SAMSA CONSULTING
TRANSPORT PLANNING & TRAFFIC ENGINEERING

10th March 2017

NSW Department of Planning & Environment
Level 22, 320 Pitt Street
SYDNEY NSW 2000

Our Ref: *Minmi Rd_road safety review*
Direct line: 0414 971 956

Attention: Natasha Harras / Anthony Witherdin

Dear Natasha / Anthony,

"THE DAN LAND" DEVELOPMENT, 290-302 MINMI ROAD, FLETCHER
Road Safety Review of Project Modification Application

BACKGROUND

Concept Approval and Project Approval (*MP 06_0031*) were granted in 2006 for a residential subdivision known as 'The Dan Land' at 290-302 Minmi Road, Fletcher. The subdivision is being developed in stages and the approval included three (3) 'superlots' within Stage 10, which did not require direct access onto Minmi Road. The approval also provided for a pedestrian and cycle path along Minmi Road. Stage 10 of the development is located to the north of Minmi Road opposite Brittania Boulevard and Highland Way in Fletcher – refer to *Figure 1* below.

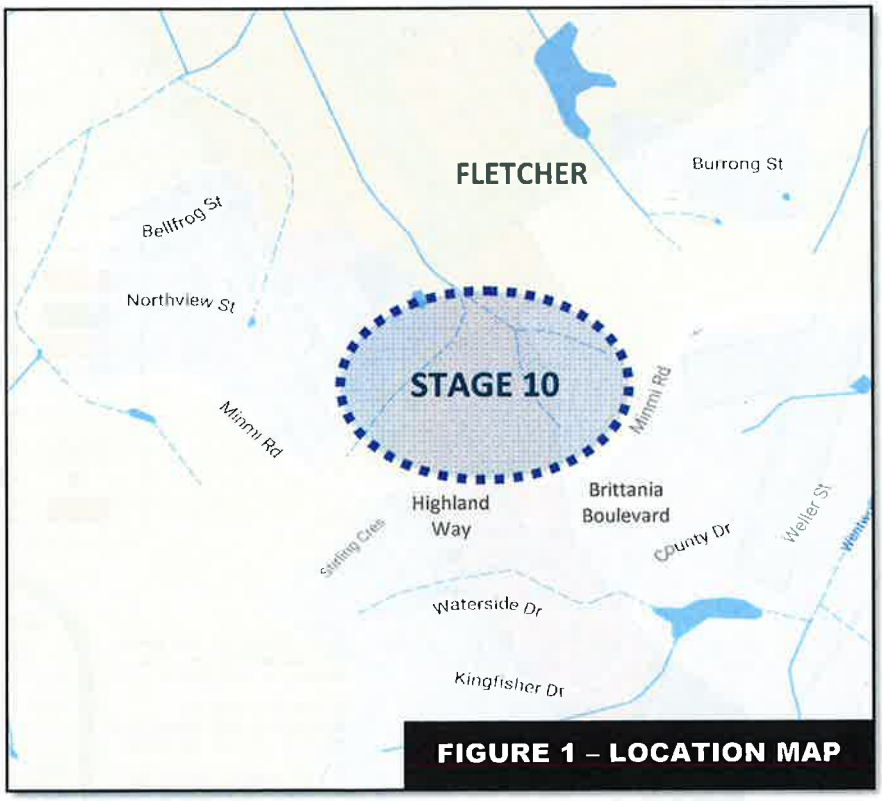

FIGURE 1 – LOCATION MAP

DEVELOPMENT PROPOSAL DETAILS

The Department is assessing a modification request (*MP06_0031 MOD 3*) seeking to convert the 'superlots' within Stage 10 to 138 individual residential allotments, of which 31 would have direct vehicular access to Minmi Road – refer to proposed site layout in *Figure 2* below. The modification will result in an increase in the overall number of lots previously approved for the estate from 400 to 435.

