

**BEFORE HEARING COMMISSIONERS
IN THE WESTERN BAY OF PLENTY DISTRICT**

UNDER THE Resource Management Act 1991 (“**Act**”)

IN THE MATTER OF an application for resource consent to authorise four existing industrial activities within part of the Te Puna Business Park structure plan area, for a term of two years

BETWEEN **TINEX GROUP LIMITED**
Applicant

AND **WESTERN BAY OF BAY OF PLENTY DISTRICT COUNCIL**
Consent authority

STATEMENT OF EVIDENCE OF BRUCE HARRISON

*Before a Hearing Panel: Rob van Voorthuysen (Chair),
James Whetu (Commissioner)*

INTRODUCTION

Background, qualifications and experience

1. My full name is Bruce John Harrison.
2. I am a self-employed Transportation Engineer trading as Harrison Transportation and undertake a range of Transportation Assessments for development projects across the Bay of Plenty.
3. I hold a Bachelor of Engineering (Civil) degree from the University of Canterbury, am a Chartered Member of Engineering New Zealand (CMEngNZ), a member of the Engineering New Zealand Transportation Group and a member of the Institute of Transportation Engineers.
4. I have approximately 35 years’ experience in the traffic and transportation engineering field. I have previously worked for a local authority and also several consulting engineering firms. In these roles I have provided technical advice on traffic and transportation matters associated with a

wide range of development proposals and their potential impact on the surrounding road network.

5. I have prepared a Transportation Assessment report dated November 2022 to support the existing activities application. I have further provided additional assessments to transportation related queries, as part of the s92 response to the exiting use consent application dated 12 May 2023 and 30 May 2023.
6. I confirm that I have visited the site and am familiar with the existing activities occurring on the site. I am familiar with the surrounding roading networks and intersections and roading requirements required by the Te Puna Business Park Structure Plan.

Expert witness code of conduct

7. I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's 2023 Practice Note. While this is not an Environment Court hearing, I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Purpose and scope of evidence

8. The purpose and scope of my evidence is to address transportation related matters associated with the retrospective resource consent application for the existing activities on the site located at 245 Te Puna Station Road.
9. In particular, I will address the two principal matters that remain in contention through the reporting of Council's Roading Manager, Mr Callum Mclean and Council's Roading Consultant Ms Justine Wilton, those being:
 - (a) the upgrade and function of the site access to Te Puna Station Road (as well as the question of material being tracked onto Te Puna Station Road); and
 - (b) the upgrade and function of the Te Puna Station Road/Te Puna Road Intersection.

10. Council's reporting planner, Ms Heather Perring has relied upon these assessments and considers that transportation related effects, particularly the safety of the Te Puna Station Road/Te Puna Road intersection and the site access, are more than minor.
11. I will also address matters relating to traffic on Clarke Road and Te Puna Station Road as they have been raised by a number of submitters.
12. I note that most of these issues were the subject of consideration (evidence and cross examination) through the Environment Court hearing on the appeal against the abatement notice. I understand that there has been no decision yet, but where appropriate, I refer some of the answers to questions in that process.
13. I also understand that Mr McLean's "inputs" are embedded into the s42A report, while Ms Wilton has produced a short "peer review" (three and a half pages). I refer to their positions as necessary.

EVIDENCE

14. As a preliminary point, I wish to emphasise the low number of vehicles assessing the site's current activities. There was agreement at the recent Environment Court hearing (by Ms Wilton) that we are talking about 25 vehicles per day, 10 light, 15 heavy, and that this equates to two to three vehicles per hour at peak times.

Te Puna Station Road/Te Puna Road Intersection

15. Regarding the Te Puna Station Road/Te Puna Road intersection, I carefully analysed that intersection and its operation with specific consideration to the traffic generated by the subject site in my original assessment report and within the further information provided.

Previous upgrades and debate about the District Plan requirements

16. I note that there is still some debate about whether the District Plan requires a **right turn bay** on Te Puna Road at this intersection given that it doesn't say this, but refers only to making "provision for left and right turn movements". In this respect I consider that Mr McLean's references to a right turn bay, as detailed in Paragraph [120(iv)] of Ms Perring's report,

have not clearly made it into the Plan, which leaves the door open for other measures to be undertaken to satisfy that requirement.

