

UNDER

the Resource Management Act 1991

IN THE MATTER

of a request to Kaipara District Council for
Private Plan Change 81: Dargaville
Racecourse by the Dargaville Racing Club Inc

STATEMENT OF EVIDENCE OF DON MCKENZIE ON BEHALF OF THE APPLICANT

TRANSPORTATION

10 MARCH 2023

1. INTRODUCTION

- 1.1 My full name is Donald John McKenzie. I am a practising specialist transportation engineer. Since 2020 I have been employed by Stantec New Zealand as its Private Sector (Transport) Leader, and between 2018 and 2020 was the Group Manager (Northern Region) – Transportation with the firm. Prior to that time, I was a shareholder of and employed by, Traffic Design Group Limited ("TDG") for 25 years, most recently as a Director and the Auckland Branch Manager. In April 2018, TDG was acquired by Stantec New Zealand.
- 1.2 I hold a Bachelors degree in Civil Engineering with Honours from the University of Canterbury awarded in 1991. I am a Chartered Professional Engineer in New Zealand, an International Professional Engineer, Fellow and Chartered Member of Engineering New Zealand, and a Fellow and Professional Member of the Institute of Transportation Engineers, USA.
- 1.3 Throughout my 30 years of professional experience, I have practiced as a traffic engineering and transportation planning specialist where I have provided transportation consulting and expert witness services to a wide variety of clients across the country within the private sector, local government and central government agencies.
- 1.4 Examples of my experience relevant to this project include:
- (a) Advice, expert evidence, and contributions to expert witness conferencing in support of numerous land use, residential and commercial development resource consents plan changes and appeals throughout the Auckland region and across New Zealand including inputs to Council, Environment Court and High Court processes;

- (b) I have assisted developers advancing various development opportunities within the wider Northland area including development of Countdown supermarkets in Kerikeri, Whangarei and Dargaville, and a range of residential developments at locations such as Langs Beach, Ruakaka and Hikurangi, and
- (c) Technical assistance to Whangarei District Council as the Council’s transportation engineering advisor for several Plan Changes (such as Plan Change 150 Marsden City at Ruakaka) and District Plan Review processes including the Urban and Services Plan Changes.

1.5 My evidence in this statement is given in respect of an application by Dargaville Racing Club Inc for Private Plan Change 81 (“**PC81**”): Dargaville Racecourse.

1.6 My evidence will:

- (a) Summarise my involvement with the transportation aspects of PC81;
- (b) Summarise the key recommendations of my report;
- (c) Comment on the transportation issues raised by submitters;
- (d) Comment on the Council Officer’s report with a particular focus on the transportation elements presented by Mr Leo Hills (the transportation expert engaged by the Kaipara District Council (“**KDC**”)).

1.7 I have read and agree to abide by the Environment Court’s Code of Conduct for Expert Witnesses as specified in the Environment Court’s practice Note 2023. This evidence is within my area of expertise, except where I state that I rely upon the evidence of another expert witness as presented to this hearing or a report that formed part of PC81. I have not omitted to consider any material facts known to me that might alter or detract from any opinions expressed. I have no conflict of interest to declare.

2. INVOLVEMENT WITH PC81

2.1 I have been engaged by the Applicant to provide transport engineering advice in relation to PC81 to the Kaipara District Plan relating to the former Dargaville Racecourse site.

2.2 I oversaw and managed all aspects of the Stantec Transportation Assessment report which accompanied the PC81 request and was prepared through 2021/2022. I was part of informal

discussions with the transportation engineering representatives of NZ Transport Agency | Waka Kotahi, KDC and the Northland Transport Alliance through the period of the PC81 preparation, and most recently in January and February 2023 following the receipt of submissions and in preparation for this hearing.

2.3 I am familiar with the application site and environs. I visited the site and adjoining parts of the Dargaville roading network numerous times over the past several years, with my most recent visits during March 2023.

2.4 My evidence is presented on behalf of the Applicant and should be read in conjunction with and includes the following documents:

- (a) the integrated transportation assessment (“**ITA**”) report dated February 2022 which was submitted as Appendix 5 to PC81,
- (b) a response to a request for further information (from Tessa Robins on behalf of Waka Kotahi) issued via email, shown in **Attachment 1 (“RFI response”)**;
- (c) a Safe System Assessment (“**SSA**”) accompanying a safe system compliant intersection Concept Plan (arising out of the original submission of Waka Kotahi, some informal discussions held with representatives of Flow the transportation advisors engaged by Waka Kotahi), and Mr Hills (the transportation advisor engaged by KDC) during January and February 2023 (**Attachment 2**);
- (d) the proposed SH14 / Awakino Point North Road intersection upgrade Concept Plan, (**Attachment 3**), and
- (e) the proposed shared path feasibility plan (**Attachment 4**).

2.5 The PC81 provisions respond to the recommendations in my report.

3. SUMMARY OF EVIDENCE

3.1 The Applicant is seeking to rezone 45.4ha of currently Rural zoned land lying to the north of, and gaining access from, Awakino Point North Road to a mix of Development Areas (“**DA’s**”).

3.2 The subject land is well located in terms of accessibility by private vehicles, due to its close proximity and connections to both the existing State Highway road network, as well as the key

local road network connection via Awakino Point North Road which forms one of the frontage roads serving the subject land.

3.3 The key foci of the traffic engineering and transportation planning matters that I will be discussing in my evidence are:

- (a) the intersection form of State Highway 14 (“SH14”) / Awakino Point North Road in light of providing a safe system compliant design,
- (b) the shared path connection from the PC81 area to the Dargaville Town Centre,
- (c) the request by the Ministry of Education for the inclusion of provisions to enable a school within PC81, and
- (d) the traffic generation trigger to upgrade the SH14 / Awakino Point North Road intersection.

3.4 On the basis of my assessments and the subsequent informal discussions with the transportation advisers for the agencies involved in the pre-hearing process, I remain satisfied that the traffic and transportation effects associated with the PC81 proposal can be accommodated within the context of both the existing and future transport network in this and surrounding parts of Dargaville. I do not consider there to be any matters of a traffic operations or transportation planning nature that would preclude the rezoning from being approved as sought.

4. EXISTING ENVIRONMENT

4.1 The PC81 site is approximately 45.4 ha in size located north of the SH14 / Awakino Point North intersection. It is approximately 3km northeast of Dargaville Town Centre.

4.2 Details and descriptions of the surrounding transportation network and associated features have been presented in detail and assessed in the ITA, RFI response and Stantec SSA which form part of the application. I will not repeat that information and analysis here, but rather provide a general overview of the key findings and conclusions I have reached both through the assessment process, as well as in light of the most recent informal discussions with Flow (the transportation advisers engaged by Waka Kotahi), Waka Kotahi staff, and Mr Hills (the transportation advisor engaged by KDC).

- 4.3 In broad summary, vehicles will access the PC81 site from SH14 (via the SH14/Awakino Point Road) and connect to Awakino Point Road via three new internal roads that will extend into the PC81 site. A diagram showing the extent of the Plan Change land in the context of the surrounding roading network is shown in Attachment 5 to my statement.
- 4.4 Vehicular traffic movements beyond the site can connect to the Dargaville Town Centre via a 5-7 minute drive (depending on local traffic conditions), while Whangārei is around a 50 minute drive (off-peak); extending up to an hour during busier peak traffic conditions, and accessed via SH14.
- 4.5 There are currently no scheduled Public Transport services within the Dargaville urban area, except for timetabled regional bus services connecting Dargaville with Whangārei.
- 4.6 Cycle journey times from the Dargaville Town Centre to the site via the existing SH14 carriageway are around 10-15 minutes. Currently any cycle movement that does occur along SH14 occurs within the sealed road shoulder or general traffic lane of SH14. Currently, there are no footpaths or dedicated on-road or off-road cycling facilities along Awakino Point North Road or SH14; therefore, in respect of travel along these routes, cyclists have to share the carriageway with vehicles. However, as is described in the application and later in my statement, the confirmed feasibility of the proposed shared path along SH14 is a key element of the transport provisions that support PC81.
- 4.7 The closest formed footpath infrastructure within the Dargaville Town Centre is at the SH14 / Tuna Street intersection extending along the edge of SH14 towards the Town Centre, and the formed pedestrian network within the Dargaville Town Centre.

