Attachment D

09 October 2025

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Hughes Developments Limited
c/- Davie Lovell Smith

Attention: Alice Burnett

By email: s 9(2)(a)

Dear Alice,

160 BANGOR ROAD, DARFIELD
FAST TRACK REFERRAL APPLICATION
TRANSPORT OVERVIEW

1. Hughes Developments Limited (HDL) has commissioned Novo Group to prepare a high-level Transport Assessment (TA) for a Fast Track Referral Application in relation a proposal which would enable approximately 700-800 residential lots, provision for one commercial lot (noting the exact activity would require separate resource consent), and associated infrastructure at 160 Bangor Road and Lot 2 DP 81020, Darfield.

Background

Location and Zoning

2. The Site comprises approximately 130.4ha and is located on the northwestern periphery of Darfield, as shown in **Figure 1**, and is bounded by West Coast Road (State Highway 73) and Bangor Road (State Highway 77).

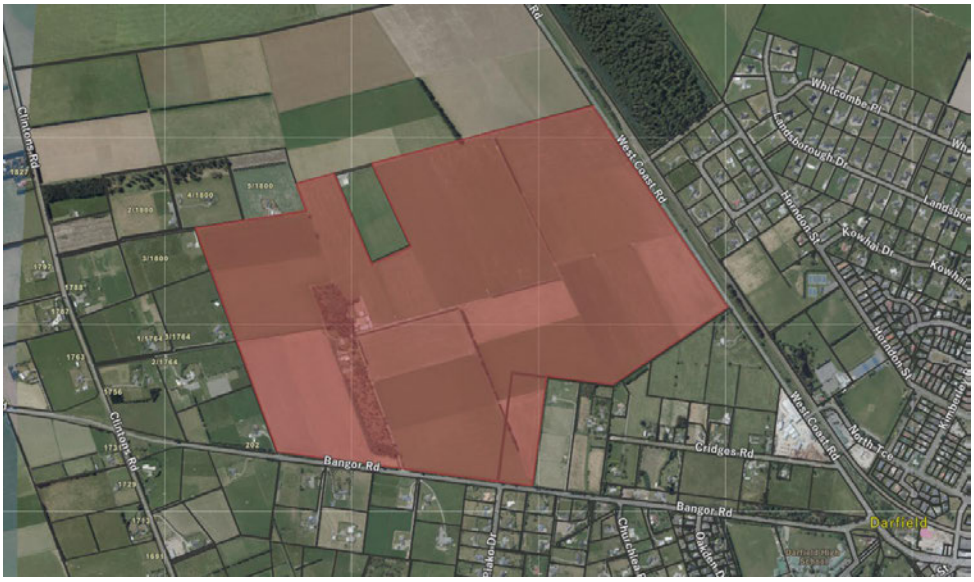

Figure 1. Locality of the Site (Canterbury Maps).

3. The Site is currently zoned *Large Lot Residential* in the Partially Operative Selwyn District Plan (Plan) and is subject to the Darfield DEV-DA3 Development Area (DEV-DA3), as shown in **Figure 2**.

Figure 2. Darfield DEV-DA3 Development area (partially operative Selwyn District Plan).

Existing Road Network

Road Characteristics

4. The key characteristics of Bangor Road and West Coast Road are summarised in **Table 1**.

Table 1. Summary of road characteristics.

Key Feature	Bangor Road (State Highway 77)	West Coast Road (State Highway 73)
Road Classification	State Highway	State Highway
Cross-section Description	Approximately 8.6m wide carriageway, allowing for two 3.5m wide traffic lanes and 0.8m wide sealed shoulders	Approximately 9.0m wide carriageway, allowing for two 3.5m wide traffic lanes and two 1.0m wide sealed shoulders
Traffic Volumes (veh/d)[1]	2,529	5,869
Speed Limit (km/h)	80/100 (80/100 threshold is approximately 163m west of Piako Drive)	100
Pedestrian Infrastructure	A 1.8m wide footpath is provided on the southern side of Bangor Road, from immediately east of Piako Drive to McLaughlins Road.	None available.
Cycle Infrastructure	None available.	None available.
Public Transport	None available.	None available (a bus stop is located opposite the art gallery on South Terrace (being the section of State Highway 73 that extends through Darfield township)).

Bangor Road/West Coast Road Intersection

5. The intersection of Bangor Road and West Coast Road is a stop-controlled T-intersection with a right-turn bay and left-turn slip lane on West Coast Road, right-turn and left-turn lane on Bangor Road, and a median island on Bangor Road, as shown in **Figure 3**.

Figure 3. Layout of the West Coast Road/Bangor Road intersection (Canterbury Maps).