17. For example, and prior to the previous improvements, there was only a single lane on the “side road”, Te Puna Station Road approach. A previous upgrade however provided two separate lanes, allowing for left *and right* turn movements. So, there is now provision for left and right turn movements on the Te Puna Station Road approach.
18. Council also confirmed that the necessary improvements had been undertaken in the Agreement dated 21 July 2020:
 - E. The Te Puna Road/Te Puna Station Road intersection has been upgraded by Council which satisfies the requirements of District Plan clause 12.4.16.2(b).
 - F. The roading improvements remaining that are required to enable the Industrial Area to develop is the traffic calming on Clarke Rd.
19. This was reiterated in an email from Council’s Resource Management Manager Phillip Martelli on 23 May 2019 that refers:

... Council has undertaken the traffic assessment of Te Puna Station Road/SH2 intersection. The current performance of the intersection meets the requirements of the District Plan. The Te Puna roundabout meets the requirements for that intersection upgrade, and the Te Puna Road/Te Puna Station Road intersection has been upgraded. The roading improvements remaining that are required to enable the industrial area to develop is the traffic calming on Clarke Rd (apart from your own internal road entranceways onto Te Puna Station Road). As discussed with each of you previously, Council has investigated the option of Council arranging for these traffic calming requirements and recouping the costs from yourselves. This traffic calming is a requirement of the District Plan and must be in place prior to you as landowners being able to give effect to the Industrial Zone.
20. I do acknowledge that the Council has found evidence from the 2003 Plan Change hearing that refers to the installation of a right turn bay from Te Puna Road (among other measures), before recommending a plan provision that required “provision for left turn and right turn movements or similar traffic management alternatives”.
21. I will leave it to others to contest what all this means from a legal perspective, but in my opinion, there is a basis from a traffic perspective to consider that the requirements on the face of the Plan were satisfied. It may be that different requirements were intended, but that is not what the Plan says. As I understand it, if there is a deficiency in the Plan and what

it says isn't what was intended, then the Plan should be corrected. Mr Crossan can speak to this further.

22. Finally, on this issue of how the Plan approached things, I note the questions put to me by Environment Court Judge Semple at the recent abatement notice hearing:

Q. ... I am interested in your expertise as a traffic engineer around how conditions are ultimately imposed or plan provisions are ultimately developed and in this instance there are a series of upgrades that none of which would be necessary, one assumes, at day 1 of development of an industrial park of this nature, but I assume that those provisions and tell me if you think I am wrong about this assumption, I assume that those provisions were predicated on a full development of this business park, and so they're not – they don't appear to be stages, there's only one staged provision from what I can work out and the rest of them seem to be predicated on the fact that all of these, all of this upgrade work occurs pre the first bit of traffic that flows in and out of this business park. Is that your understanding of how that works and, first, and then secondly how common is that in your experience as a traffic engineer?

A. Yes, that is correct and that is very common.

Q. Yes.

A. You normally only put in staging if there is – if it's quite a significant development that is going to be staged over a period of time.

Q. Right.

A. Otherwise, yeah, you're normally required to do everything upfront.

Q. Yes and in this instance, would you say that what you're suggesting now is a form of staging?

A. Yes, effectively, it's a small Stage 1, yes.

Q. All right, thank you, that rounds out my knowledge, thank you, appreciate that.

23. I confirm the answers that I gave then, and that the current activities could be considered a small "Stage 1" of the overall business park development, and the effects of which do not warrant the full right hand bay upgrade of Te Puna Road (if that is what the Plan was intended to require for the entire business park development).

Current issues

24. Irrespective of what was intended in the Structure Plan, or the Agreement, in my opinion, however, a right turn bay at this intersection is warranted

now, given current levels of traffic. This is regardless of any traffic emanating from the Te Puna Business Park.