5. FUTURE ENVIRONMENT

- 5.1 I understand that the KDC Spatial Plan has identified a range of future potential infrastructure to support the planned further growth in Dargaville forecast out to 2050, including future and proposed upgrades to the collector road network and pedestrian / cyclist facilities. Of particular relevance to the PC81 area, the KDC Dargaville Spatial Plan includes several future upgrades including :
- (a) The potential to construct a new road along the Outer Dargaville ridgeline connecting the top of Hokianga Road to Awakino Road reducing the need for local drivers to use SH14 for local trips; and

- (b) A possible development of a new pedestrian/cycle path, alongside the existing rail corridor, connecting the Awakino Road residential area to SH14, looping back into the town centre via Victoria Street.
- 5.2 The Spatial Plan seeks to encourage more industrial-style businesses to locate in existing industrial areas, such as east Dargaville, and maximise the use of existing vacant space. The Spatial Plan also shows a new Industrial area at Awakino Point, including part of the PC81 site. I therefore consider that PC81 in its current form is generally consistent with the development direction signalled for Dargaville through the Spatial Plan.
- 5.3 The Spatial Plan identifies a shared path along SH14. The shared path is envisioned to loop around the Dargaville Town Centre area via the proposed road connections on the northern fringe of the town centre, about 200m southwest of the PC81. I consider the provision of the proposed shared path to support PC81 to be well-aligned with the Spatial Plan, following the same alignment apart from the connection to the PC81 itself (being about 200m to the north of the Spatial Plan alignment).
- 5.4 I understand from discussions with Waka Kotahi representatives through this PC81 process that Waka Kotahi supports a safe walking and cycling link in principle, with a preference for the shared path to cross the nearby open land running alongside SH14 to the west of the highway. Should the shared path run adjacent to the state highway, Waka Kotahi considers that the path would require a width of 2.75 – 3m protected from the roadway by a kerblin e and 0.6m – 1m front verge. Waka Kotahi also states a preference to terminate the link at a quiet street or appealing destination.
- 5.5 It is my view that there is a degree of alignment of the proposals forming part of PC81 with the broad expectations of future growth expressed within the Spatial Plan, especially around the future role of the SH14 route and adjacent land-use development.

6. PC81 PROPOSAL

- 6.1 The Applicant is seeking to rezone around 45.4ha of currently Rural zoned land lying to the north of, and gaining access from, Awakino Point North Road to a mix of DA's comprising a total lot yield of approximately 460 lots. The DA's comprise of approximately 24 light industrial lots, 435 residential lots, and one Neighbourhood Centre Area.

6.2 The proposal details are set out in the application material and summarised in the evidence statement provided by Ms Anich – resource management planner for the Applicant.

7. SUMMARY OF TRAFFIC EFFECTS ASSESSMENT

7.1 As reported in the ITA accompanying the PC81 request, intersection traffic modelling has been undertaken using recognised traffic modelling techniques to assess the impacts arising from the increase in vehicle movements travelling through the SH14 / Awakino Point North Road intersection.

7.2 The intersection currently operates at a maximum turning movement delay of approximately 10 seconds per vehicle associated with vehicles turning left into Awakino Point North Road from SH14 during the weekday morning and afternoon peak hours. The intersection is expected to continue to operate at an acceptable Level of Service with the addition of the development traffic included for the future year 2026 with no noticeable increase in the maximum delays at the intersection in its current form. Further details of these assessments are provided in Section 6.3 of the ITA.

7.3 As set out in a preliminary form within the ITA and then refined in response to the submissions made by Waka Kotahi and NTA, the Applicant instructed Stantec to prepare a form of intersection upgrading to support PC81. A safe system compliant intersection upgrade form was developed and shared informally with Flow/Waka Kotahi and Mr Hills on behalf of KDC. Under the intersection upgrade traffic (both existing SH14 users and future residents and visitors to the PC81 area) would be expected to experience an entirely acceptable Level of Service following the addition of the PC81 traffic at the future year 2026. The assessed maximum turning movement delay of approximately 13 seconds per vehicle associated with vehicles turning right out of Awakino Point North Road to SH14 during the weekday morning peak hour is equivalent to current turning delays. In this respect, I also note that under the modified safe system compliant intersection form results in a minor increase in operating traffic capacity given an increase in gap acceptance at the intersection as a result of a lower speed environment introduced.

7.4 In both the Waka Kotahi submission (including the Flow assessment and its Safe System Assessment appendix) and the informal discussions held to date, neither Mr Collins (on behalf of Waka Kotahi) nor Mr Hills raised any further concerns around the capacity performance of the intersection, but rather focussed on the safety implications at this intersection (which I will address later in my statement).

8. ENGAGEMENT WITH WAKA KOTAHI

8.1 Following receipt of the Plan Change request, Waka Kotahi requested further information. A response was accordingly prepared by Stantec addressing each of the transport-related matters raised within the request. The response addressed:

- (a) Concept designs for the proposed T-intersection and the relevant SIDRA file and sensitivity;
- (b) Concept designs for the shared use path, and
- (c) Confirmation of the industrial zone trip rates

8.2 The remaining unresolved matters raised in submissions around the safety of the SH14/Awakino Point North Road intersection and the feasibility of the shared path have been thoroughly addressed through the Stantec SSA and then subsequently at the informal discussions held with Waka Kotahi/Flow and KDC prior to the hearing.

9. SUBMISSIONS

9.1 I respond in the following sections to those submissions raising transportation-related comments and concerns:

Northland Transportation Alliance

9.2 The Northland Transportation Alliance (“NTA”) generally supports PC81 but seeks to amend the zoning as proposed with suitable conditions for the road network to ensure they are safe system compliant. The NTA submission cited a range of issues primarily centred on three aspects of the Plan Change, namely:

- (a) that the SH14 / Awakino Point North Road intersection be upgraded to a Give-Way controlled T intersection, specifically requesting that:
 - (i) the intersection to be upgraded to be Safe System Compliant Primary Treatment facility type;
 - (ii) road safety audits are carried out; and
 - (iii) Awakino Point North Road to be upgraded.

(b) NTA seek that the shared user path connects with Selwyn Park as a minimum including safe system-compliant primary active transport crossing facility for all users. NTA also request that road safety audits of crossing facilities and the associated infrastructure be carried out.

9.3 I can confirm that PC81 proposes that the SH14 / Awakino Point North Road intersection will be upgraded to a safe system compliant intersection including the addition of speed management devices on the SH14 approaches to the intersection. The SSA provided to KDC, and Waka Kotahi (and now attached as Attachment 2 to my statement) confirms the proposed concept design's alignment with a Primary Treatment facility.

9.4 I consider the requirement to complete road safety audits for the detailed design of the intersection and other upgrades to the roading network to be a standard requirement through the resource consent and detail design stage of both the intersection and the Awakino Point North Road upgrade fronting the PC81 area, as well as the shared user path facility.

9.5 The proposed shared path is proposed to connect the PC81 area to the existing Dargaville Town Centre footpath network located at the SH14 / Tuna Street intersection. The provision of an active mode connection up to this location in the road network is in my opinion appropriate to mitigate the effects associated with the PC81 area. I consider the existing footpath connecting Tuna Street to the Selwyn Park area to be sufficient to provide the active mode connection from the PC81 area to the existing Dargaville Town Centre footpath network.

Waka Kotahi

9.6 Waka Kotahi's submission notes the following key transportation matters with specific reference to Attachment 2 of their submission being the Technical Note prepared by Flow:

(a) Waka Kotahi considers that the Trifecta Development Area ("**TDA**") Chapter should be amended to identify that the intersection of SH14 and Awakino Point North Road be upgraded to a roundabout rather than a priority-controlled T intersection, and

(b) that the current intersection should be upgraded prior to any construction works that will generate more than 10 heavy vehicle movements through the SH14/Awakino Point North Road intersection per day.

