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Issued via email: simon@sgl.nz

Dear Simon

RM230016 MANGAKURI SUBDIVISION – 402 MANGAKURI ROAD, MANGAKURI

East Cape Consulting (ECC) was engaged by the SR and BJ Williams Charitable Trust (the Applicant) to prepare a Traffic Assessment Report (TAR) for the above subdivision.

The TAR concluded that the proposed subdivision can be appropriately accessed from the surrounding network and no specific transportation conditions were recommended.

A Transport Engineering Review (TER) dated 22 March 2023 was subsequently carried out by Stantec. This letter report has been prepared to address the questions raised by this review.

TRANSPORT ENGINEERING REVIEW

1. Applicant to confirm that there is no need for any improvements to Williams Road to safely accommodate the additional traffic and the higher incidence of two-way movement, for example; localised widening on curves, passing bays, additional sealing, line marking, signage, changes in speed limit or traffic calming measures.

No improvements are recommended.

The highest traffic volume given by Mobileroad is 120 vehicles per day (vpd) on Williams Road (reported Section 2.2 of TAR). When spread across the 27 existing lots this equates to an average of 4.4 vpd per lot. The addition of 8 lots could therefore add 35 vpd to Williams Road to give a total of 155 vpd, this is well within the carrying capacity of a two-way two-lane rural road.

Along the beachfront (which will be used by one additional lot) the existing lane width is sufficient for one-way traffic with informal passing within the berm. The provision of existing speed management features indicates a historical speeding issue which could be exacerbated by road widening. Therefore, no localised widening is recommended for a single additional lot.



2. Applicant to provide a plan of the proposed path network and confirm how this will be formed and maintained.

Figure 1 below has been extracted from the Wayfinder Limited plans to show the internal paths within the development (yellow dashed lines). Maintenance will fall on the landowner whose land the path is formed upon. In most cases, if not all, this will be the farm (Mangakuri Station).

The path will be constructed with a material suitable to provide an all-weather surface. Limestone is a likely option which is to be confirmed.



Figure 1 – Landscaping Plan (Source Wayfinder Limited)

3. Applicant to confirm extent of any works to ensure that the sight distances at ROW 1 are adequate for the operating speed on Okura Road.

Figure 16 from the TAR is reproduced below as Figure 2 for ease of reference. This shows the existing vegetation restricts visibility to the south 3m back from the edge of seal. Figure 3 shows a view along Okura Road taken from the edge of seal. It shows good visibility to the south. These Figures demonstrate that removal of some vegetation and grassing of this berm, located within the road reserve, will ensure adequate sight distance is achieved.



Figure 2 – Okura Road Access South Approach (from TAR)



Figure 3 – Okura Road Access South Approach

4. Applicant to provide an assessment of available sight distances against the PDP transport standard TRAN-S8.
5. Applicant to confirm extent of any earthworks necessary to meet sight distance requirements.

Section 3.3 of the TAR notes a drive over speed survey was conducted on Wednesday, 16 November 2022. The weather was fine and the road surface dry. The approach speeds for each access are summarised in Table 1 below.

Williams Road	Approach	Speed (km/h)	
		50 th percentile	85 th percentile
South Access	West	46	47.4
	North	48	49
North Access	South	41	44.5
	North	44	46.1

Table 1 –Speed Survey Results For Williams Road

These speeds show that even though an open road speed limit applies the vertical and horizontal geometry of Williams Road restrict vehicles to speeds lower than 50 km/h. It is anticipated that even if the gravel section of Williams Road was sealed the average speed, for the Southern Access – West Approach¹, would not increase much beyond 50 km/h, if at all.

Okura Road is narrow with regular traffic calming features. The site visit indicates that vehicle speeds are also lower than 50 km/h.

Section TRAN-S8 (Safe Sightline Distances) of the updated version of the Proposed District Plan (“Decisions: 25/05/2023”) specifies that for vehicle accesses fronting a road that is not a State Highway, compliance with the Austroads Standards will be deemed an acceptable.

Austroads states that desirably sight distances at access should comply with the sight distance requirements for intersections. Accordingly, the sight distance requirements given in Section 4.1 of the TAR increase to 97m for a 50km/h speed environment.

As a result of the increased sight distance requirements four trees within the road reserve should be removed to the north of the northern access as shown in Figure 4.