25. This is because of the increase in traffic volumes generally since the Structure Plan was first being considered in around 2003.
26. I agree that traffic safety is extremely important and, in my opinion, a right turn bay on Te Puna Road would benefit the intersection. This would allow a vehicle travelling north on Te Puna Road approaching a vehicle stopped in that right turn bay to turn into Te Puna Station Road to pass it to the left.
27. However, providing a right turn bay would be a significant undertaking, and I agree with Ms Perring that this would take some time to design and construct. There are also other limiting factors such as the width of the rail bridge to the north and acquisition of land to the west that may be required, based on a preliminary design that I have assessed at this intersection. This drawing is attached as **Attachment 1**.
28. As I have done with the entrance to the site, I have checked the relevant sight line distances and standards. The Austroads "Guide to Road Design" recommends, for a design speed of 80 km/h, a safe intersection sight distance of 181 m. In constrained locations, a lesser distance of 133 m is however permitted. The available sight distances to the south are between 134 m and 159 m.
29. Accordingly, while the available sight distances are less than what would normally be provided in a green-field situation, I do not consider the lack of a right turn bay to present a significant safety issue. People will have enough time, travelling at 80km/h, to see a vehicle stopped to turn, and to then be able to slow down, and stop. They do this every day, in response to all vehicles waiting to turn into Te Puna Station Road, not just those generated from the existing activities subject to this application.
30. I understand that Mr McLean considered the safety risk at this intersection to be "Serious" with a crash probability being "likely" under the Safe System Audit Guidelines, and that Ms Wilton agrees with this. I agree that this is the closest match.
31. As a reality check to these issues, while I understand that traffic from these existing activities is not part of the "existing environment" in a planning

sense, the factual situation is that the traffic from these activities has been occurring and utilising this intersection for the last 3-4 years, without any crash history. It is therefore not a hypothetical situation as is the case in a normal resource consent process where assumptions are made. The level of activity occurring as a result of the activities for which consent is being sought has been happening in the real world, cumulative to all of the other traffic making that same right hand turn into Te Puna Station Road, and there do not appear to have been any issues arising. This gives me some additional comfort in allowing those activities to continue, in addition to my assessment against the standards.

32. In my opinion, taking all the above into account, the proposed pavement marking alterations to the Te Puna Station Road/Te Puna Road intersection as shown on the Stratum Consultants drawing 423022-CIV-D001 are adequate to cater for the general traffic generated by the site and will in fact improve the existing situation.
33. In addition, as I have addressed in my reporting, it is understood that the transport of houses will be carried out during off-peak times under specific traffic control as an over-dimension load. This specific traffic control will manage the tracking of these vehicles through the Te Puna Station Road/Te Puna Road intersection.
34. Overall, my opinion remains that the safety of the Te Puna Station Road/Te Puna Road intersection, particularly with the amended pavement markings, will not be materially compromised by the traffic from the current existing site activities. Put another way, the removal of the traffic from the current existing site activities will not appreciably improve the current situation. Or put another way still, if the traffic from the site is assumed to not be occurring, its "introduction" will not appreciably increase risk such that they should be not allowed.
35. Should the Panel grant the resource consent, I am supportive of a condition as per Ms Perring's draft set of consent conditions to amend the pavement markings at the intersection.

Site Access to Te Puna Station Road

36. With regard to the site access to Te Puna Station Road, I assessed this in my original traffic report and subsequently recommended amendments

to the splays to accommodate tracking which I have explained and assessed in the further information responses for the application.

37. Accordingly, as recognised in the Council s42A report, it is proposed to upgrade and seal the current vehicle entrance to the site in accordance with the Waka Kotahi Planning Policy Manual, Diagram D except for the road widening opposite. I consider this appropriate.

Appropriateness of “Diagram D”

38. I understand that there is a dispute that the implementation of “Diagram D” is appropriate. To clarify any confusion about the diagram numbers and their source:

- (a) The proposed Diagram D treatment (without widening on the opposite side) is “Diagram D” from the Waka Kotahi NZTA “Planning Policy Manual”.
- (b) The District Plan refers to “Diagram D ‘Moderate Use Access’ from the Transit Planning Policy Manual”. I understand that this now translates to “Diagram E” from the Waka Kotahi NZTA “Planning Policy Manual”, however I do not have a copy of the previous manual to be able to verify this.
- (c) Ms Wilton also refers to Development Code Diagram A, this is a Western Bay of Plenty District Council standard which is a lesser standard than NZTA Diagram D.