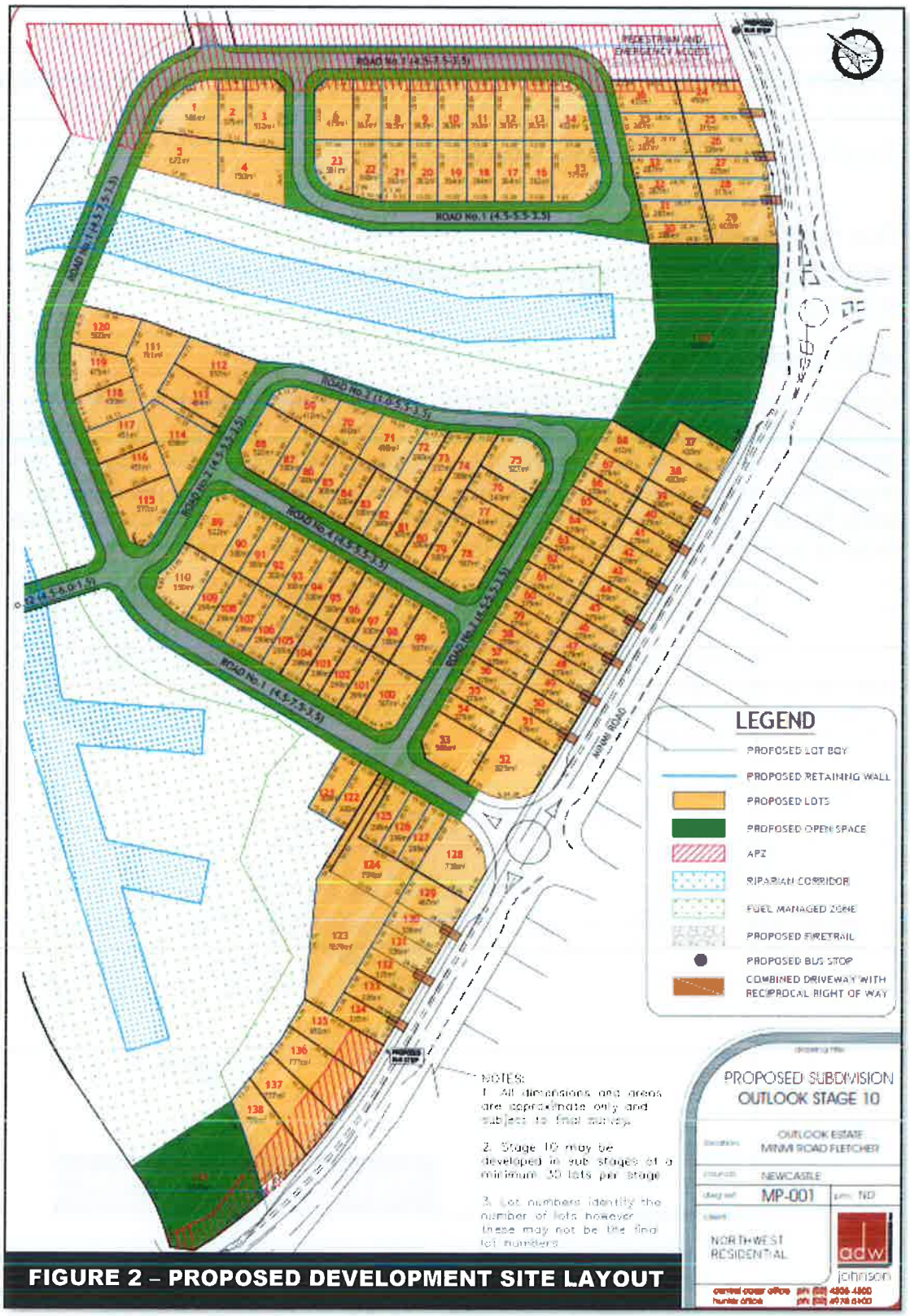

FIGURE 2 – PROPOSED DEVELOPMENT SITE LAYOUT

Newcastle City Council has raised concern that the modification would result in adverse safety impacts for pedestrians, cyclists, and vehicles on Minmi Road, particularly as traffic volumes increase in the future.

In response to Council concerns, the proponent has provided additional information from its traffic consultants and has amended the plans to reduce the number of driveway crossovers to 18 (with approximately every two dwellings sharing a driveway).

This road safety review has been undertaken by *Samsa Consulting Pty Ltd*, Transport Planning & Traffic Engineering Consultants, and is in response to a request to provide advice as to whether the proposed modification would result in unacceptable traffic and pedestrian safety impacts on Minmi Road in the long term.