Intersection

- 9.7 I disagree that the SH14 / Awakino Point North Road intersection should be upgraded to a roundabout to mitigate the effects associated with PC81. As outlined in the SSA prepared by Stantec, the proposed Raised Safety Platform T-intersection proposed by the Applicant provides equivalent safety outcomes compared to the roundabout option put forward in the Flow Technical Memo. I note that the proposed treatment elements within the Applicant's proposed upgrading of the intersection are generally recognised and implemented (as separate elements) across the State Highway network (nationally) and are known recognised physical interventions to address speed concerns at intersections. The proposed design adopts elements from standard Waka Kotahi rural intersection treatment interventions and applies a cost-effective safe system-compliant alternative to a roundabout.
- 9.8 This design can be further refined in consultation with Waka Kotahi to optimise the speed-calming effect through the detailed design processes to follow through the consent and engineering plan approval processes. In my view, such an intersection upgrade fully addresses the concerns raised by the Waka Kotahi submission.
- 9.9 Additionally and in recognition of the possible future land use and transportation changes within Dargaville signalled within the Dargaville Spatial Plan, the proposed tee-intersection form put forward by the Applicant in support of PC81 does not preclude future strategic access upgrades (for example in form of a roundabout further west along SH14 to connect into the Outer Dargaville Ridgeline route identified in the Spatial Plan) and as such, is an appropriate improvement to the adjacent road network at this time.
- 9.10 Furthermore, I consider the Applicant's proposed intersection upgrade form could accommodate future upgrades within the wider area if considered appropriate at that time. This may for example include, Waka Kotahi retrofitting the PC81 upgraded tee-intersection to another form of intersection to connect the Dargaville Town Centre and wider urban area emerging once the Dargaville Spatial Plan is given effect to. The Applicant's proposed intersection form does not preclude such options from being developed and constructed at a later date.

Trigger

- 9.11 The TDA-LU-S4 Transport provisions note that prior to the establishment of any activity other than Farming in the Light Industrial Area, or prior to occupation of any residential unit in the

General Residential Area, upgrading of the intersection of SH14 / Awakino Point North Road must be complete. I consider these upgrade triggers to be sufficient to address the effects PC81 will have on this intersection.

- 9.12 I do not consider a trigger associated with construction work (as suggested by the Waka Kotahi submission) to be relevant. Construction effects can be managed in a standard manner through an appropriate temporary traffic management plan (“**TMP**”) during the construction phase and can be enabled through the resource consent phase of activity within the PC81 area by means of a suitable condition at the time.

Shared Path

- 9.13 Waka Kotahi note that a development of the scale proposed in PC81 has the potential to generate relatively high levels of private vehicle movements, which would impact the transport network. Waka Kotahi has identified a pedestrian and cycle link between the subject land and Dargaville township as a key active mode link to help mitigate private vehicle use and provide greater transport choice and requests greater certainty to support this rule, specifically:

- (a) the standard and location of the connection;
- (b) that the applicant is responsible for the funding/delivery of the connection;
- (c) that the connection must also safely and efficiently connect with walking and cycling routes within the plan change site;
- (d) that the design takes into account natural hazard risk for access to the plan change site and in particular ensures the proposed pedestrian and cycle link is appropriately designed to be resilient to those risks; and
- (e) that the design takes into account Crime Prevention Through Environmental Design (CPTED)

- 9.14 I have investigated the feasibility of a pedestrian and cycle link (shared use path) between PC81 and the Dargaville Town Centre and can conclude that such a facility is generally feasible. The existing SH14 road reserve can generally accommodate a shared path of around 2m to 3m in width and the shared path can connect to the existing footpath infrastructure at the Tuna Street intersection. Furthermore, the above matters I cited in the previous paragraph

can in my opinion be addressed through the resource consent detailed design phase of the shared path at resource consent stage.

- 9.15 I note that funding of the shared path is addressed in Ms Anich's statement.
- 9.16 Waka Kotahi notes there are specific site constraints that need to be managed during detailed design of the pedestrian and cycle link specifically, but not limited to:
- (a) the SH14 bridge over Awakino River;
 - (b) Awakino Point East Road, specifically Lot 22 DP 7811 (NA611/235); and
 - (c) Ensuring grade separation or fencing from the SH corridor.
- 9.17 I agree that these constraints can be managed through the standard detailed design phase of the shared path connection.

Ministry of Education

- 9.18 The Ministry is seeking enabling provisions for educational facilities be included within the TDA to enable the Ministry to service the growth and urban expansion of Dargaville which may potentially require a new school in the PC81 area.
- 9.19 Ms Anich's evidence states that the PC81 provisions currently provide for home-based childcare activities to be established in the Large Lot Residential Area and General Residential Area, and for education facilities of limited scale (300m² GFA and 500m² outdoor area, intended to accommodate early childhood or kohanga reo) in the Neighbourhood Centre Area.
- 9.20 I consider the provision of larger educational facilities such as a new school within the PC81 area to have a noticeable effect on the surrounding transportation network especially if the facility draws students and staff from outside the PC81 area, and that broader network planning will need to be considered more fully to enable this provision to be included at this time. From a trip generation perspective, a larger educational facility such as a new school could generate additional demand from the Dargaville Town Centre that would see the right turning movement from SH14 into Awakino Point North Road increase to require the need of intersection upgrades beyond what is needed to support PC81 in its current form and extent. Any such additional infrastructure requirements should be the responsibility of the Ministry

of Education. Ms Anich has proposed some wording for the PC81 provisions enabling larger educational facilities such as a new school, if the Ministry's submission were to be accepted.

Other Submitters

9.21 A number of submissions have been received that raise transportation issues associated with PC81 and its future operation. I have identified 11 other submissions¹ addressing transportation matters.

9.22 In the following sections of my evidence, I set out my responses to the transportation issues raised by these submitters, under the following topic headings:

- (a) Shared path provision ;
- (b) SH14 / Awakino Point North Road intersection safety ;
- (c) SH14 / Awakino Point North Road intersection capacity ; and
- (d) School bus stop provision ;

Shared Path

9.23 I consider that the provision of a shared path between PC81 and Tuna Street intersection to be feasible and adequate to address the concerns of these submitters. The shared path will not only support active mode needs generated by PC81, but by the existing communities with the Awakino Point area. The enabling of the PC81 supports the needs of the submitters by means of an active mode provision.

SH14 / Awakino Point North Road Intersection Safety and Capacity

9.24 I confirm that the PC81 provisions supports a SH14 / Awakino Point North Road intersection upgrade that will be safe system compliant along with providing sufficient capacity to enable the additional traffic generated by PC81.

¹ Submitters – Mr D. Simpkin, Mrs L Phillips, Mr & Mrs C and J Rowse, CJFarms 2020 Ltd, Awakino Point Rate Payers Inc, Mr & Mrs D and A McLeod, Mr & Mrs S and M Phillips, Mr & Mrs L and K Harrison, Mr & Mrs J and M Brenstrum, Dargaville Community, and Mr J KcKelvie & Mrs S Rockell

School Bus Stop

9.25 I note that there are currently no formal bus stops on Awakino Point North Road given its rural state (being gravel). The upgrade of Awakino Point North Road (triggered by the establishment of any activity other than Farming in the Light Industrial Area, or prior to occupation of any residential unit in the General Residential Area) does not preclude a bus stop on this road, and the proposed upgrading and associated speed management platforms across Awakino Point North Road may in my opinion enhance the opportunity to provide for bus stops in the future. The provision of such a facility will be considered at detailed design stage of Awakino Point North Road, however at this stage of the process and without full appreciation of the demand for bus travel, it is not in my opinion appropriate to require the provision of bus stops (especially in the current situation here there is no current scheduled bus transport system within the Dargaville urban area).

10. COUNCIL OFFICER'S REPORT

10.1 I have reviewed the report prepared by Mr Hills (the KDC transportation expert) as part of the Council Officer's Section 42A report and respond to relevant aspects of the his report accordingly. In summary, I concur with the conclusions he has reached in regard to the following matters:

- (a) The provision of a shared path from the site to Dargaville is generally appropriate and will mitigate the generated effects arising from pedestrian and cyclist activity arising from the PC81 development;
- (b) There are no road capacity issues relating to the proposal supported by the proposed intersection upgrading of the SH14 / Awakino Point North Road;
- (c) The key remaining issue between transportation experts relates to the specific form of upgrading to be undertaken at the SH14 / Awakino Point North Road intersection (relating particularly to speed and safety of SH14 users), and
- (d) Mr Hills considers that an upgraded priority-controlled T-intersection option (as proposed by the Applicant) or a roundabout option could appropriately and sufficiently mitigate the transportation effects (including safety) of PC81.