39. Although it is not entirely clear from his comments as stated at paragraph [125] of Ms Perring’s s42A report, Mr McLean appears to favour implementation of the full Waka Kotahi NZTA “Planning Policy Manual” requirements and implies that the access should be designed as an intersection. This follows from his “translation” of the 25 vehicles per day (10 light, 15 heavy) into equivalent car movements (ecm) of between 100 and 250 ecm/day, and the application of those figures against the Waka Kotahi Planning Policy Manual (subparagraphs (iii) and (iv)).

40. Waka Kotahi defines equivalent car movements per day (averaged over a year) as follows:

- (a) 1 car to and from the property = 2 equivalent car movements

- (b) 1 truck to and from property = 6 equivalent car movements
 - (c) 1 truck and trailer to and from property = 10 equivalent car movements.
41. The Waka Kotahi equivalent car movement factors differ from Council's factors in that the Waka Kotahi factors apply to a combined in and out movement as the base, whereas Council's factors apply to the in and the out movements separately, effectively doubling the factor.
42. Based on my observations and understanding, the more particular breakdown of the 25 vehicles typically accessing the site each day are:
- (a) 10 cars (five in and five out) = 10 ecm
 - (b) 12 trucks (six in and six out) = 36 ecm
 - (c) 3 truck and trailers (either one in and two out or two in and one out) = 15 ecm
- Total ~ 61 ecm
43. The total ecm, assessed using the Waka Kotahi factors, are therefore less than 100 per day, not in the range of 100 to 250 as stated by Mr McLean. Using the Waka Kotahi criteria, as there is expected to be more than one heavy vehicle per week and as the daily volume of traffic using the access is in the range of 31 to 100 ecm/day, then the Diagram E treatment is specified, not a full design as a road intersection.
44. I also note that, when there is more than one heavy vehicle using the access per week, the Waka Kotahi requirements specify the same access treatment, regardless of the through traffic volume along the road. I consider this to be appropriate for a typical rural highway with relatively few vehicle entrances and where the primary function of the road is to provide for the through traffic movement along the road, not the provision of property access. I consider however that Te Puna Station Road differs from a typical state highway in that it is classified in the District Plan as a Local Road with a function, defined in the Plan, to principally provide access to the adjoining properties and catering for minimal through traffic. Given the Local Road classification, I consider that the Diagram D treatment is more appropriate than either the Diagram E treatment as

specified in the Planning Policy Manual, or the intersection treatment as suggested by Mr McLean.

45. Mr McLean also makes reference in paragraph [125(vii)] of the s42A report to all experts attending a previous conferencing agreeing that the relevant Waka Kotahi Planning Policy Manual entrance was appropriate. I do not dispute that fact, however, and importantly, that conference was in the context of the wider business park development and did not specifically relate to this application, which had not been lodged at the time. This statement is therefore misplaced in its context.
46. For these reasons, while guidelines are helpful, appropriateness of any proposed entranceway design (and any widening) needs to be assessed on a case-by-case basis.
47. I have demonstrated (refer Stratum consultants drawing) that the splay widening to a Diagram D Standard allows heavy vehicles to turn in and out of the site without crossing the opposing centreline. Putting aside widening, that is a critical factor for Ms Wilton, being to allow for “two-way traffic ... with a flare radius modified to suit the expected vehicle”
48. On this basis, I consider there to be no real issue with the proposed entrance-way treatment for the existing activities, other than whether or not there needs to be widening.

Road widening

49. In respect of road widening (opposite the site entrance), such road widening would allow a vehicle travelling east on Te Puna Station Road and coming across a vehicle travelling in the same direction but stopped at that point to make a right-hand turn into the site, to pass that stationary vehicle on the left. Without the road widening, that vehicle coming from behind will need to slow, stop, and wait for that stationary vehicle to make the right-hand turn and enter the site. In other words, the purpose of the road widening would be to instead allow such a vehicle travelling behind the truck to pass on its left-hand side.
50. I have checked the sight line distances and am comfortable that they comply with the relevant applicable standards. The standard, being the “Entranceway Sight Distances” requirements specified on Drawing W415

of the Development Code, and the sight line distance available being greater than the required 250 m. Accordingly, while the lack of road widening is a safety issue requiring careful consideration, given the low volumes I consider the safety risk to be relatively low. People will have time, travelling at 80km/h, to see a truck stopped to turn, slow down, and stop.