The scope of the review is as follows:

- Review and consider the proposed modification and the supporting documentation submitted by the proponent and submissions from Newcastle Council.
- Where necessary, request additional information from the proponent or Council to clarify any issues or technical details.
- Provide written advice to the Department, with clear reasoning as to whether the proposed modification is acceptable with regards to potential safety impacts from new dwellings gaining access from Minmi Road.

DOCUMENTS REVIEWED

The following documentation was reviewed:

- Australian Standard "*AS 2890.1:2004, Parking facilities, Part 1: Off-street parking*"
- AustRoads "*Guide to Traffic Management, Part 11: Parking*", 2008
- Commonwealth of Australia "*AMCORD – A National Resource Document for Residential Development*", 1997
- City Plan Services "*The Dan Land, 290 and 302 Minmi Road Fletcher - Section 75W Application to Modify Concept Plan 06_0031*", letter correspondence dated 12/07/2016, 21/12/2015 and 25/08/2016
- GHD "*Outlook Estate Stage 10: Traffic Impact Assessment*", December 2015
- Newcastle City Council "*Newcastle Development Control Plan 2012: Section 7.03 – Traffic, Parking and Access*", 15 June 2012 (amended 24 October 2016)
- Newcastle City Council "*Modification to Concept Plan Approval for Dan Land 290 & 302 Minmi Road Fletcher (MP06_0031 MOD 3)*", letter correspondence dated 10/08/2016, 11/02/2016, 22/01/2016 and 22/09/2015
- Seca Solution "*Review of access issues, Outlook Estate, Minmi, NSW*", technical advice dated 2/09/2016 and 7/06/2016

REVIEW FINDINGS

Existing Road Network

- Minmi Road in the vicinity of the subject development site has a sub-arterial function servicing minor collector roads from residential centres, eg. Brittania Boulevard and Highland Way. The carriageway incorporates two 3.5 m wide travel lanes, a wide parking lane on the southern side and a relatively narrow paved shoulder area on the northern (development site) side. There is a single-lane roundabout at Brittania Boulevard and a 'give way' controlled T-junction at Highland Way.
- Minmi Road has a 60 km/h speed zone adjacent to the subject development site with a speed zone change to 70 km/h approximately 200 m west of Highland Way. Street lighting is provided and there is a footpath along the southern side of Minmi Road. There is no bicycle infrastructure although there is a short section of footpath along the northern side of the Brittania Boulevard roundabout that allows eastbound cyclists to bypass the roundabout.
- Current daily traffic volumes along Minmi Road are in the order of 8,000 vehicles per day with peak hour volumes of up to 800 vehicles per hour with a 4% heavy vehicle component[1].
- Based on site observations during AM and PM peak travel periods, existing intersection performance at the Minmi Road intersections with Brittania Boulevard and Highland Way is considered to be adequate with significant spare capacity available – this is corroborated by the level of service (LoS) A evaluated by the GHD traffic study[2]. Crash history does not indicate any significant road safety issues.
- Bus route 260 is the only service that operates along Minmi Road with two bus stops located adjacent to the subject development site – one on the northern side of Minmi Road at Highland Way, and another on the southern side of Minmi Road close to Britannia Boulevard.

Road Safety Issues

- It is considered that the proposed roundabout at Minmi Road / Highland Way and the 60 km/h speed zone will help control traffic movements and road safety along Minmi Road in the vicinity.
- The alignment of Minmi Road provides for adequate sight distance in both directions for drivers entering and exiting the proposed driveways. Vehicle speeds entering and exiting the driveways are very low and sight distance for path users and drivers is adequate.
- Drivers entering and exiting properties are required to give way to path users and there is an expectation / familiarity by residents that paths crossing driveways would be used. Also, path users on paths crossing driveways would be aware of vehicle movements across the path and ride accordingly. Path users are generally slow speed cyclists / pedestrians and typically not used by cyclists travelling at speed, who would travel on-road.
- While it would be preferable to have rear access via an internal street for all lots currently fronting Minmi Road due to its road network function and traffic volumes, the existing direct access off each residential lot on the southern side of Minmi Road would still be evident with all of the inherent road safety issues that have been raised by direct Minmi Road access from the lots in the proposed development on the northern side, ie. right-turn entry movements, reverse exit movements, pedestrian / cyclist conflicts with vehicular driveway movements, etc. It could be argued that having a similar direct access arrangement on both sides of Minmi Road would

1 October 2015 traffic data from GHD "*Outlook Estate Stage 10: Traffic Impact Assessment*", December 2015
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benefit access to both sides of the road by slowing traffic (even though it is within a 60 km/h speed zone) and creating a 'local' feel to the road network where turning movements into and out of residential lots (including reversing exit movements) are expected by drivers and pedestrians / cyclists using the footpath area.