[1] State highway traffic monitoring – annual average daily traffic (2024)

Bangor Road/Piako Drive Intersection

6. The intersection of Bangor Road and Piako Drive is a give-way controlled T-intersection, as shown in **Figure 4**.

Figure 4. Layout of the Bangor Road/Piako Drive intersection, with the Site to the immediate north of Bangor Road (Canterbury Maps).

Crash History

7. The NZ Transport Agency Crash Analysis System (CAS) has been reviewed to identify crashes that have been reported along the Site frontages and intersections in the vicinity of the Site, as shown in **Figure 5**. This review has been undertaken for the most recent five-year period (10/06/2020 - 10/06/2025).

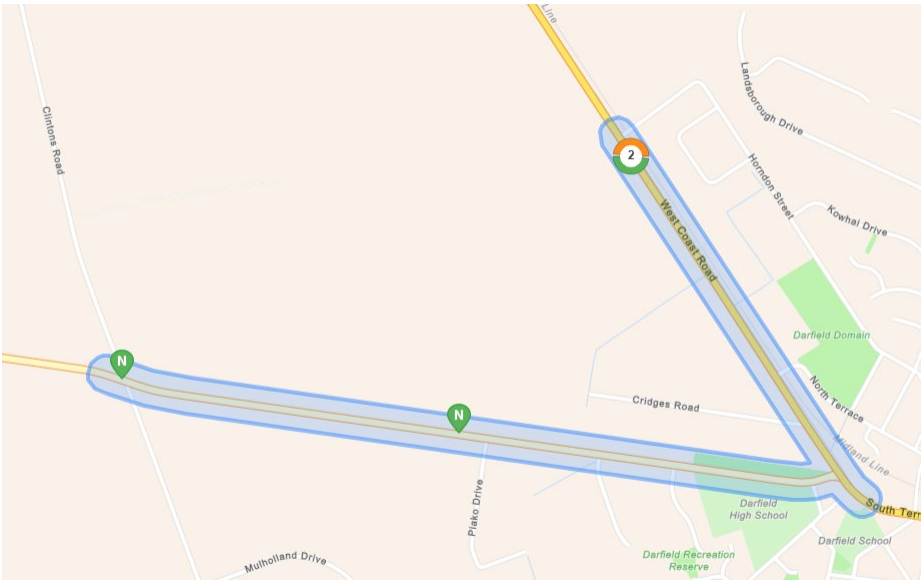

Figure 5. CAS Search area and location of reported crashes (CAS).

8. In total, four crashes have been reported within these search parameters. These are summarised as:

- A non-injury crash where a car travelling westbound on Bangor Road lost control and hit a fence. The driver lost control avoiding an animal on the road.
- A non-injury crash where a car travelling eastbound on Bangor Road lost control and hit a hedge. Alcohol was suspected to be a contributing factor.
- A serious injury crash where a motorcyclist travelling north westbound on West Coast Road lost control. A brake issue was suspected to be a contributing factor.
- A non-injury crash where a car travelling north westbound on West Coast Road lost control turning right and hit ended up in a waterway. Speed and the driver being from overseas were suspected to be contributing factors.

9. There is no trend in the reported crash history that would suggest there are inherent safety issues along the Site's road frontages or at the nearby intersections that will be exacerbated by the proposal.

Alternate Transport Modes

Pedestrian/Cycle Network

10. A 1.6m wide footpath is provided on the southern side of Bangor Road, between Piako Drive and McLaughlins Road (which is east of Piako Drive), shown in red dash below in **Figure 6**.

Figure 6. Extent of the footpath on the southern side of Bangor Road.

11. No pedestrian infrastructure is provided on West Coast Road along the Site frontage. Footpaths are provided along both sides of South Terrace (being the section of State Highway 73 within the Darfield town centre), which joins to the Bangor Road footpath at McLaughlins Road.

12. No dedicated cycle infrastructure is provided.

Public Transport

13. There are no public transport links within the vicinity of the Site; however, there is a bus stop on South Terrace, opposite the Darfield Art Gallery. This services the Metro 86 route, which provides connections to West Melton and through to the Christchurch City Centre. However, this service currently has one city-bound trip per day (in the AM) and one return trip (in the PM).

Proposed Development

Summary

14. HDL proposes to develop the Site into approximately 700-800 residential lots, one commercial lot (anticipated to be a supermarket) near Bangor Road, and associated infrastructure (the Proposal). It is understood that larger lots of at least one hectare will be located around the perimeter of the Site, and lot sizes will decrease to no smaller than 650m^2 near the middle of the Site.

15. The Proposal will be supported by the construction of multiple new roads, access reserve strips, and reserves, which are to be vested in Selwyn District Council (Council). The Site will have access to Bangor Road at two locations, with the remaining roads providing circulation around the Site.