51. So, while I consider the safety risk to be low, there is always a risk that someone having to slow or stop for an obstruction anywhere (which could be anything from a turning truck to a stalled car, to a tree branch or something that has fallen off the back of a trailer) is (say) distracted and is not able to stop in time. All risk can never be avoided.
52. I see the issue as also being a level of service issue, in that people will sometimes have to stop and wait behind a turning vehicle, and so will suffer a short delay in their journey. Given the very low frequency of vehicles accessing the existing activities currently on site (say, 2-3 per hour), and the volumes of traffic on Te Puna Station Road (as assessed in my updated response to the resource consent application s92 request of 30 May 2023, including taking into account including the updated Westlink survey volumes), widening opposite the entrance and specific provision for right turning movements is simply not warranted. I consider any effect arising from not widening the road to be minor.

Safety Effects from Lack of Sealing

53. In response to Mr McLean's concerns around this matter, I note that the sealing of the entrance as proposed will reduce the tracking of sediment and metal onto Te Puna Station Road.
54. In response to Mr McLeans concerns, Ms Perring at paragraph [149] notes that the entrance sealing will partially mitigate this effect, but she has remaining concerns that an additional length of the internal road may need to be sealed to fully address the issue. Based on my observations of the length of material tracked onto the road at other vehicle entrances, I would recommend a length of 30 metres of the private road and entrance be sealed from edge of the Te Puna Station Road carriageway. I note that Ms Perring has included a condition of consent to this effect which I support.

Other matters

Clarke Road Access & Wairoa Bridge Underpass

55. I support the Ms Perring's proposed condition 10(b) to ensure that heavy vehicles associated with the activity do not utilise Clarke Road, which addresses submitters' concerns around heavy vehicles using this route. I note that the applicant and its tenants can only exert control over vehicles accessing their site (as they have contractual relationships with them and will be bound by the conditions of consent if granted) and cannot enforce this on other owners of businesses in the area.
56. I also support that part of Ms Perring's proposed condition 10(c) which will limit heavy vehicles travelling to and from the site from using the State Highway underpass (should Te Puna Station Road be reopened to allow this access). However, I do not foresee any feasible need to restrict light vehicle access from using this route (or Clarke Road for that matter) if required.

Heavy Traffic on Te Puna Station Road

57. I note that many submissions raise concerns with heavy vehicle traffic generally on Te Puna Station Road.
58. In my opinion, Te Puna Station Road in its current form is adequate to serve the very low level of traffic generated by the existing site activities. I am aware through my involvement in the applicant's other applications that Te Puna Station Road is also to be upgraded by Council in the longer term as part of the wider structure plan and business park development through utilisation of Financial Contributions paid for by the business park developers.
59. I understand that the applicant has offered a condition of consent to pay proportionate roading financial contributions as part of this application. This may assist in having those wider upgrade works progressed.

CONCLUSION

60. There is nothing in the evidence for the Council that causes me to depart from my earlier opinion that the traffic effects of the existing activities have