- The proposed combined driveway treatment proposed reduces the number of driveway crossovers to 18 from 31. It is considered that this treatment would only marginally mitigate the conflicts between vehicles accessing the proposed lots and path users crossing the driveways because there would still be the same number of vehicle movements crossing the path, albeit at 18 consolidated locations rather than 31 locations.
- It is understood that a parking lane (wide shoulder area) is to be provided along the northern side of Minmi Road, similar to the southern side. It is considered that this is a desirable treatment, which would increase the carriageway width to help with access into and out of the proposed lots, especially for reversing exit movements. Related to the parking lane, it is unclear whether the location of driveways for the relatively narrow lots would allow adequate lengths between driveway crossings for vehicles to park on-street.
- The issue of reversing exit movements for properties with direct access off Minmi Road could potentially be resolved by requiring those vehicles to enter and exit Minmi Road in a forward direction only, ie. for properties to have an on-site turn-around area. Moreover, turn-around areas are preferred for lots 111, 123 and 124 to facilitate exit movements in a forward direction because of their long driveways. Notwithstanding, it is acknowledged that on-site turn-around areas may be impractical.
- The proposed 5.5 m carriageway width along the development's internal road network is considered to be marginal. While it satisfies AMCORD guidelines (where traffic is less than 1,000 vehicles per day), the 5.5 m width barely allows two vehicles to pass and would not be suitable for larger vehicles, eg. bus route. Any on-street parking would reduce the carriageway width and therefore, would need to be controlled.
- It is understood that a pedestrian crossing facility is proposed to enable the safe crossing of Minmi Road for pedestrians crossing between bus stops on both sides of the road as well as between the proposed Stage 10 development and the local retail centre on the south-eastern side of the Minmi Road / Brittania Boulevard roundabout.
- Independent road safety audits should be undertaken as part of the design finalisation, pre-opening and/or post-opening phases of the proposed development to identify any significant road safety issues.

CONCLUSIONS

This road safety review and assessment of the subject development concludes that direct access off the northern side of Minmi Road would not create any significant road safety issues due to the following reasons:

- The road environment along Minmi Road is relatively low speed (60 km/h).
- The relatively low speed environment will be controlled / maintained by the existing and proposed roundabouts along Minmi Road at Brittania Boulevard and Highland Way (respectively).
- The alignment of Minmi Road provides for adequate sight distance in both directions for drivers entering and exiting the proposed driveways.
- Vehicle speeds entering and exiting the driveways are very low and sight distance for path users and drivers is adequate. Drivers entering and exiting properties are required to give way to path users and there is an expectation / familiarity by residents that paths crossing driveways would be used and vice versa for path users.
- There is existing direct access off the southern side of Minmi Road, which appears to operate satisfactorily and sets a precedent for the local road environment. Direct access is also common in many other suburban areas.

If you have any queries with respect to the above, please do not hesitate to contact the undersigned.

Yours faithfully,

ALAN SAMSA
Fellow, Institute of Engineers Australia (FIEAust)
Chartered Professional Engineer (IEAust): NPER (1151361)
RMS Accredited Road Safety Auditor: Level 3 Lead Auditor (Auditor ID: RSA-02-0056)
Fellow, Australian Institute of Traffic Planning & Management (FAITPM)
Certified Transport Planner (CTP)
Member Institute of Transportation Engineers (ITE)

