

19 February 2026

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MEMO

TO: Tim Carter, Carter Group Ltd
FROM: Nick Fuller, Principal Transport Engineer
PROJECT REF: 0021-050_Ryans Road_M005

FTAA-2504-1054: 104 RYANS ROAD, CHRISTCHURCH APPLICANT RESPONSE TO TRANSPORT COMMENTS

1. This memorandum provides our response to the further transport commentary provided by Christchurch City Council (the Council) and the New Zealand Transport Agency (NZTA) in response to Panel Minute 6 with regards to the above Fast-Track application. This memorandum focuses on the points of disagreement between us and the commenting parties.

Executive Summary

Christchurch City Council

2. The Council's comments primarily relate to the traffic modelling undertaken for the Pound Road / Ryans Road intersection, including the model basis, growth assumptions, calibration and the need for a staging condition tied to future modelling or intersection upgrades. The ITA was undertaken using the most up-to-date strategic model available at the time of lodging the Application, which Council acknowledges. Council's proposed condition leads to the potential to include uncertain or unapproved land use changes and this may prejudice Stage 2 of this development.
3. In relation to model calibration, I consider that the approach adopted is conservative and potentially overstates adverse effects. The calibration process specifically worsened the operation of the critical right-turn movement into Ryans Road (from Pound Road) during a period affected by roadworks. Once those roadworks are complete, it is reasonable to expect driver behaviour and intersection performance to improve toward default conditions. On this basis, I consider the modelled outcomes represent a worst-case scenario rather than a likely future state.
4. Overall, I note that neither I, nor the Council, have indicated that there would be significant adverse effects at the Pound Road / Ryans Road intersection if the development proceeds and it is not upgraded. Therefore, the Council's staging condition is not required.

New Zealand Transport Agency

5. The NZTA response seeks a suite of staged conditions requiring intersection upgrades, developer agreements, further modelling and certification prior to the progression of both



Stage 1 and Stage 2 of the development. I disagree with the NZTA's position that upgrades to the SH73 / Pound Road intersection are required prior to development proceeding. The traffic modelling demonstrates that the intersection operates at Level of Service F for specific movements without the development, and that the proposal results in increased delay to those same over-capacity movements during the weekday PM peak only. While this increase in delay is not desirable, it is not unusual within the Christchurch network and remains comparable to (or better than) the operation of other strategic intersections that are currently tolerated. I also consider that the safety of this intersection would not be significantly adversely affected without the upgrade occurring prior to full occupation of the development.

6. I also disagree that further modelling is necessary at later stages of the development. The modelling already assesses the full development scenario using the best available information at the time of application and in preparing this response. As with the Council's suggested condition, requiring ongoing modelling risks introducing speculative future network changes, growth areas, or study outcomes that were not part of the original assessment basis and are unrelated to the effects of this proposal. As such, I consider the NZTA conditions are not required.

Christchurch City Council Comments

7. The following discusses the key transport points raised in Council's response to Minute 6.

Pound Road / Ryans Road Intersection Modelling

Basis of Modelling

8. Council's transport memo¹ raises concerns with the traffic modelling undertaken to assess the effects of the proposed development, particularly in relation to the Pound Road / Ryans Road intersection operation.
9. Council notes that the version of the model being used was the most up-to-date model at the time of preparing the Application (and when preparing subsequent responses). They go on to note that the model is being updated², although that was not available when assessing the effects of this proposal. Even at the time of writing this memo, we understand that model has still not been updated, nor is any newer version available for use. We therefore remain of the view that the model used in our assessment includes the best available information to consider potential future effects.
10. Similarly, Council comment on the growth projected in the traffic model and raises concerns that this does not account for potential growth areas that Council has expressions of interest for (but has not received a private plan change request or progressed their own plan change or received a consent application for) or for the Ngai Tahu Fast Track application at the southern end of Pound Road. I consider that the potential growth areas are speculative and should not be included in our assessment. I have also not considered

¹ By Mr Milne dated 15 December 2025.

² By Christchurch City Council, the NZ Transport Agency, Environment Canterbury, Selwyn District Council and Waimakariri District Council. These parties together oversee the inputs (including growth assumptions) to the base CAST models.



the Ngai Tahu Fast Track application, given Ryans Road was lodged and accepted as complete first, and that there has been no decision on that application.