- 10.2 Mr Hills considers the key remaining issue to be the speed environment associated with the upgraded SH14 / Awakino Point North Road intersection – both in terms of the Applicant’s proposed tee-intersection or the roundabout option advanced by Waka Kotahi.
- 10.3 Mr Hills discusses that Waka Kotahi considers the “safest” intersection form to be a roundabout. While Mr Hills agrees that the roundabout form would be the safest form of intersection at this location, he does not consider that the Applicant should be required to provide the safest option, but rather one that adequately and appropriately mitigates the effects of PC81. Mr Hills concludes that this is achieved through the proposed priority-controlled intersection, with supporting speed mitigation measures (again as proposed by the Applicant) to reduce speed to an appropriate level both for the intersection location, as well as developing a “gateway” feature on this western entrance into Dargaville – consistent with the medium to long-term expectations expressed within the Spatial Plan for increased urban development to the northeast of the Town Centre.
- 10.4 I concur with Mr Hills’ conclusion and consider the proposed intersection form shown within Attachment 3 to my statement will achieve the safe system outcome as outlined in my SSA and per the safety outcomes sought by submitters such as the NTA and Waka Kotahi.

11. CONCLUSION

- 11.1 I have undertaken a range of transportation assessment processes associated with the proposed rezoning of the Dargaville Racecourse land that would be achieved via PC81, including leading the preparation of the Transportation Assessment and participating in informal discussions with transportation representatives of Waka Kotahi and KDC. This statement of evidence builds upon the detailed assessments of the transportation elements of the PC81 proposal advanced by the Applicant that I have overseen and undertaken over the past two years.
- 11.2 Based on the assessments undertaken, I consider that the transportation effects associated with PC81 can be accommodated in a manner that ensures the safe and effective transport network operation of the adjoining parts of the public road network including SH14. The proposed transportation provisions of PC81 (requiring several elements of infrastructure upgrading set out in my statement) will in my opinion, ensure this infrastructure delivery occurs in a safe and effective manner.

- 11.3 The delivery of upgrading proposed in support of PC81, including both the intersection upgrading of SH14/Awakino Point North Road and a proposed shared path from the PC81 site to SH14/Tuna Street intersection, is appropriate to support the future activity that will be delivered through PC81. These upgrading features proposed to be enabled through the PC81 provisions to mitigate the generated traffic and active mode effects of PC81, will also in my view have the added secondary benefit of aligning with the achievement of elements of the Dargaville Spatial Plan.
- 11.4 I have considered the reporting prepared by Mr Hills (the Council's transportation advisor) and the submissions of Waka Kotahi and NTA, and consider that the PC81 planning provisions will adequately and appropriately address their respective concerns from a transportation perspective. I consider that the primary outstanding issue raised by Waka Kotahi and the view that the "best outcome" to be achieved through PC81 is for implementation of a roundabout at the SH14/Awakino Point North Road is not related to mitigation of effects of the PC81 and the enabled development. Instead I consider that such options are being advanced to contribute to Waka Kotahi's wider network planning and operational concerns. If Waka Kotahi wishes to implement a roundabout as a means of enhanced speed management or other network outcome, then the proposed tee-intersection/speed managed intersection upgrade proposed by the Applicant is a preferred outcome and does not preclude other upgrading from occurring at this location or nearby in the future.
- 11.5 A suite of proposed plan provisions have been included including what are in my opinion appropriate trigger/threshold mechanisms to address the matters raised by Waka Kotahi (and other submitters) with respect to the appropriate requirement for and provision of suitable infrastructure to support the PC81 activity.
- 11.6 In summary, there are in my opinion no matters of a traffic or transportation effects nature that would preclude PC81 from being granted as sought.

Don McKenzie

10 March 2023

ATTACHMENT 1: RFI RESPONSE

From: Venessa Anich <venessa@landsandsurvey.co.nz>
Sent: Tuesday, 26 April 2022 2:34 PM
To: Tessa Robins <Tessa.Robins@nzta.govt.nz>
Subject: FW: 2021-0342: Dargaville Racecourse Plan Change

CAUTION: The sender of this email is from outside Waka Kotahi. Do not click links, attachments, or reply unless you recognise the sender's email address and know the content is safe.

Hi Tessa,
Please see below and attached for responses from Stantec to your request for information (email dated 31 March 2022).

Regards,
Venessa.

Venessa Anich | Senior Planner - Lands and Survey Whangarei / Dargaville |
021 439 839 | venessa@landsandsurvey.co.nz |

From: van der Westhuizen, Gerhard <Gerhard.vanderWesthuizen@stantec.com>
Sent: Tuesday, 26 April 2022 1:57 PM
To: Venessa Anich <venessa@landsandsurvey.co.nz>
Cc: McKenzie, Don <don.mckenzie@stantec.com>
Subject: FW: 2021-0342: Dargaville Racecourse Plan Change

Hi Venessa,

Please find our response to Waka Kotahi's request for further information below. The respective request is cited in *italics*.

1. *Concept designs for the proposed T intersection and how it will tie into the existing SH and Awakino Point North and the relevant SIDRA file and sensitivity test;*

Please find the preliminary conceptual design attached. The SIDRA file is also attached.

2. *Concept designs for the SUP (to show extent to which it will be in the designation and with indications of how far from the carriageway it will be);*
-

The shared use path will be 3m in width and have a minimum separation of at least 1m from the carriageway at constrained areas. It is noted that no conceptual design has been prepared at Plan Change level, and that subsequent subdivision stages (along with any future neighbouring developments) could incorporate the conceptual design of the facility.

3. *General Cross section of the SUP and at the following locations – with the proposed SH14/Awakino Point North intersection, with the tie in at Tuna Street and across the bridge;*

As per above.

4. *Confirm the industrial zones trip rates are correct within the ITA.*

As per Section 6.1 in the Integrated Transportation Assessment (ITA), the following trip generation rates were used.

Table 6-1: Expected Trip generation

Land Use	Number of lots	Research Report 453 Description	Trip Rate (average)	Coverage	Trip Generation
Small Commercial / Light Industry	14	Manufacturing	1.4	0.5	47
Large Commercial / Light Industry	10	Warehousing	0.9	0.5	399
Medium Density Residential	156	Dwellings	1.1		172
General Residential	80	Dwellings	1.1		88
Low Density Residential	36	Dwellings	1.1		40
Lifestyle Lot Residential	7	Dwellings	1.1		8
Retirement	156	Retirement Units	1.1		172
Neighbourhood Commercial	1		1	0.75	11
Total					935

It is noted that Development traffic peak hour rates from the Waka Kotahi Research Report 453 – Trips and parking related to land use (**RR453**) were used to derive the trip generation rates for the proposed PPC. The ITA appears to have a minor error, reporting small commercial / Light Industry as having a trip rate of 1.4 / 100sqm GFA, rather than 1.1 as in the RR453. This equates to a minor reduction of 10 vehicle trips per hour. It is considered that this reduction will have negligible effect on the capacity and operational analysis of the intersection, and that the 'over estimate' is acceptable at Plan Change level.

I trust that the above responses adequately address the issues and comments raised in the request for further information. I would be happy to further elaborate on any of the above as may be required.

Kind regards,

Gerhard van der Westhuizen

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Senior Transportation Engineer

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PO Box 13052, Christchurch 8141

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ATTACHMENT 2: Safe System Assessment

SH14/AWAKINO POINT NORTH ROAD INTERSECTION

Safe System Matrix – Option 0: SH14/Awakino Point North Road existing intersection with priority control

		Run-off Road Crashes	Head-on Crashes	Intersection Crashes	Other Crash Types	Pedestrian Crashes	Cyclist Crashes	Motorcyclist Crashes		
Exposure	Related info	High	High	High	High	Moderate	Moderate	Moderate		
	Score	3	3	3	3	2	2	2		
Likelihood	Related info	Very Likely ✓ banking of road/ superelevation ✓ some delineation (signs, markings and edge marker posts) X poor road surface on the side road (gravel) X narrow shoulder	Very Likely X no central barriers/centre line treatments X Curved alignment, limited visibility through intersection.	Very Likely X poor visibility ✓ low impact angles X side road give-way control X high conflict points X no acceleration or deceleration lanes	Likely X no acceleration or deceleration lanes X poor road surface on the side road (gravel)	Likely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Very Likely X poor road surface on the side road (gravel) X high conflict points		
	Score	4	4	4	3	2	2	4		
Severity	Related info	DSi Very Likely X high speed X no barriers X no clear zone X roadside trees	DSi Very Likely X high speed	DSi Very Likely X high speed ✓ low impact angles	DSi Very Likely X high speed	DSi Very Likely X high speed	DSi Very Likely X high speed	DSi Very Likely X high speed	DSi Very Likely X high speed X roadside hazards	
	Score	4	4	4	4	4	4	4		
Product		48	48	48	36	16	16	32	Total Score 244 / 448	

