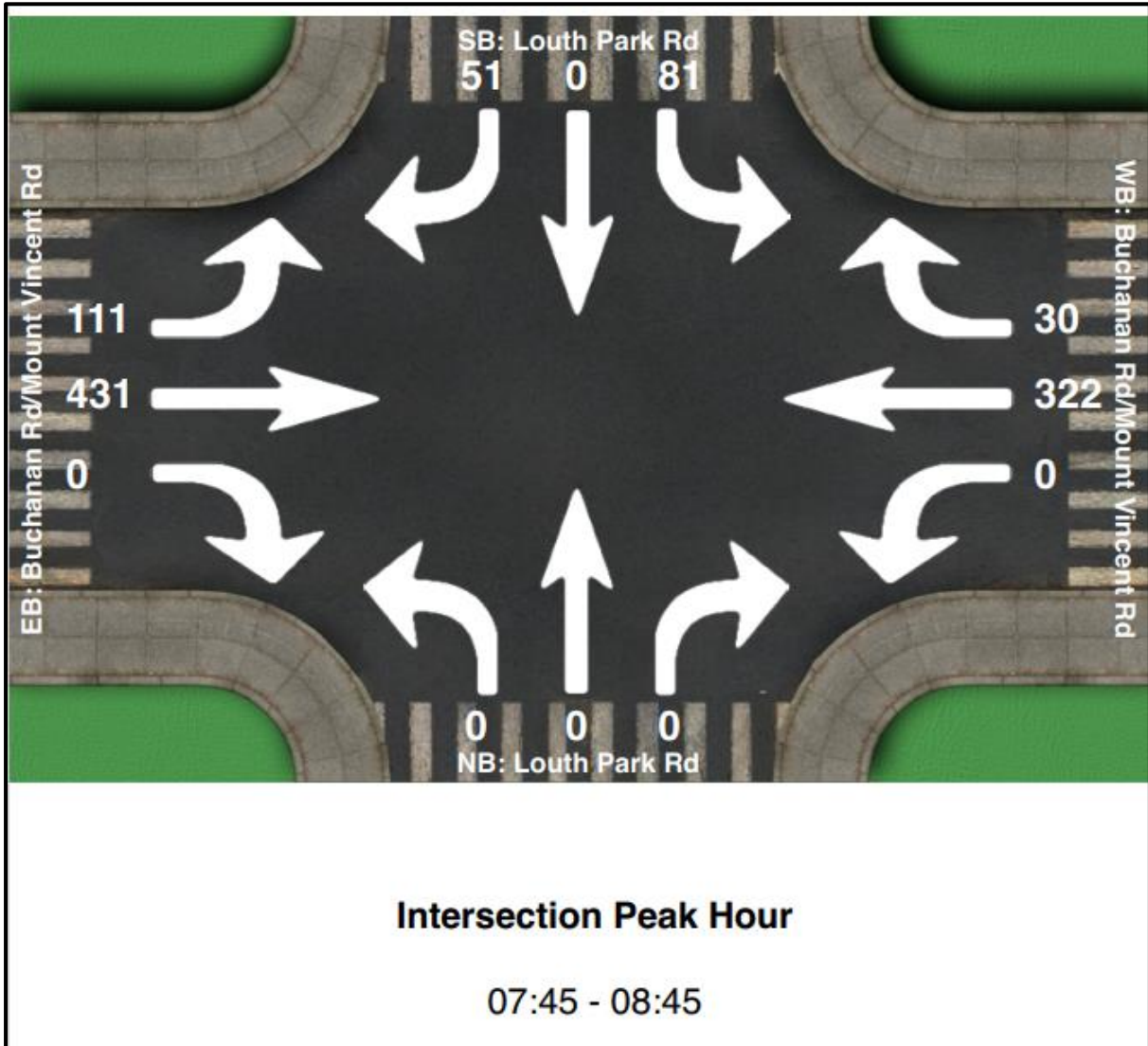
The traffic surveys and Sidra modelling completed for the project demonstrate that the intersection of Mount Vincent Road and Louth Park Road will continue to operate at an acceptable level of service allowing for the full development together with background growth through to 2032. No road upgrades are required to increase the capacity of this intersection.

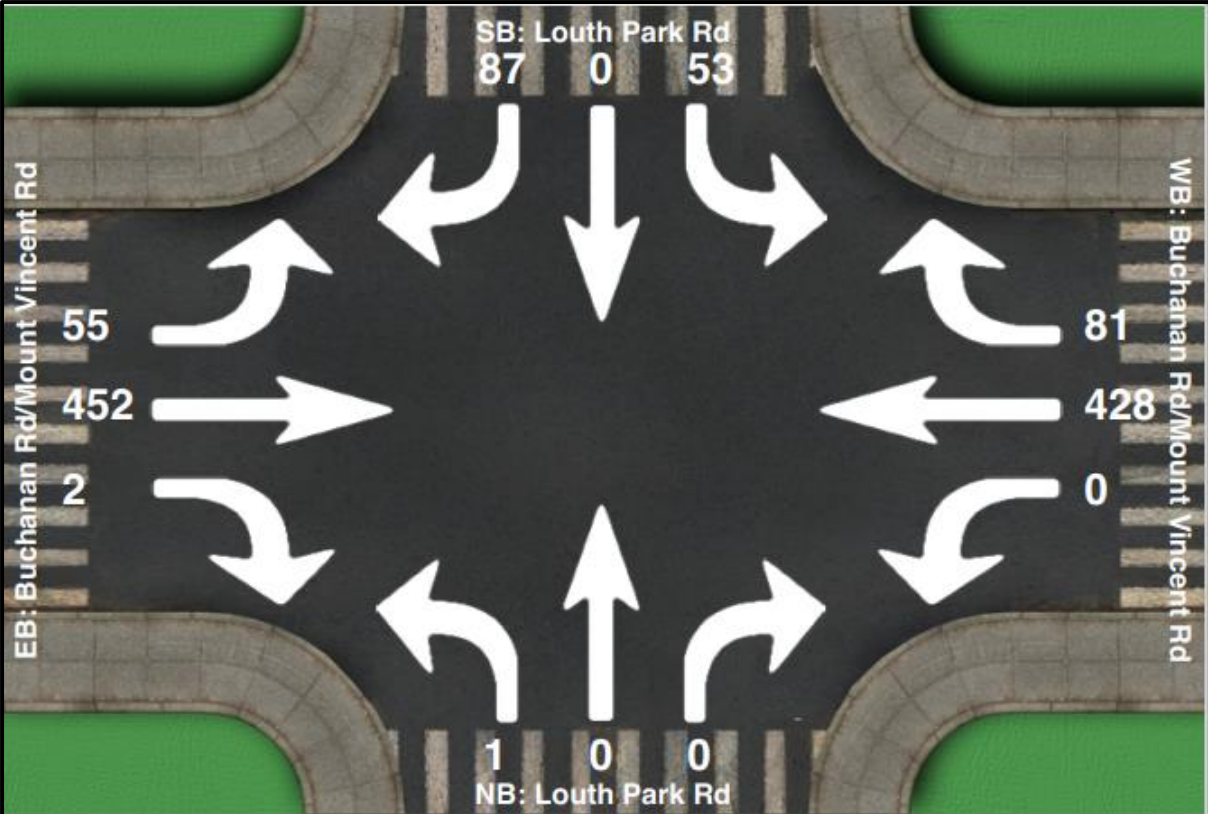


# Appendix A Site Plans



## Appendix B Traffic Surveys





**Intersection Peak Hour**

16:00 - 17:00