11. The projected traffic growth allowed for in the model adjusts Council's own 2038 forecasts plus additional increases specifically in the Dakota Park, Waterloo Park and Main South Road industrial areas. This acknowledges that the underlying Council growth projections are potentially low and provides a more robust approach that simply adopting the Council 2038 model.
12. In summary, I agree with Council that the version of the model was the most up-to-date at the time of preparing the Application. This model remains as the most up-to-date version for the subsequent assessment and S55 responses, and as such I consider this to be a sound basis for assessing the traffic effects of the proposal. I disagree with Council's suggestion to include speculative potential growth areas in the modelling, as these have no certainty.

Model Interpretation & Trip Rates

13. Council raises concerns regarding the interpretation of the model results, noting that not all users may choose to reassign their trips to avoid congestion. I accept this is the case for some drivers, but the purpose of these types of city-wide traffic models is to endeavour to predict driver's behaviour in relation to congestion.
14. Concerns are also raised regarding the variability of the traffic generated by the activities that will establish on-site. We have previously reviewed the trips rates adopted in our assessment. We are aware of other sources of traffic generation data, including:
 - i. Smallbone Business Park in Ashburton (2005 Opus Survey): 12.65 vehicles per hour per ha developable site area; and
 - ii. Sir James Wattie Drive in Christchurch: 11 vehicles per hour per ha developable site area.
15. The peak hour traffic generation of the proposed Site has been assessed as 705 to 774 vehicles per hour, which equates to 12.7 to 13.9 vehicles per ha of Site area (rather than developable area). The subdivision plans identify that 5.48ha will be roads plus a further 2.29ha will be either Rural (20 Grays Road) or Utility Reserve, leading to 7.76ha that cannot be developed, leading to a 'developable area' of approximately 47.74ha. Accounting for this, the trip rate is 14.8 to 16.2 per ha of developable area, which is at least 18% greater than that of the other surveys we are aware of. We consider this makes the traffic generation estimate robust.

Network Assumptions

16. Council comment that the modelling relies upon wider NZTA upgrades to allow traffic to reassign away from the Pound Road / Ryans Road intersection. Two model network options are included in the ITA, which includes the existing transport network ('no network mitigation') plus a potential 'with network mitigation' option. The version we have relied on for the assessment of transport effects is the existing transport network as there is no certainty as to the form or timing of NZTA upgrades.



17. Given the above, Council can be assured that this proposal does not rely on NZTA upgrades to reassign traffic away from the Pound Road / Ryans Road intersection.

Model Calibration

18. I note Council's comments regarding the calibration process undertaken for the SIDRA model in my response to the S55 comments. I also agree that ideally this calibration would be undertaken at a time when no roadworks are occurring in the area, although these works are not anticipated to be complete until mid-2026.
19. That said, the calibration undertaken was to notably worsen the operation of the right turn from Pound Road into Ryans Road. This is the critical movement that the Council have identified within their proposed condition for this intersection. I would expect that the operation of this right turn would be better than that of the calibrated model once the roadworks are complete.
20. The calibration required notably increasing the length of gap in traffic that drivers would consider suitable, therefore indicating that drivers were particularly cautious when turning. I consider this related in part to driver's uncertainty whether they could travel on Ryans Road because of the roadworks and I would expect the operation without the roadworks to trend back toward the default parameters and improved operation.
21. Given the above, I consider that the intersection modelling undertaken in my previous response would likely be conservative and the intersection would operate better than anticipated.