SH14/AWAKINO POINT NORTH ROAD INTERSECTION

Safe System Matrix – Option 1: SH14/Awakino Point North Road T-intersection with priority control (slip legs on side road removed)

		Run-off Road Crashes	Head-on Crashes	Intersection Crashes	Other Crash Types	Pedestrian Crashes	Cyclist Crashes	Motorcyclist Crashes	
Exposure	Related info	High	High	High	High	Moderate	Moderate	Moderate	
	Score	3	3	3	3	2	2	2	
Likelihood	Related info	Likely ✓ banking of road/ superelevation ✓ some delineation (signs, markings and edge marker posts) ✓ improved surfacing on the side road ✗ narrow shoulder	Likely ✓ wide lanes provide some separation from opposing traffic ✗ no central barriers/centre line treatments	Likely ✓ improved visibility ✗ high impact angles ✗ side road give-way control ✓ reduced conflict points ✓ acceleration and deceleration lane	Unlikely ✓ acceleration and deceleration lane ✓ improved surfacing on the side road	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road ✗ shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road ✗ shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ improved surfacing on the side road ✓ reduced conflict points	
	Score	3	3	3	2	2	2	3	
Severity	Related info	DSi Very Likely ✗ high speed ✗ no barriers ✗ no clear zone ✗ roadside trees	DSi Very Likely ✗ high speed	DSi Very Likely ✗ high speed ✗ high impact angles	DSi Very Likely ✗ high speed	DSi Very Likely ✗ high speed	DSi Very Likely ✗ high speed	DSi Very Likely ✗ high speed ✗ roadside hazards	
	Score	4	4	4	4	4	4	4	
Product		36	36	36	24	16	16	24	Total Score 188 / 448

SH14/AWAKINO POINT NORTH ROAD INTERSECTION

Safe System Matrix – Option 2: SH14/Awakino Point North Road single-lane roundabout

		Run-off Road Crashes	Head-on Crashes	Intersection Crashes	Other Crash Types	Pedestrian Crashes	Cyclist Crashes	Motorcyclist Crashes	
Exposure	Related info	High	High	High	High	Moderate	Moderate	Moderate	
	Score	3	3	3	3	2	2	2	
Likelihood	Related info	Unlikely ✓ improved road alignment on SH14 ✓ improved delineation (signs and markings) ✓ improved surfacing on the side road ✓ adequate shoulder ✓ lowered approach and intersection speeds	Very Unlikely ✓ central islands prevent head-on collisions ✓ lowered approach and intersection speeds	Unlikely ✓ improved visibility ✓ lower impact angles ✓ single lane with give-way control on all approaches ✓ reduced conflict points ✓ lowered approach and intersection speeds	Very Unlikely ✓ single lane with give-way control on all approaches ✓ improved surfacing on the side road ✓ adequate deflection on all approaches ✓ lowered speeds	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ improved road alignment on SH14 ✓ improved surfacing on the side road	
	Score	2	1	2	1	2	2	3	
Severity	Related info	DSi Unlikely ✓ lower approach speed X no barriers X no clear zone X roadside trees	DSi Unlikely ✓ lower approach speed	DSi Unlikely ✓ lower approach speed ✓ lower impact angles	DSi Unlikely ✓ lower approach speed	DSi Very Likely X high speed	DSi Very Likely X high speed	DSi Very Likely X high speed X roadside hazards	
	Score	2	2	1	2	4	4	4	
Product		12	6	6	6	16	16	24	Total Score
									86 / 448

SH14/AWAKINO POINT NORTH ROAD INTERSECTION

Safe System Matrix – Option 3: Raised Safety Platform T-intersection

		Run-off Road Crashes	Head-on Crashes	Intersection Crashes	Other Crash Types	Pedestrian Crashes	Cyclist Crashes	Motorcyclist Crashes	
Exposure	Related info	High	High	High	High	Moderate	Moderate	Moderate	
	Score	3	3	3	3	2	2	2	
Likelihood	Related info	Unlikely ✓ improved delineation (signs and markings) ✓ rumble strips approaching intersection ✓ improved surfacing on the side road ✓ kerbed edgeline ✓ lowered approach and intersection speeds	Unlikely ✓ raised median ✓ lowered approach and intersection speeds ✓ rumble strips and RSP approaching intersection	Unlikely ✓ improved visibility ✓ rumble strips and speed table X high impact angles X side road give-way control ✓ reduced conflict points ✓ lowered approach and intersection speeds	Unlikely ✓ acceleration and deceleration lane ✓ improved surfacing on the side road ✓ lowered speeds rear end crash potential, but unlikely	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Unlikely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road X shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ improved surfacing on the side road ✓ reduced conflict points	
	Score	2	1	2	2	2	2	2	3
Severity	Related info	DSi Very Unlikely ✓ lower approach speed ✓ kerbed edgeline Improved clear zone by way of gateway treatment ✓ no roadside trees	DSi Unlikely ✓ lower approach speed	DSi Likely ✓ lower approach speed X high impact angles	DSi Unlikely ✓ lower approach speed	DSi Very Likely X high speed	DSi Very Likely X high speed	DSi Very Likely X high speed X roadside hazards	
	Score	1	2	2	2	4	4	4	
Product		6	6	12	12	16	16	24	Total Score
									92 / 448

SH14/AWAKINO POINT NORTH ROAD INTERSECTION

Safe System Matrix – Option 4: Option 3 + Raised Platform for Peds

Raised table for peds

		Run-off Road Crashes	Head-on Crashes	Intersection Crashes	Other Crash Types	Pedestrian Crashes	Cyclist Crashes	Motorcyclist Crashes	
Exposure	Related info	High	High	High	High	Moderate	Moderate	Moderate	
	Score	3	3	3	3	2	2	2	
Likelihood	Related info	Unlikely ✓ improved delineation (signs and markings) ✓ rumble strips approaching intersection ✓ improved surfacing on the side road ✓ kerbed edgeline ✓ lowered approach and intersection speeds	Unlikely ✓ raised median ✓ lowered approach and intersection speeds ✓ rumble strips approaching intersection. RSP	Unlikely ✓ improved visibility ✓ rumble strips and speed table ✗ high impact angles ✗ side road give-way control ✓ reduced conflict points ✓ lowered approach and intersection speeds	Unlikely ✓ acceleration and deceleration lane ✓ improved surfacing on the side road ✓ lowered speeds rear end crash potential, but unlikely	Likely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road ✗ shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ shared use path along the eastern side of SH14 and side road; crossing facility on the side road ✗ shared use path mixes pedestrians and cyclists ✓ no destinations at the intersection to create desired lines across the intersection	Likely ✓ improved surfacing on the side road ✓ reduced conflict points	
	Score	2	1	2	2	2	2	3	
Severity	Related info	DSi Very Unlikely ✓ lower approach speed ✓ kerbed edgeline Improved clear zone by way of gateway treatment ✓ no roadside trees	DSi Unlikely ✓ lower approach speed	DSi Likely ✓ lower approach speed ✗ high impact angles	DSi Unlikely ✓ lower approach speed	DSi Unlikely ✓ lower speed	DSi Unlikely ✓ lower speed	DSi Very Likely ✗ high speed ✗ roadside hazards	
	Score	1	2	2	2	2	2	4	
Product		6	6	12	12	8	8	24	Total Score
									76 / 448

SH14/AWAKINO POINT NORTH ROAD INTERSECTION
Safe Systems Assessment Framework Summary