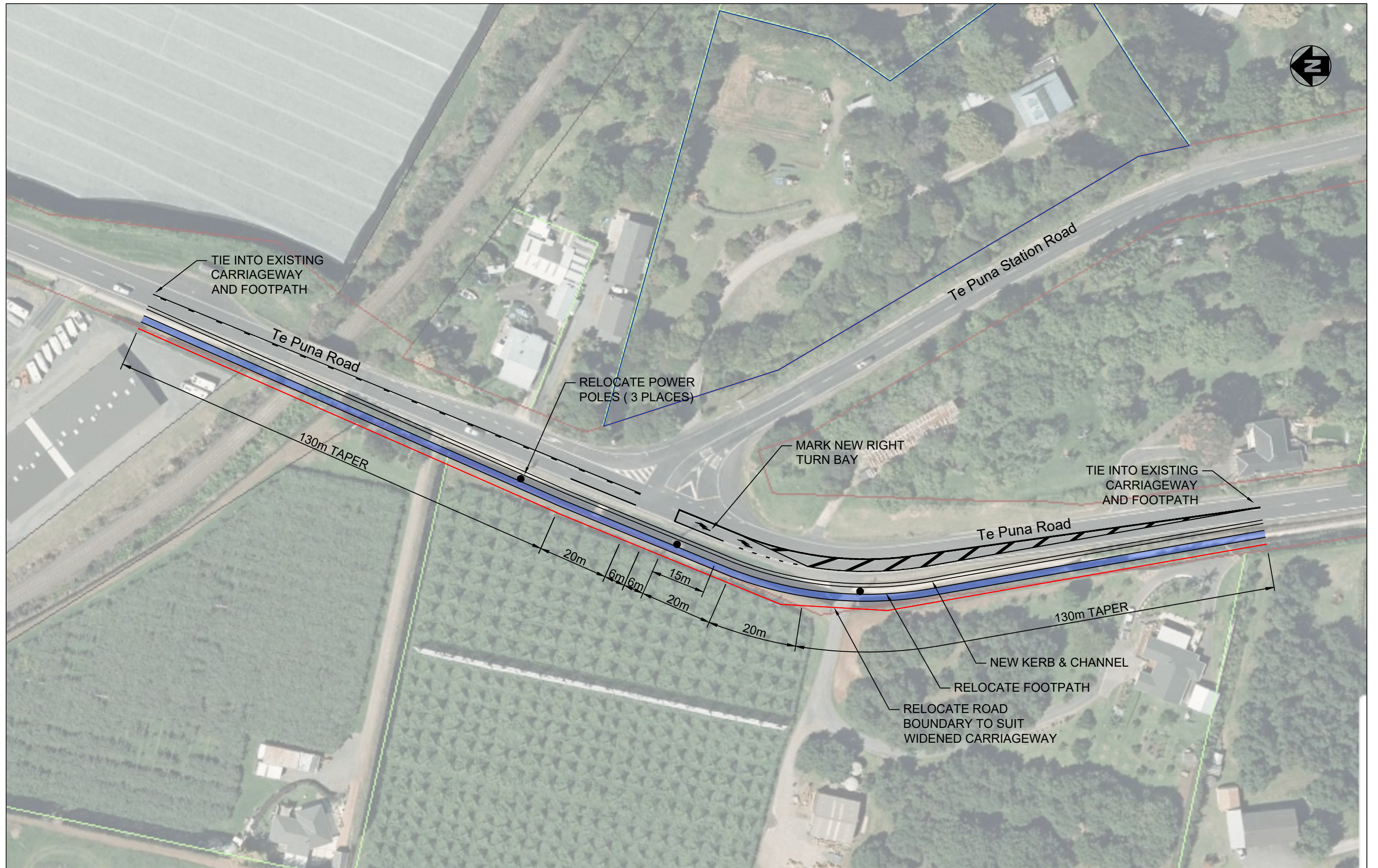
less than minor effects on the surrounding environment. This is particularly the case if the mitigation measures, I have recommended are adopted.