Proposed Condition

22. Ultimately, Council consider there remains a need to include the staging condition they proposed as part of their S53 response (Subdivision Condition 3). That condition permitted no development beyond Stage 1 until either the Pound Road / Ryans Road intersection is upgraded to a roundabout, or additional modelling is provided including annual turning counts at the intersection, as follows:

The second stage must not occur until either:

- a. *The intersection of Pound Road / Ryans Road is upgraded to a roundabout; or*
 - b. *The modelling has been updated and demonstrated to the satisfaction of Council that the intersection can safely accommodate the additional traffic demands associated with the proposal. The second stage must not occur where the subject model demonstrates the average queue length associated with right turns into Ryans Road extends beyond the available stacking space for the modelled period. This modelling shall be based on an agreed annual turning movement survey of the intersection arranged by the consent holder and provided to Council for input into the agreed model.*
23. I consider that the Pound Road / Ryans Road intersection can be upgraded, as evidenced by Council's proposed intersection upgrade (referenced in the ITA and included as **Attachment 1** to this memo). Whilst I accept this is subject to property purchase and funding, this scheme has been included in previous Long Term Plans and on that basis I consider it can be implemented by Council.



24. I have concerns regarding the practicality of the additional traffic modelling requested by Council. The basis of updating the traffic modelling is unclear and I note that Council alludes to wanting to include potential future growth areas and the outcomes of the NZTA Hornby Case Study in this modelling. I also consider that the requirement to undertake the modelling on ongoing annual turning movement surveys will introduce the potential for other (unconsented) developments to be included in those counts and therefore preclude the commencement of Stage 2 of this Fast Track application.
25. The modelling should be based on the best estimate of the future transport network available at the time of lodging and deciding the Application, which is the version of the model adopted in the ITA (and recognised as being the most up to date at that time by Council). I have provided additional discussion regarding the calibration of the intersection model and I anticipate that the intersection operation will be better than predicted in my previous assessment.
26. Overall, I consider there is no need for Council's proposed staging condition and that sufficient evidence has been provided that the effects at the Pound Road / Ryans Road intersection are acceptable. I also note that neither I nor the Council have identified that the potential adverse effects of the full development proceeding without the upgrade at this intersection would be significant.

Shared Path

27. I note Council's response regarding the desirability of providing a shared path to accommodate cyclists past the site. Whilst I agree that the NZTA Hornby Case Study may investigate improved cycle provision in this area, the findings of that study are not anticipated until the end of this year and there is no certainty that improved facilities through this area would be recommended and subsequently provided. I also consider that the reference to the Council's Major Cycle Routes is misleading, as there is little urban development to the west of the Site that would generate notable cycling demands along Ryans Road.
28. Whilst I agree that shared paths along the site frontages would be desirable, there are no connecting facilities planned and these would represent isolated segments of shared path. Overall, I consider the transport effects of not providing these shared paths to be tolerable and not significant.

Power Poles

29. I have reviewed the Council's response regarding the need to underground power poles and agree that this is generally considered good practice for road safety outcomes. However (as per my 19th November 2025 response), the traffic modelling undertaken suggests that the traffic volumes on the frontage roads are not predicted to increase and the speed limit on these roads will be reduced. Particularly with regards to the reduced speed limit, there is still a safety benefit even without undergrounding the power poles when compared to the 'without development' scenario as a result of this proposal.



NZ Transport Agency

30. The NZTA response to Minute 6 includes a series of suggestion conditions, with rationale provided. The following summarises the conditions recommended by the NZTA:
- i. Condition 1 seeks that the development proceed over two stages, as per the Application plans;
 - ii. Condition 2 requires a detailed design to be provided of upgrades to the SH73 / Pound Road intersection plus additional traffic modelling prior to issuing titles for Stage 1;
 - iii. Condition 3 requires a private developer agreement to be entered into with NZ Transport Agency for the upgrade works to the SH73 / Pound Road intersection;
 - iv. Condition 4 requires a Construction Traffic Management Plan to be submitted for the works to the SH73 / Pound Road intersection;
 - v. Condition 5 requires the upgrade set out in Condition 2 to be implemented prior to issuing titles for Stage 1;
 - vi. Condition 6 seeks that a transport assessment be provided prior to Stage 2 commencing to determine the effects at the SH73 / Pound Road intersection, confirm that the level of service is no worse than the operation without Stage 2 and / or identify mitigation. This also seeks Council and NZ Transport Agency certification of the modelling (including modelling assumptions);
 - vii. Condition 7 seeks that Stage 2 of the development does not proceed if the modelling predicts a worse level of service than at the completion of Stage 1; and
 - viii. Condition 8 seeks additional capacity improvements be constructed prior to Stage 2 commencing.