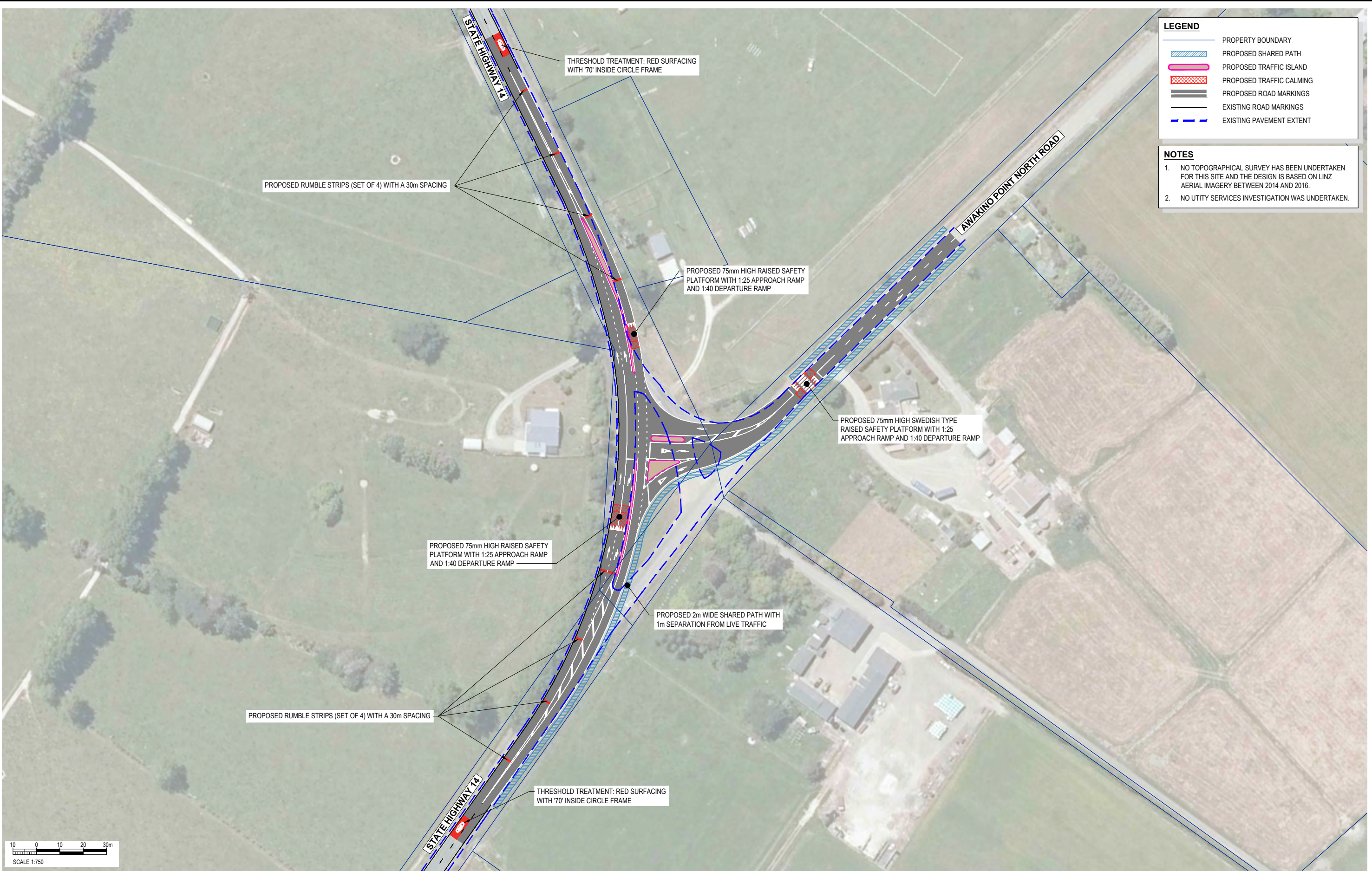
Improvement Option	Total Score	
Option 0 - Existing	244	/ 448
Option 1 - Slip legs removed	188	/ 448
Option 2 - Roundabout	86	/ 448
Option 3 - Raised Safety Platform T-intersection	92	/ 448
Option 4 - Option 3 + Raised Platform for Peds	76	/ 448

ATTACHMENT 3: SH14/AWAKINO POINT NORTH ROAD INTERSECTION UPGRADE CONCEPT PLAN

DO NOT SCALE - IF IN DOUBT, ASK

200mm
150
100
90
80
70
60
50
40
30
20
10
0

ORIGINAL SIZE **A1**

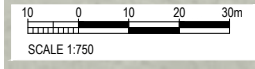


LEGEND

- PROPERTY BOUNDARY
- PROPOSED SHARED PATH
- PROPOSED TRAFFIC ISLAND
- PROPOSED TRAFFIC CALMING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKINGS
- EXISTING PAVEMENT EXTENT

NOTES

- NO TOPOGRAPHICAL SURVEY HAS BEEN UNDERTAKEN FOR THIS SITE AND THE DESIGN IS BASED ON LINZ AERIAL IMAGERY BETWEEN 2014 AND 2016.
- NO UTILITY SERVICES INVESTIGATION WAS UNDERTAKEN.



NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	BY	CHK	APP
B	FOOTPATH UPDATE	070323	GVDW	DJM	DJM
A	INITIAL LAYOUT	130223	ML	GVDW	
	REVISIONS		DRN	CHK	APP

SURVEYED	-	-
DESIGNED	MARK LUO	130223
DRAWN	MARK LUO	130223
CAD REVIEW	GVDW	070323
DESIGN CHECK	GVDW	070323
DESIGN REVIEW	GVDW	070323
APPROVED	DJM	070323
PROF REGISTRATION:		



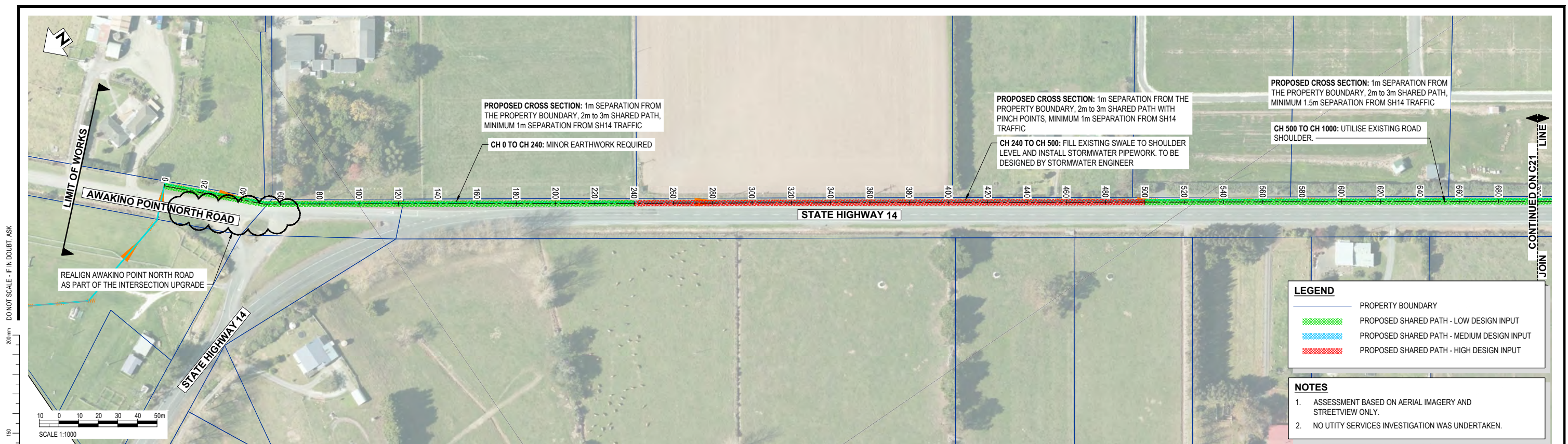
Client:

PROPOSED DARGAVILLE RACECOURSE PPC
DARGAVILLE RACING CLUB INC

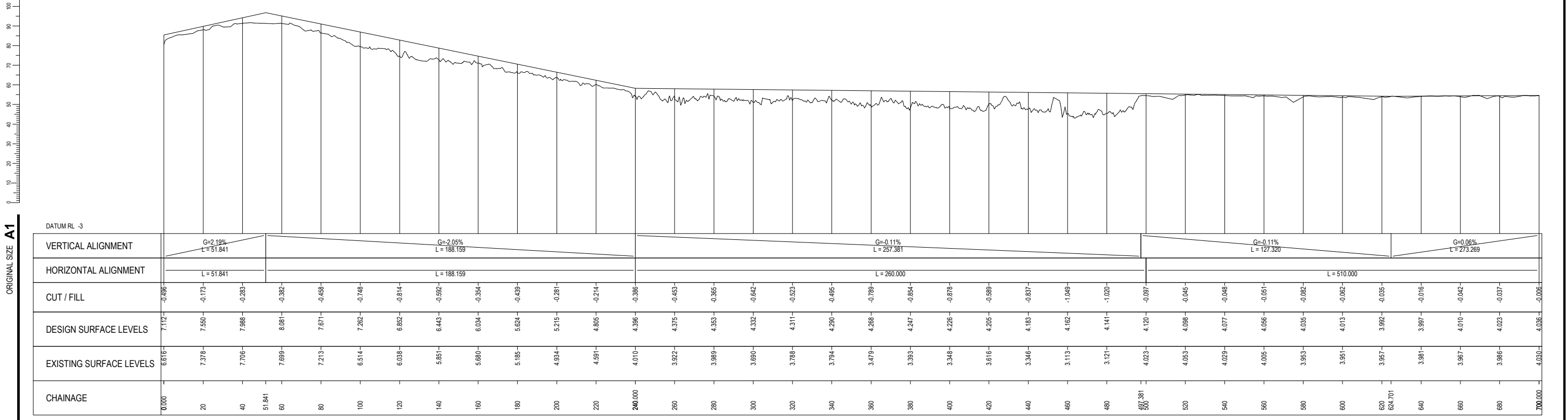
SH14 / AWAKINO PT NORTH RD INTERSECTION CONCEPT
GENERAL LAYOUT PLAN

Status Stamp	FINAL
Date Stamp	07.03.2023
Scales	1: 750 @ A1, 1: 1500 A3
Drawing No.	310204755-02-001-C020
Rev.	A

ATTACHMENT 4: SHARED PATH FEASIBILITY PLAN



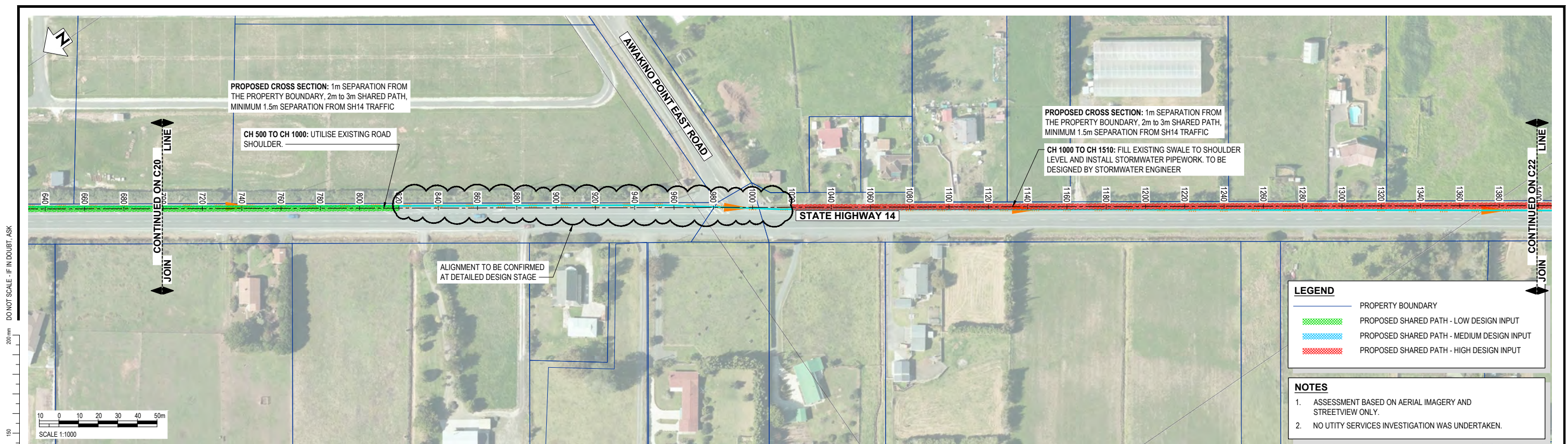
PLAN
SCALE 1 : 1000 @ A1



LONGITUDINAL SECTION

NOT FOR CONSTRUCTION

B FINAL A FOR DISCUSSION		SP GV 07.03.23 MN GV 20.02.23 DRN CHK APP DATE		SURVEYED DESIGNED DRAWN M.NEL 20.02.23 CAD REVIEW G.VAN DER WESTHUIZEN 20.02.23 DESIGN CHECK DESIGN REVIEW APPROVED PROF REGISTRATION:			Client: PROPOSED DARGAVILLE RACECOURSE PPC DARGAVILLE RACING CLUB INC PROPOSED SHARED PATH FEASIBILITY SHEET 1 OF 3	Status Stamp FINAL Date Stamp 08.03.23 Scales 1:1000 @ A1, 1:2000 @ A3 Drawing No. 310204755-01-001-C020 Rev. B	
REV REVISIONS									



PROPOSED CROSS SECTION: 1m SEPARATION FROM THE PROPERTY BOUNDARY, 2m to 3m SHARED PATH, MINIMUM 1.5m SEPARATION FROM SH14 TRAFFIC

CH 500 TO CH 1000: UTILISE EXISTING ROAD SHOULDER.

PROPOSED CROSS SECTION: 1m SEPARATION FROM THE PROPERTY BOUNDARY, 2m to 3m SHARED PATH, MINIMUM 1.5m SEPARATION FROM SH14 TRAFFIC

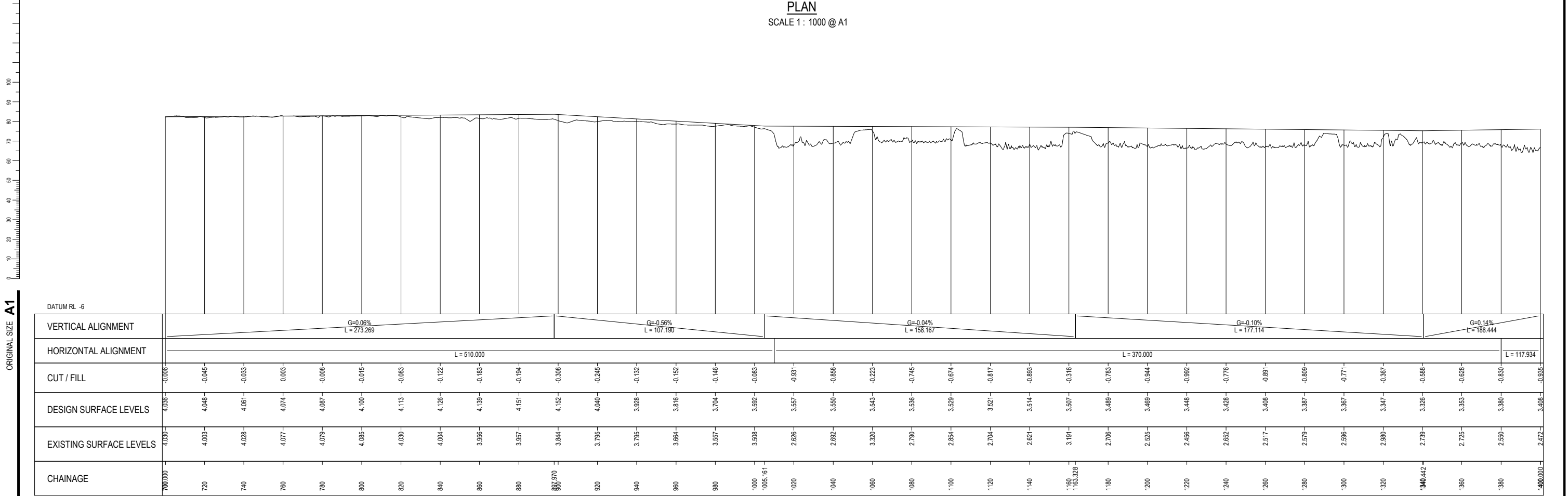
CH 1000 TO CH 1510: FILL EXISTING SWALE TO SHOULDER LEVEL AND INSTALL STORMWATER PIPEWORK. TO BE DESIGNED BY STORMWATER ENGINEER

ALIGNMENT TO BE CONFIRMED AT DETAILED DESIGN STAGE

LEGEND	
	PROPERTY BOUNDARY
	PROPOSED SHARED PATH - LOW DESIGN INPUT
	PROPOSED SHARED PATH - MEDIUM DESIGN INPUT
	PROPOSED SHARED PATH - HIGH DESIGN INPUT

- NOTES**
- ASSESSMENT BASED ON AERIAL IMAGERY AND STREETVIEW ONLY.
 - NO UTILITY SERVICES INVESTIGATION WAS UNDERTAKEN.