25 September 2023

Bruce Harrison

Attachment 1

**Possible Right Hand Turn Bay at Te Puna Station Road/Te Puna Road
Intersection**



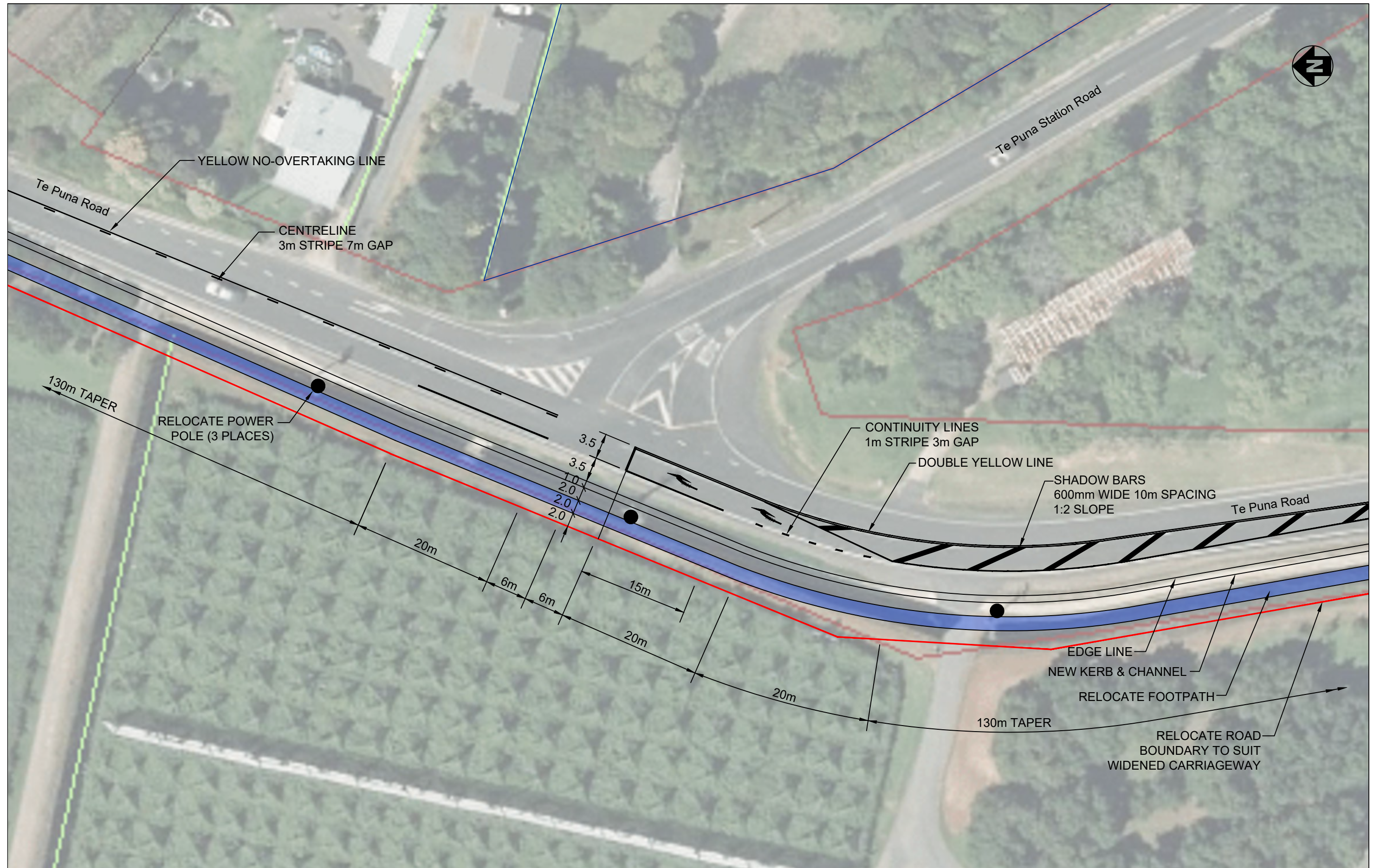
TE PUNA INDUSTRIAL LTD
 TE PUNA & TE PUNA STATION ROAD INRESECTION
 INDICATIVE RIGHT TURN BAY

Harrison Transportation

PO Box 11557, Papamoa 3151
 Phone: 07 576 6737
 Mobile: 027 221 6926
 Email: bruce@harrisontransportation.co.nz

Design	BH	Job No.		DRAWING No
Drawn	JM	555	CAD File 23-137	01
Checked	BH		Plot Date 09/05/23	
Date	26/04/23	Drawing No.		SCALE
Drawn	1 of 3	555-01		1:1000 @A3