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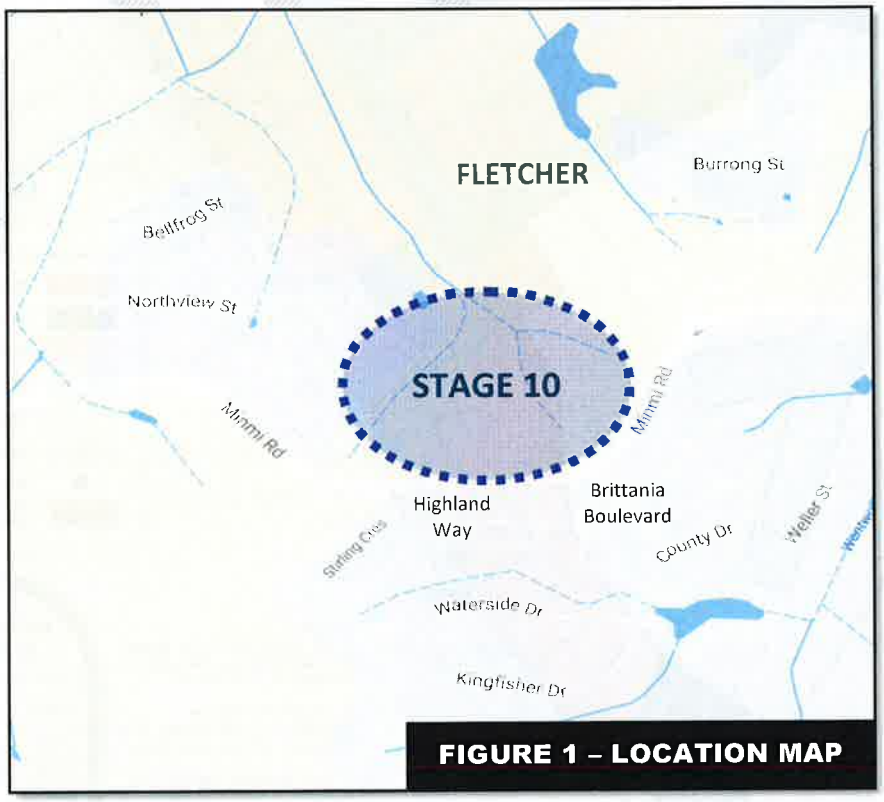

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- The issue of right-turn entry movements could potentially be resolved by providing some form of physical median restriction / barrier preventing right-turns and forcing drivers to use the existing and proposed roundabouts at Brittania Boulevard and Highland Way respectively, to turn-around and enter residential lots on both sides of Minmi Road via a left-turn.
- It is unclear whether a parking lane (wide shoulder area) is to be provided along the northern side of Minmi Road, similar to the southern side. It is considered that this would be a preferred treatment, which would increase the carriageway width to help with access into and out of the proposed lots, especially for reversing exit movements. Related to the parking lane, it is unclear whether the location of driveways for the relatively narrow lots would allow adequate lengths between driveway crossings for vehicles to park on-street.
- The issue of reversing exit movements for properties with direct access off Minmi Road could potentially be resolved by conditioning those vehicles to enter and exit Minmi Road in a forward direction only, ie. for properties to have an on-site turn-around area. Moreover, turn-around areas are preferred for lots 111, 123 and 124 to facilitate exit movements in a forward direction because of their long driveways.
- A suitable pedestrian crossing facility(ies) should be considered to enable the safe crossing of Minmi Road for pedestrians crossing between bus stops on both sides of the road as well as between the proposed Stage 10 development and the local retail centre on the south-eastern side of the Minmi Road / Brittania Boulevard roundabout.
- Consider conditioning independent road safety audits as part of the design finalisation, pre-opening and/or post-opening phases of the proposed development to determine any significant road safety issues.

CONCLUSIONS

The following has been concluded from a road safety review and assessment of the subject development.

- While it would be preferable to have rear access for all lots proposed to front Minmi Road, it is considered that direct access would not create any significant road safety issues. This is because drivers entering and exiting properties are required to give way to path users and there is an expectation / familiarity by residents that paths crossing driveways would be used and vice versa for path users.
- The existing direct access off each residential lot on the southern side of Minmi Road sets a precedent for the local road environment, which is also common in many other suburban areas.
- A number of measures should be considered / investigated with the aim being to mitigate specific road safety issues. These include:
  - Restricting right-turn movements with a physical central median between Britannia Boulevard and Highland Way.
  - Providing a parking lane (wide shoulder area) along the northern side of Minmi Road.
  - Conditioning all access movements between the proposed properties and Minmi Road to be in a forward direction only, ie. provide an on-site turn-around area.
  - Provide a suitable pedestrian crossing facility(ies) to enable the safe crossing of Minmi Road.
  - Conditioning independent road safety audits as part of the design finalisation, pre-opening and/or post-opening phases of the proposed development.

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