PLAN
SCALE 1 : 1000 @ A1



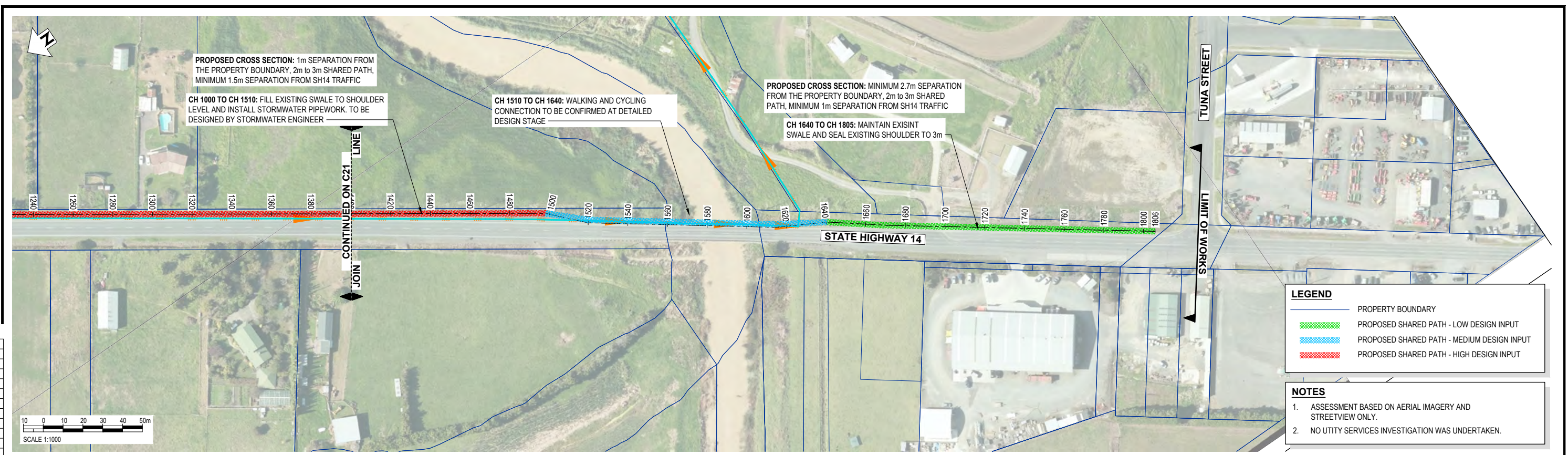
LONGITUDINAL SECTION CL1

NOT FOR CONSTRUCTION

B FINAL A FOR DISCUSSION		SP MN DRN	GV GV CHK	07.03.23 20.02.23 DATE	SURVEYED DESIGNED DRAWN CAD REVIEW DESIGN CHECK DESIGN REVIEW APPROVED PROF REGISTRATION:	M.NEL G. VAN DER WESTHUIZEN	20.02.23 20.02.23		Client:	PROPOSED DARGAVILLE RACECOURSE PPC DARGAVILLE RACING CLUB INC	Status Stamp FINAL Date Stamp 08.03.23 Scales 1: 1000 @ A1, 1: 2000 @ A3 Drawing No. 310204755-01-001-C021	Rev. B
REV		REVISIONS		PROPOSED SHARED PATH FEASIBILITY SHEET 2 OF 3								

DO NOT SCALE - IF IN DOUBT, ASK

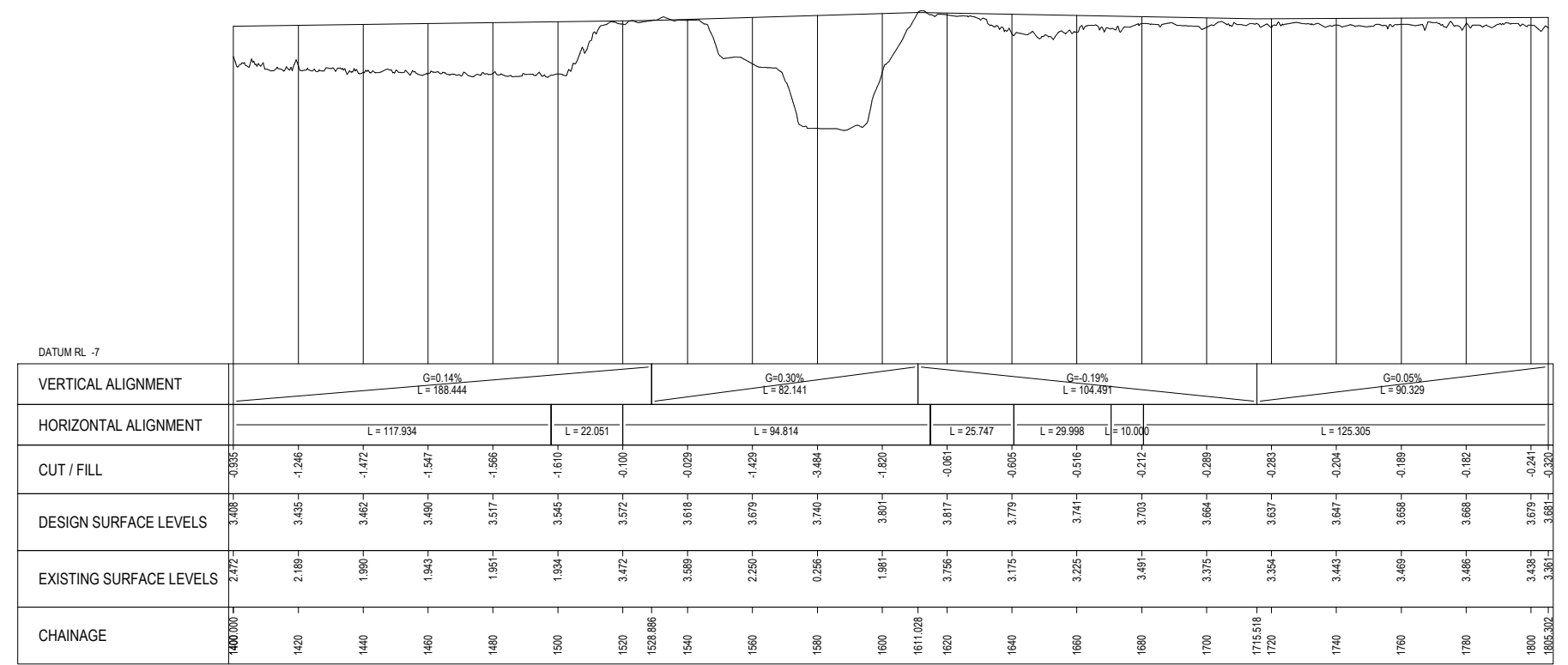
ORIGINAL SIZE A1



LEGEND	
	PROPERTY BOUNDARY
	PROPOSED SHARED PATH - LOW DESIGN INPUT
	PROPOSED SHARED PATH - MEDIUM DESIGN INPUT
	PROPOSED SHARED PATH - HIGH DESIGN INPUT

- NOTES**
- ASSESSMENT BASED ON AERIAL IMAGERY AND STREETVIEW ONLY.
 - NO UTILITY SERVICES INVESTIGATION WAS UNDERTAKEN.

PLAN
SCALE 1 : 1000 @ A1



LONGITUDINAL SECTION CL1

NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	BY	CHK	APP
B	FINAL	07.03.23	SP	GV	
A	FOR DISCUSSION	20.02.23	MN	GV	
			DRN	CHK	APP

SURVEYED		
DESIGNED		
DRAWN	M.NEL	20.02.23
CAD REVIEW	G.VAN DER WESTHUIZEN	20.02.23
DESIGN CHECK		
DESIGN REVIEW		
APPROVED		
PROF REGISTRATION:		



Client:

PROPOSED DARGAVILLE RACECOURSE PPC
DARGAVILLE RACING CLUB INC

PROPOSED SHARED PATH FEASIBILITY
SHEET 3 OF 3

Status Stamp	FINAL
Date Stamp	08.03.23
Scales	1 : 1000 @ A1, 1 : 2000 @ A3
Drawing No.	310204755-01-001-C022
Rev.	B

ATTACHMENT 5: LOCALITY PLAN