Traffic Generation

Residential

16. The anticipated traffic generation of the proposed residential lots has been based on trip rates surveyed from 202 dwellings in West Melton[2]. These are considered to be a good proxy for the Proposal, as both areas are located a reasonable distance from Christchurch (as a major employment centre) and have similar existing development scale. It is noted, however, that Darfield also includes a high school, meaning there will be a lower number of trips to/from areas outside of Darfield for education purposes. The adopted rates from the West Melton survey are the 85th percentile peak hour rates and average daily rates on a per dwelling basis. These rates have been used in conjunction with an anticipated yield of 800 lots as part of the Proposal. The resulting anticipated traffic generation of the proposal is summarised in **Table 2**.

Table 2. Summary of traffic generation rates and resulting traffic generation.

Period	Rate (per dwelling)	Resulting Traffic Generation
Morning Peak (veh/h)	0.65	520
Afternoon Peak (veh/h)	0.74	592
Daily (veh/d)	5.85	4,680

17. The Institute of Transport Engineers *Trip Generation Manual* (ITE Manual) provides arrival and departure splits for residential dwellings during the morning and afternoon peak periods. These have been applied to the anticipated peak hour traffic volumes of the site (refer to **Table 2**), as summarised in **Table 3**.

[2] This was a weeklong survey in June 2022, with the accesses at Brinsworth Avenue, Rotherham Drive and Rossington Drive counted.

Table 3. Estimated arrival and departure splits during the morning and afternoon peak periods.

Peak Period	% Arrivals	% Departures	Arrivals (veh/h)	Departures (veh/h)
Morning	20	80	104	416
Afternoon	63	37	373	219

18. These arrival and departure splits will be distributed between the two road connections that will connect the Site to Bangor Road. An additional road connection to West Coast Road, via adjoining land at 3481 West Coast Road is anticipated by the Plan, but provision of that connection is not included as part of the Proposal so has not been considered for the purpose of this TA. It is assumed that the majority of traffic leaving the site during the morning peak period will head towards Christchurch or the commercial area of Darfield. This will result in a high proportion of the traffic turning left onto Bangor Road and then right at the Bangor Road/West Coast Road intersection. The reverse will happen in the evening peak period, where a high proportion of the traffic returning to the site will turn left at the Bangor Road/West Coast Road intersection and then right into the site from Bangor Road.

19. The daily traffic volume along Bangor Road suggests vehicles will be able to turn to/from the site accesses with minimal delay. Similarly, vehicles turning left from West Coast Road onto Bangor Road will be able to do so without delay.

20. Detailed modelling will need to be undertaken to establish the extent of upgrades required along Bangor Road, the extent of delay for vehicles turning right from Bangor Road to West Coast Road, and any upgrades required at the Bangor Road/West Coast Road intersection. However, the following points are noted:

    - The Bangor Road corridor is 20.0m wide and there is no footpath infrastructure along the site frontage; therefore, there is sufficient space to widen the road to accommodate right-turn bays, with suitable stacking length, at the site accesses.

    - There is sufficient space at the Bangor Road/West Coast Road intersection (approximately 51.0m diameter) to accommodate a roundabout or other type of intersection upgrade if required.

Commercial (Supermarket)

21. One commercial lot is proposed near Bangor Road, with access proposed via an internal road. This is anticipated to accommodate a supermarket, although the conditions of the resource consent will allow for a range of Local Commercial activities.

22. The New Zealand Transport Agency's (NZTA) Research Report 453 *Trips and parking related to land-use* provides peak hour and daily trip generation rates for a variety of different land uses. The relevant figures from that Report are the 85th percentile trip rates of 17.9 vehicle trips per hour per 100m^2 gross floor area (GFA), and 129 vehicle trips per day per 100m^2. Further to this, it is considered that some of the traffic associated with the supermarket will already be on the network in the vicinity of the Site; therefore, the following pass-by and diverted rates[3] have been adopted from the ITE Manual:

[3] Pass-by traffic is typically already on the frontage road of the activity (e.g., proportion of subdivision traffic) and diverted traffic is typically in close proximity to the Site.

- Pass by trips: 36%
- Diverted trips: 38%

23. The above rates only include the afternoon peak hour. Therefore, traffic generated in the morning peak hour is assumed to be wholly new to the surrounding road network, albeit the morning peak generation is anticipated to be less than the PM peak. The pass-by and diverted rates have been applied to the peak hour traffic generation rate of the supermarket activity (being 17.9 vehicle trips per hour per 100m^2 GFA) and is summarised in **Table 4**.

Table 4. The proportion of pass-by, diverted, and new trips during the afternoon peak period.

Trip	Peak Hour Traffic Rate (veh/h/100m^2)
Pass-by	6
Diverted	7
New	5

24. At this stage, the lot size and the scale of the commercial activities are unknown. However, an assessment of the likely scale of commercial activity and associated transport effects will be included in the Integrated Transport Assessment that supports the substantive application under the Fast Track process.