Need for Upgrade

31. The ITA has provided traffic modelling of the anticipated effects of the full development on the network. The modelling indicates that the operation of the Pound Road / SH73 southern approach has the through and right turn movements at Level of Service F without the development with delays of 137 to 143 seconds. These delays increase to 195 and 200 seconds as a result of the proposal, with no other movements becoming Level of Service F³.
32. Changes to the existing line-marking were recommended in the ITA that would provide additional capacity and remedy both the without and with development traffic volumes through this intersection. I considered that the NZTA should be undertaking these as a matter of course to remedy the poor performance of the intersection regardless of this development.
33. I do not consider there is a need to undertake these upgrades prior to development occurring at the Site, be it Stage 1 or Stage 2. This is because the intersection is generally predicted to operate satisfactorily with the key effects being the additional delay to two

³ Where Level of Service 'A' is typically considered excellent operation, 'E' is at or approaching capacity and 'F' is over-capacity.



already over-capacity movements during the weekday PM peak only. Although this increase in delay is not ideal, the operation of this intersection in 2038 with the full development traffic on the network would remain better than other intersections on the strategic road network, such as SH1 / Yaldhurst Road traffic signals and the SH1 / Sawyers Arms Road roundabout. Whilst this level of operation not ideal, it is not without precedent and being tolerated in a Christchurch context.

34. I also consider that the safety of this intersection would not be significantly adversely affected if the development proceeds without this upgrade. Roundabouts are specifically designed to manage vehicle speeds and conflict angles. Austroads notes that roundabout layouts introduce curvature on approach and within the circulatory carriageway, which encourages drivers to reduce speeds before entering the intersection. This speed moderation substantially lowers both the likelihood and severity of crashes.
35. In addition, the circulating nature of traffic around a central island removes high-severity right-angle and head-on conflicts that are typical of priority- or signal-controlled intersections. Instead, any vehicle-to-vehicle conflicts tend to occur at shallow, 'glancing' angles and at lower speeds, which significantly reduces crash forces and injury risk.
36. Given the above, I consider that the recommended line-markings would ideally be implemented prior to development occurring, although these are not necessary to avoid significant adverse effects from arising. As such, I consider there is no requirement for any conditions that preclude development of the Site until upgrades have been completed.

Form of upgrade

37. Notwithstanding the above, the NZTA seeks changes to the roundabout that have not been identified as necessary in the ITA. The following table sets out the differences between the recommendation in the ITA (that was modelled and confirmed as satisfactorily addressing the capacity concern) and the NZTA suggested requirements.



Table 1: SH73 / Pound Road - ITA vs NZ Transport Agency Upgrade Requirements

Existing Arrangement	ITA Recommendation	NZ Transport Agency Condition
The Pound Road approaches have dedicated left turn lanes plus shared through and right turn lanes.	Remarking of the Pound Road approaches to provide a dedicated right turn lane, plus a shared through and left turn lane.	Remarking of the Pound Road approaches to provide a shared left turn and through lane, plus a shared through and right turn lane.
Dual circulating lanes are provided past the Pound Road approaches, but hatching reduces this to single lane circulation past the SH73 approaches.	Remark the circulation lanes as fully dual lane.	Remark the circulation lanes as fully dual lane.
The Pound Road arms have single lane departure lanes, as there is only one through lane from the opposite side of the intersection.	No change, as there remains one through lane from Pound Road on the opposite side of the intersection.	Requires two departure lanes on both sides of Pound Road because there would be two through lanes from the opposite side of the intersection.

38. Although I would expect the NZTA upgrade to provide additional capacity, the lesser upgrade as determined in the ITA provides more than sufficient capacity to mitigate the effects of the proposed development. The recommended upgrade in the ITA also has the benefit of not requiring widening on the Pound Road departures. As such, I consider the ITA recommended upgrade to be one that can be implemented with relative ease.
39. Although the NZ Transport Agency would likely require additional traffic capacity that would have a wider benefit to the transport network, this is not required to accommodate this development and should not be a requirement for the consent holder to implement.