No	DESCRIPTION	DATE	CHK



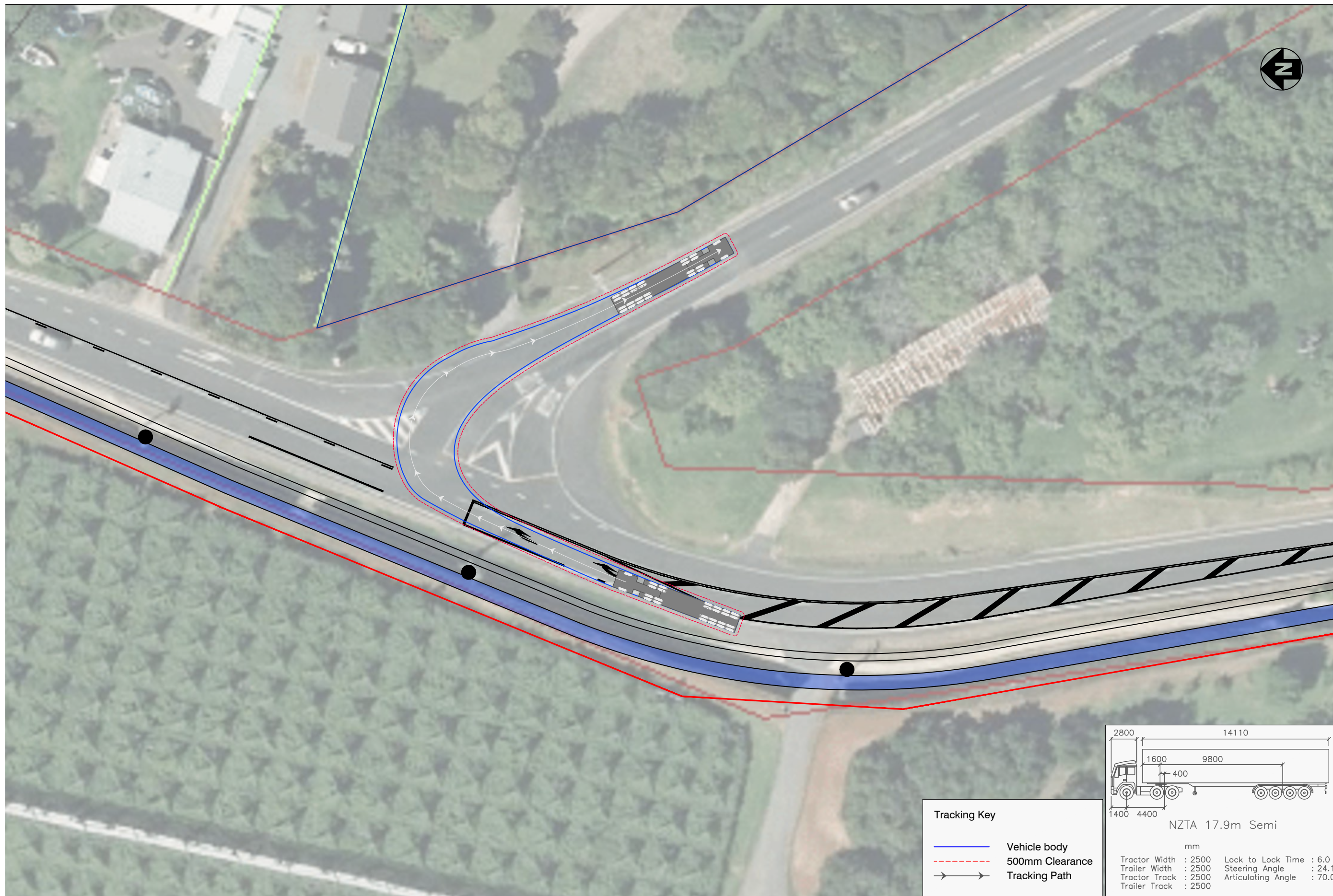
No	DESCRIPTION	DATE	CHK

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 INDICATIVE RIGHT TURN BAY LAYOUT

Harrison Transportation

PO Box 11557, Papamoa 3151
 Phone: 07 576 6737
 Mobile: 027 221 6926
 Email: bruce@harrisontransportation.co.nz

Design	BH	Job No.	CAD File	23-137	DRAWING No 02
Drawn	JM	555	Plot Date	09/05/23	
Checked	BH		Rev.No.		
Date	26/04/23	Drawing No.	555-02		SCALE 1:500 @A3
Drawing	2 of 3				



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 TRUCK TURNING

Harrison Transportation

PO Box 11557, Papamoa 3151
 Phone: 07 576 6737
 Mobile: 027 221 6926
 Email: bruce@harrisontransportation.co.nz

Design	BH	Job No.	
Drawn	JM	555	CAD File 23-137
Checked	BH		Plot Date 09/05/23
Date	26/04/23	Drawing No.	Rev.No.
Drawing	3 of 3	555-03	

DRAWING No
03
 SCALE 1:500 @A3

DATE	CHK