Design Considerations

25. An indicative site layout is provided in **Attachment 1**. This will be developed further for the substantive stage, including the design considerations discussed in the following sections.

Internal Roads

26. The applicable design standards for internal roads within residential developments primarily depend on the nature and anticipated density of the development. In this instance, the Site is zoned *Large Lot Residential,* and the applicable road formation and operation standards for roads within that zone are shown in **Table 5**.

Table 5. Summary of relevant road formation and operation standards for roads in the *Large Lot Residential zone.*

Road Type	Legal Width (m)	Carriageway Width (m)	Traffic Lanes	Parking Lanes	Provision for Cyclists	Provision for Pedestrians
Collector	20 - 25	11 -12	2	1	Yes	Yes – both sides
Local	18 - 20	6 - 6.5	2	N/A	N/A	Yes – one side
Cycle/Pedestrian Accessway	6 - 10	2.5 - 3	N/A	N/A	Yes	Yes

27. The proposed density of the Site is more typical of the *General Residential* zoning in the Plan (compared to the current *Large Lot Residential* zoning). As such, while the *Large Lot Residential zoning* standards apply to the Proposal for the purposes of assessment, the standards which apply to the *General Residential zoning* have informed the design of the internal roading network for the Proposal. This is because they provide for a carriageway width that is sufficient to accommodate parking on at least one side.

28. **Table 6** summarises the required road formation and operation standards in the *General Residential zone* from the Plan.[4] As that table illustrates, the only differences between the standards which apply to the *Large Lot Residential zone* and the *General Residential zone* relate to the width of *Local Roads* and the requirement for parking lanes.

Table 6. Summary of relevant road formation and operation standards for roads in the *General Residential zone.*

Road Type	Legal Width (m)	Carriageway Width (m)	Traffic Lanes	Parking Lanes	Provision for Cyclists	Provision for Pedestrians
Collector	20 - 25	11 - 12	2	1	Yes	Yes – both sides
Local	13 - 20	7.5 - 8	2	1	No	Yes – one side
Cycle/Pedestrian Accessway	6 - 10	2.5 - 3	N/A	N/A	Yes	Yes

29. In relation to the Proposal:

a. The internal road network will include comprise *Collector Roads*, *Local Roads,* and private accessways.

b. The road corridors for the Proposal will comply with the requirements of the District Plan and carriageways will be at least 8.0m wide. This will ensure that footpaths, cycle infrastructure, and /or additional on-street parking can be accommodated within the road corridor or carriageway in the future. It also avoids access issues for emergency services and refuse collection vehicles caused by poor on-street parking etiquette, where through lanes can be reduced to less than 3.0m when vehicles are parked immediately opposite each other on both sides.

c. The provision of parking when it is only required on one side should be provided on the side with denser development. A shared-use path shall be provided on one-side of the *Collector Roads* and within proposed pedestrian/cycle access reserves.

Intersection Spacing

30. The DP requires *Collector Roads* in a 50km/h zone to be separated by at least 123.0m.[5] It is anticipated that this will be achieved for all *Collector Roads* proposed.

31. No minimum intersection separation is provided in the DP for *Local Roads*. However, the 2021 revision of Austroads *Guide to Road Design Part 4: Intersections and Crossings* –

[4] Partially Operative Selwyn District Plan, TRAN-TABLE 7
[5] Partially operative Selwyn District Plan, TRAN-TABLE 8.

General states that *'Desirably, intersections should be separated by at least five seconds of travel time at the design speed'*. NZS4404:2010[6] recommends a target operating speed for residential suburban local roads of 40km/h. Allowing for an additional 10km/h design speed above this (i.e. 50km/h), a desired intersection separation of 69.0m would be acceptable. We also note that the Christchurch Infrastructure Design Standards permits a separation of 40.0m between local road intersections, suggesting this would also be acceptable.

Future Connection to Adjoining Properties

32. The Plan, through its Development Areas, anticipates roading connections to neighbouring sites. These connections are not currently available and therefore are not relied on as part of this Proposal. However, it is important to ensure that connections are provided to ensure the proposal is well connected to the evolving network around it, if and when this develops. These connections have been indicated in the indicative layout provided in **Attachment 1**. For context, the following provides some commentary regarding these development areas.

Cridges Road

33. There are two lots to the east of the Site that are zoned *Large Lot Residential* and subject to DEV-DA6 – Darfield 6 Development Area (DEV-DA6) in the DP. This includes an indicative road connection between the Site and Cridges Road (see **Figure 7**) through both blocks.

[6] New Zealand Standard for Land Development and Subdivision Infrastructure – 2010.

Figure 7. DEV-DA6 north-west development area (partially operative Selwyn District Plan).