Appropriateness of Conditions

40. The NZTA proposed conditions and associated explanations suggest a need for updated traffic modelling as part of the Stage 1 upgrade design and again to determine whether further upgrades are required prior to Stage 2 being developed. I have already confirmed in paragraph 26 that the traffic modelling considers the effects of the full development, so I do not consider there is a need for further modelling in the future.
41. The ITA was undertaken on the best available model at the time of preparing the Application. I am concerned that requiring ongoing modelling to satisfy the NZ Transport Agency (and the Council) will result in a need to account for what are currently speculative schemes that may become firm proposals during the development of this Site. This includes the outcomes of the NZTA Hornby Study and Council's potential growth areas.
42. Given the above, I consider there is no requirement for any of the NZTA proposed conditions to be imposed on the consent because the traffic effects at the SH73 / Pound



Road intersection are acceptable (even without the recommended line marking upgrade identified in the ITA).



Attachment 1: CCC Pound Road / Ryans Road Upgrade



IMPORTANT NOTE
THE AREAS AND LOCATIONS SHOWN ON THESE DRAWINGS ARE INDICATIVE ONLY AT THIS STAGE.

LEGEND	
	EXISTING PARCEL BOUNDARY
	PERMANENT LAND AREA

LAND TO BE PERMANENTLY ACQUIRED FOR ROAD - SUBJECT TO FINAL SURVEY

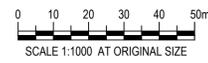
REFERENCE	OWNER	CERTIFICATE OF TITLE	LEGAL DESCRIPTION	LAND REQUIREMENT AREA (m ²)
1	CHRISTCHURCH INTERNATIONAL AIRPORT LIMITED	CB7C/60	LOT 3 DP 25728	1830
2		726317	LOT 1 DP 437914	1898
3	JOHN BOWDEN MACKINTOSH, MATTHEW CHADLOW HALL	CB7A/401	LOT 4 DP 22679	234
4	TWT HOLDINGS LIMITED	CB779/17	LOT 6 DP 18488	2106
5	ARTHUR THOMAS MASON THACKER	CB394/126	RS 2121	2036
TOTAL LAND REQUIREMENT AREA (m ²)				8104