34. Cridges Road is a cul-de-sac road within the *Large Lot Residential zone*. The road currently has a carriageway width of approximately 4.3m, within a 20.0m road corridor, which is insufficient for two-way traffic flow. Consequently, if the Site was to be connected to Cridges Road in future (as anticipated by DEC-DA6), the Cridges Road carriageway would need to be widened in accordance with the standards outlined in TRAN-TABLE7 of the Plan. Based on the surrounding zoning, this would require the road to have a minimum carriageway width of 6.0m, noting on-street parking does not need to be accommodated in this zone.

35. The carriageway of Cridges Road has been shaped to intersect the West Coast Road carriageway at 90-degrees for eastbound traffic. However, visibility to the northwest is poor due to planting on the corner of 3459 West Coast Road which extends to the northern side of the Cridges Road carriageway at the State Highway 73 intersection. This also means it will be challenging to upgrade the intersection, as land may need to be obtained from this property owner.

36. As such, we recommend that a pedestrian/cycle link is proposed through to Cridges Road from the Site. During the consultation stage, discussions should be held with Council to determine the reason for this link in DEV-DA6 and whether they will be amenable to this being a pedestrian/cycle link.

3481 West Coast Road

37. DEV-DA6 also includes road connections through the property at 3481 West Coast Road, as shown in **Figure 7**. Roading provisions from the Site shall be provided up to the

boundary of the Site. This ensures the Site has roading resilience, in the event of any closures along Bangor Road or at the intersection of Bangor Road/West Coast Road.

38. This connection is proposed to intersect West Coast Road at 90-degrees and will have far greater visibility to the northwest and southeast than the Cridges Road intersection. There is also sufficient width available to provide turning treatments on West Coast Road.

Other Connections

39. Whilst there are no other formal Development Areas surrounding the Site, it is likely that a future roading connection/provision is made to the north, with this anticipated to route through Council's pumping station site (Section 1 Survey Office Plan 438579).

40. The pedestrian/cycle link between the Site and West Coast Road, shown on DEV-DA3 (**Figure 2**), should have a reserve width of 20.0m. Whilst it is not proposed to construct a road through this link in the near future, it does provide greater flexibility for the future if an alternate road connection was ever desired by Council. It also increases resilience to the Site, as this can be used by emergency services vehicles in the event of an emergency and under temporary traffic management. The provision of a pedestrian/cycle path on West Coast Road, from this proposed access reserve shall be discussed with the NZTA during consultation.

41. A shared-use path shall be provided along the Bangor Road frontage, with a suitable crossing point (refuge island) provided to the east of Piako Drive and connecting to the existing footpath on the southern side of Bangor Road.

Speed Limit

Internal Roads

42. The speed limit for all internal roads within the Proposal is anticipated to be 50km/h. This aligns with the speed limit throughout the rest of the Darfield Township.

Bangor Road

43. Bangor Road has a speed limit of 80km/h and 100km/h along the Site frontage. The 80/100km/h speed threshold is located approximately 160m west of Piako Drive, as shown in **Figure 8**.

Figure 8. Location of the 80/100km/h speed threshold on Bangor Road (Canterbury Maps).

44. The adjacent land-use to Bangor Road is rural/peri-urban, with lot sizes generally above 5,000m^2. This gives Bangor Road a rural feel and encourages higher vehicle speeds. The majority of dwellings to the south of Bangor Road gain access via local, cul-de-sac roads with 50km/h speed limits, rather than taking direct access to Bangor Road.

45. It would be preferable to secure a lower speed limit along the section of Bangor Road which fronts the Site. However, lowering that speed limit would be subject to a separate statutory process, and cannot (and is not proposed to) be relied on at this stage for the purpose of this assessment. Consequently, all proposed intersections between the Site and Bangor Road will need to be designed to 100km/h (110km/h design speed) and 80km/h (90km/h design speed) speed environments (as appropriate to their location).

46. The provision of consistent private accessways (i.e., short spacing of driveways between adjoining lots/properties) and other urban-type infrastructure (e.g., kerb and channel) would all assist in justifying a lower speed limit along the section of Bangor Road which fronts the Site. Therefore, it is recommended that all proposed intersections with Bangor Road include kerb and channel, and a shared-use path in case lower speed limits are sought in this location in future.

47. During consultation, discussions regarding a potential reduction in the speed limit shall be held with NZTA.

Access Restrictions

48. During the original Plan Change 46 hearing in 2015[7], NZTA submitted a comment regarding lot access to Bangor Road. NZTA sought to prevent individual lot access to

[7] Operative as of 13 May 2016, to rezone the Site from Living 2A (Deferred) zone to Living 2A zone.

Bangor Road, west of the westernmost road in the original Outline Development Plan (i.e. in the 100km/h speed limit area), as shown in **Figure 9**.

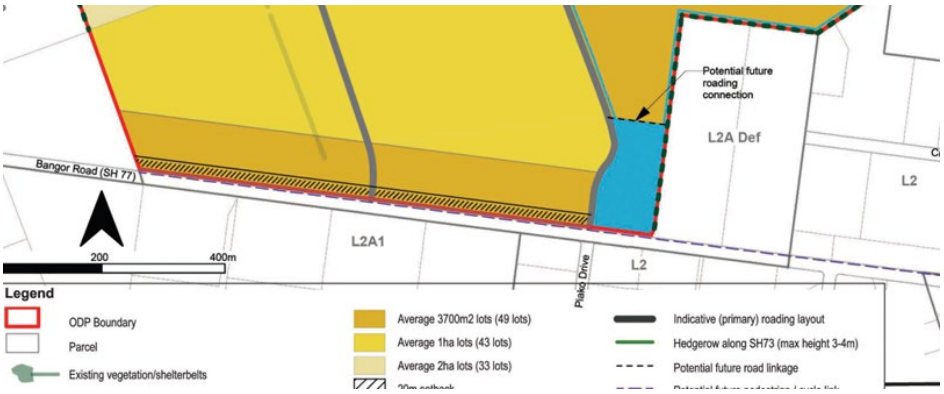

Figure 9. Original ODP (Plan Change 46).

49. NZTA's submission in that regard was accepted and is now reflected in the narrative which forms part of DEV-DA3 (being the Development Area which applies to the Site under the Plan (refer Figure 2 above)). That narrative provides that:

> *No direct access shall be made to Bangor Road from the area west of the second access on State Highway 77, with all vehicle based traffic being directed to the internal roading network.*

50. Consistent with that direction, no direct access to Bangor Road will be provided from the lots to the west of the second proposed access to Bangor Road. The indicative layout will be developed to ensure all lots to the west of the future westernmost road gain access via internal roads. Similarly, no individual property access is anticipated to West Coast Road.

51. Bunds will be constructed along the Bangor Road and West Coast Road boundaries. These will be designed to ensure appropriate sight lines, in accordance with NZTA's *Planning Policy Manual*[8], are maintained from the accesses to the east of the westernmost road on Bangor Road. Where this is unable to be achieved, internal road access will be proposed.

Intersection Upgrades

Bangor Road

52. Two intersections will be created with Bangor Road as part of the Proposal.

53. Whilst the exact upgrades required at these two intersections will be determined following intersection modelling, the width of the Bangor Road corridor means that a number of intersection treatments can be accommodated without requiring neighbouring land. It is likely that the intersection arrangements would be priority-controlled T-intersections, with right turn bays on Bangor Road.

54. Appropriate treatments will be determined using the relevant warrant figures in Austroads Guide to Traffic Management Part 6 *Intersections, Interchanges, and Crossings*, and in

[8] planning-policy-manual-appendix-5B-accessway-standards-and-guidelines.pdf

consultation with NZTA. These warrants base turn treatments on the volume of traffic along the major road (Bangor Road) and the turn volumes into the Site (proposed new roads).

55. The bund along the Bangor Road Site frontage will be designed to ensure sight lines are maintained from each intersection.

Bangor Road/West Coast Road

56. As stated previously, the intersection has auxiliary left and right-turn lanes on West Coast Road and separate right and left-turn lanes on Bangor Road. Visibility in both directions is good, noting it is located on the outside of the bend in West Coast Road to the south.

57. The original PC46 application established that the capacity of both West Coast Road and Bangor Road was in excess of 2,000 vehicles per hour. At that time, traffic volumes in the peak hour were well below this capacity[9].

58. The PC46 application also indicated that the Bangor Road/ West Coast Road intersection would operate within its capacity during the morning peak period, both with and without the proposed development (Level of Service A along West Coast Road and Level of Service C on the Bangor Road approach, irrespective of whether the Site was developed or not – these were forecast to 2025 volumes). The morning peak period was assumed to be the worst-case scenario, as this is when a large proportion of the traffic would be turning right onto West Coast Road to head towards Christchurch. The assessment determined that no upgrades were required at the intersection.

59. Whilst this Proposal would include considerably more lots, there is likely to be some capacity available in the Bangor Road/West Coast Road intersection to accommodate additional traffic generated by the Proposal without any requirement for upgrades. Detailed modelling is to be undertaken for the Integrated Transport Assessment (to be provided in support of the Fast Track substantive application), which will confirm the extent of that capacity, and if and when further upgrades to that intersection may be required. If they are required, the Proposal can be staged according to the level of capacity available and the completion of upgrades to enable further capacity.