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BENCH MK.		N. DEVERY	ND*	29.01.23
RL		S. NILSSON	SN*	29.01.23
SURVEY		N. MACKIE	NM*	29.01.23
SURVEY LB		G. DOUGHERTY	GD*	29.01.23
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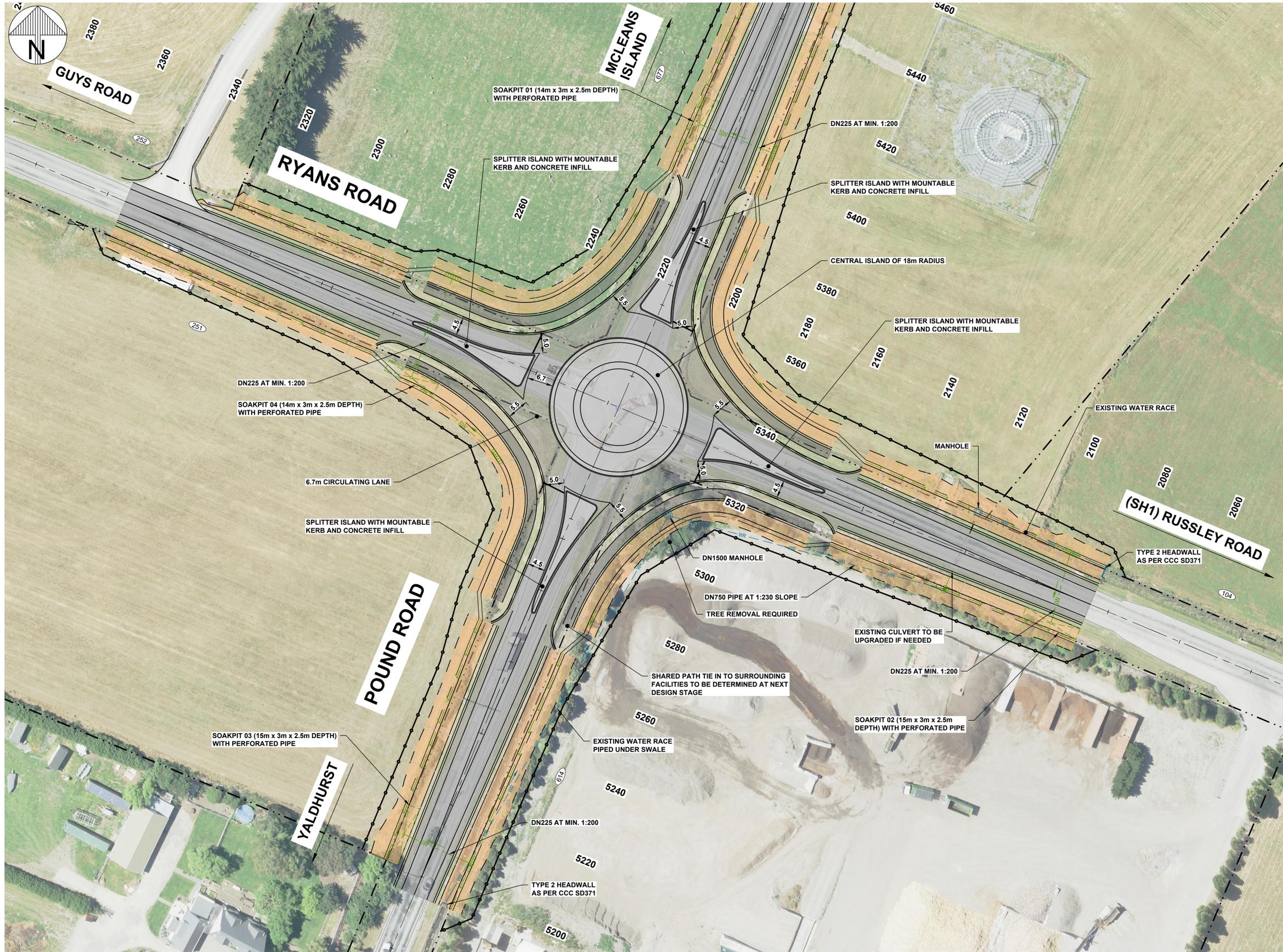
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PROJECT TITLE
POUND / RYANS ROAD INTERSECTION IMPROVEMENT PRELIMINARY ROUNDABOUT DESIGN

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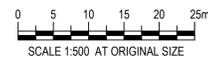
DRAWING TITLE
LAND REQUIREMENT PLAN - PREFERRED (OPTION 1)

CONTRACT NUMBER		ORIGINAL SHEET SIZE	SCALES
A	PRELIMINARY ISSUE	A1	1:1000
ISSUE			DO NOT SCALE
AMENDMENTS			SHEET
CPG PROJECT FILE NUMBER			OF



LEGEND - PROPOSED	
	KERB AND CHANNEL
	EDGE OF SEAL
	TOP OF BATTER
	BOTTOM OF BATTER
	EARTHWORKS INTERFACE
	DESIGNATION BOUNDARY
	2.5m WIDE SHARED PATH
	ROAD HATCH
	ISLAND HATCH
	GRASS
	STORMWATER PIPELINE
	SWALE OR TABLE DRAIN DIRECTION
	SCRUFFY DOME
	DOUBLE SUMP
	WATER RACE PIPELINE
	WATER RACE WATER DIRECTION
	MANHOLE
LEGEND - EXISTING	
	LEGAL BOUNDARY LINE
	WATER RACE PIPELINE
	WATER RACE OPEN DRAIN

- NOTE:**
- SHARED PATH TIE IN TO SURROUNDING FACILITIES TO BE DETERMINED AT NEXT DESIGN STAGE
 - WATER RACE IS SEPARATED FROM ROAD STORM WATER DRAINAGE. THERE ARE NO CONNECTIONS BETWEEN THE TWO SYSTEMS UNDER NORMAL CONDITIONS.



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PROJECT TITLE
POUND / RYANS ROAD INTERSECTION IMPROVEMENT PRELIMINARY ROUNDABOUT DESIGN

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DRAWING TITLE
LAYOUT PLAN PREFERRED OPTION (OPTION 1)

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	A1	1:500
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CPG PROJECT FILE NUMBER		SHEET
		OF