60. There is sufficient space within the road corridor to accommodate a roundabout (our preferred treatment) or traffic signals if intersection modelling indicates this upgrade is required. This means third party land is not anticipated to be required, simplifying the process of upgrading the intersection.

Proposed Further Assessment

Modelling

61. Intersection capacity modelling will be undertaken at each of the proposed road intersections with Bangor Road and at the Bangor Road/West Coast Road intersection.

62. There is no area-wide traffic model that exists for the Darfield area; therefore, the intersection modelling will be undertaken using existing counts (factored to reflect traffic

[9] Appendix-5-BANGOR-ROAD-TRAFFIC-FINAL.pdf

growth), a peak hour turning movement survey at the Bangor Road/West Coast Road intersection and use of the New Zealand Census data to estimate the distribution to/from the Site. This modelling will be undertaken using SIDRA.

63. The modelling will be used to determine the type of intersection upgrades that are required and whether the development needs to be staged further to ensure the existing road network is able to accommodate the traffic associated with the Site.

Internal Subdivision Design

64. The proposed internal subdivision layout will be assessed and compared to the Plan requirements and other applicable standards (such as the Selwyn District Code of Engineering Practice, Austroads guides and New Zealand Standards). This will include vehicle tracking to ensure the internal road network and proposed intersections are able to accommodate the required design.

65. Guidance and assessment will be provided for access locations that may not comply with the Plan requirements (such as sight lines when near bends). This may lead to conditions to ensure that Site accesses avoid unacceptable locations.

Integrated Transport Assessment

66. An integrated transport assessment will be provided that assesses the proposed development against the transport and transport-related subdivision rules of the DP.

Consultation

67. Consultation will need to be undertaken with Council to establish desired future road connections to the Council's road network and the desired speed limit within the Site, and with NZTA to discuss intersection treatments, anticipated generation, staging, Bangor Road speed limit, and pedestrian/cycle provisions within the Bangor Road and West Coast Road corridors.

Summary & Conclusion

Summary

68. HDL is seeking a Fast Track Referral for a proposal to deliver 700-800 residential lots, one commercial lot, and associated infrastructure at 160 Bangor Road and Lot 2 DP 81020, Darfield.

69. The Proposal will include larger residential lots around the perimeter of the site, more typical of the sites *Large Lot Residential Zoning*, and smaller lots towards the middle of the site, more typical of a *General Residential Zone*. A supermarket site is anticipated in the commercial lot near southern portion of the site, noting access to this will be via internal roads rather than Bangor Road.

70. The residential portion of the Site, at full development, is estimated to generate 520 vehicles per hour during the morning peak period, 592 vehicles per hour during the afternoon peak period, and 4,680 vehicles per day. The scale of commercial activity is yet

to be determined, although an assessment of the likely traffic generation will also be provided as part of any substantive application for the Proposal.

71. Two new roads will be proposed to Bangor Road, and no vehicle access will be proposed to West Coast Road. The layout of these intersections will be determined following intersection modelling; however, it is recommended that these include kerb and channel and crossing points for a shared-use path within the subdivision site.

72. A shared-use path is also recommended along the site frontage on Bangor Road. A suitable refuge island provided to the east of the subdivision site, providing access to the existing footpath on the south side of Bangor Road.

73. The internal roading network shall be designed to a 50km/h posted speed limit and the intersections with Bangor Road shall be designed to the 80/100km/h speed limit (where relevant).

74. There are no trends in the crash history from the past five years that will be exacerbated by this Proposal.

75. Once referred, intersection modelling at the proposed new road intersections with Bangor Road and the Bangor Road/West Coast Road and vehicle tracking need to be undertaken. Consultation with NZTA and Council, and preparation of an ITA (including assessment against the relevant rules of the partially operative Selwyn District Plan) will also occur.

Conclusion

76. Based on this high-level review of the Proposal, we conclude that the proposed internal roading network can be appropriately designed to support the safe and efficient movement of vehicles and pedestrians through the Site. We also consider that the proposed intersections with Bangor Road can be designed to ensure safe access to and from the Site without compromising the performance of the surrounding road network.

77. Further modelling is required to confirm whether upgrades are required to the surrounding road network (and in particular the Bangor Road/West Coast Road intersection) in order to accommodate the traffic generated by the Proposal. Should those upgrades be required, we consider there is sufficient space along Bangor Road to accommodate these upgrades, without relying on neighbouring land. Similarly, there is also sufficient space within the road corridor at the Bangor Road/West Coast Road intersection to accommodate a roundabout, if one were to be required.

78. In summary, provided the transport components of the Proposal are delivered to appropriate design standards, it is our assessment that there are no transport-related matters that should prevent the approval of the Proposal as a Referred Project or the granting of resource consent for the Proposal.

Yours sincerely,

Novo Group Limited

Allie Mace-Cochrane

Transport Engineer
s 9(2)(a)
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0033067B

Attachment 1. Indicative Site Layout

2.0

proposal

The subdivision proposal is fully described and illustrated in the application documents.

In summary it proposes to:

- embody a spatial structure which logically extends the existing urban area and provides links to future adjacent development to achieve a consolidated urban form in the future
- adopt a layout which provides long distance views to surrounding rural areas and elevated land forms
- create 700 to 800 residential sections for the erection of a variety of detached single or double storey dwellings
- define a clear hierarchy of overall access/movement and a network of streets and key pedestrian and cycle routes to be vested with Selwyn District Council
- create a central community focus around public open space and neighbourhood shops/services
- retain and incorporate rural landscape features which contribute to placemaking
- include opportunities for a school and supermarket
- respond appropriately to site interfaces

not to scale

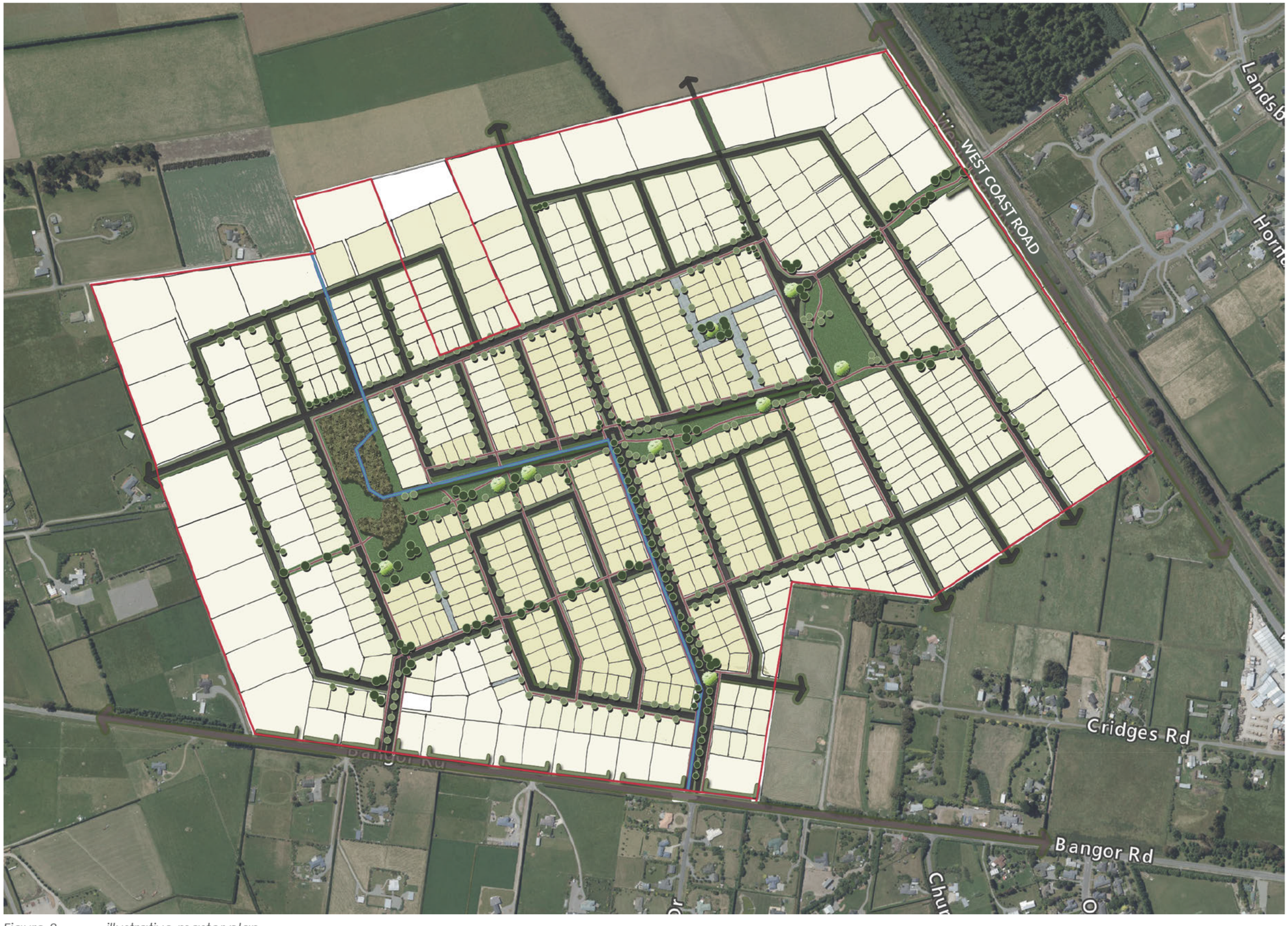

Figure 8. illustrative master plan