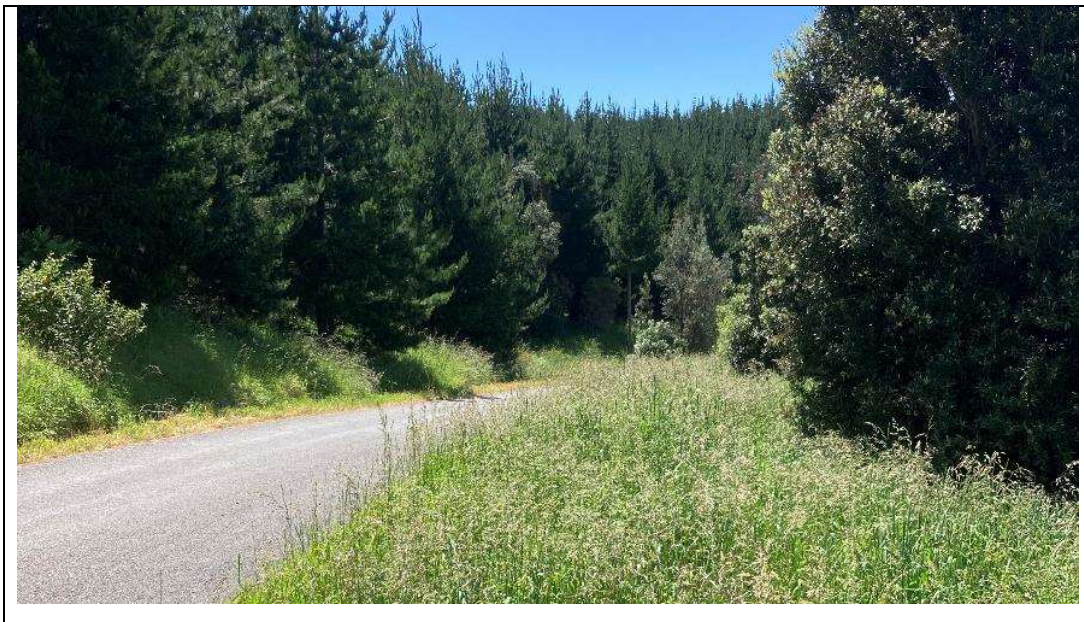


Figure 4 – Williams Road Northern Access North Approach

Once these trees are removed, 97m of sight distance can be achieved in both directions from all accesses as shown in Figures 11 to 16 of the TAR. Regular berm mowing is still recommended to

¹ Southern Access – West Approach, is the only approach which has an all-gravel surface. The Southern Access – North Approach, has 85m of gravel surface beyond which is sealed.

ensure these sight lines are kept clear of vegetation. This will keep grass height low and prevent new trees and bushes from establishing.

6. Applicant to confirm that a 5 metre long approach platform with a gradient of less than 5 percent will be provided on each right of way where they meet the frontage road.

The Figures below have been extracted from the Strata Group Limited plans to demonstrate the accessway gradients include a platform as recommended in the TAR.

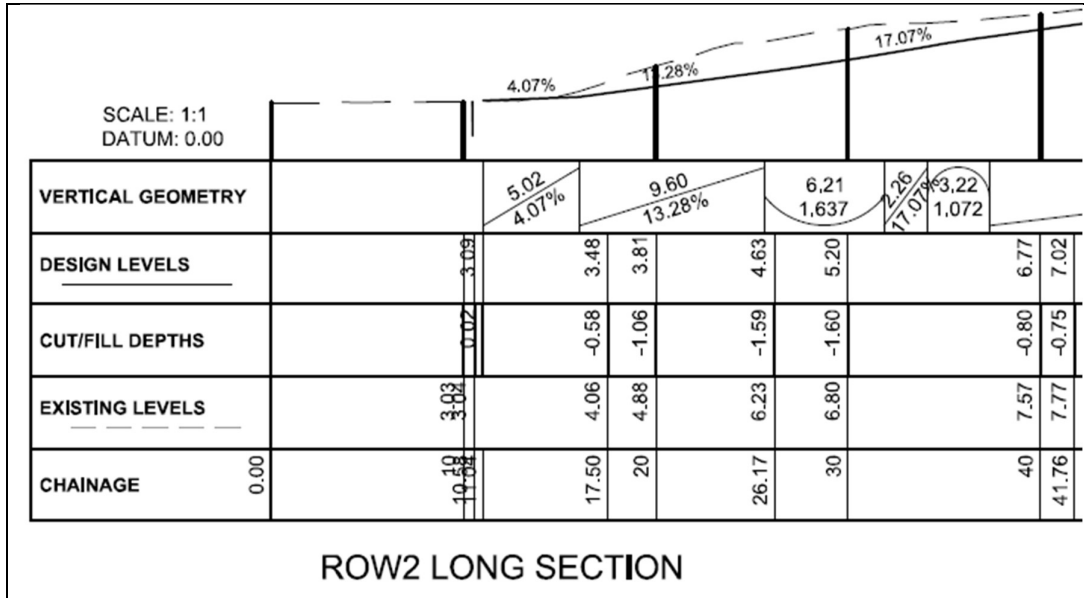


Figure 5 – Okura Road Access Exit Gradient

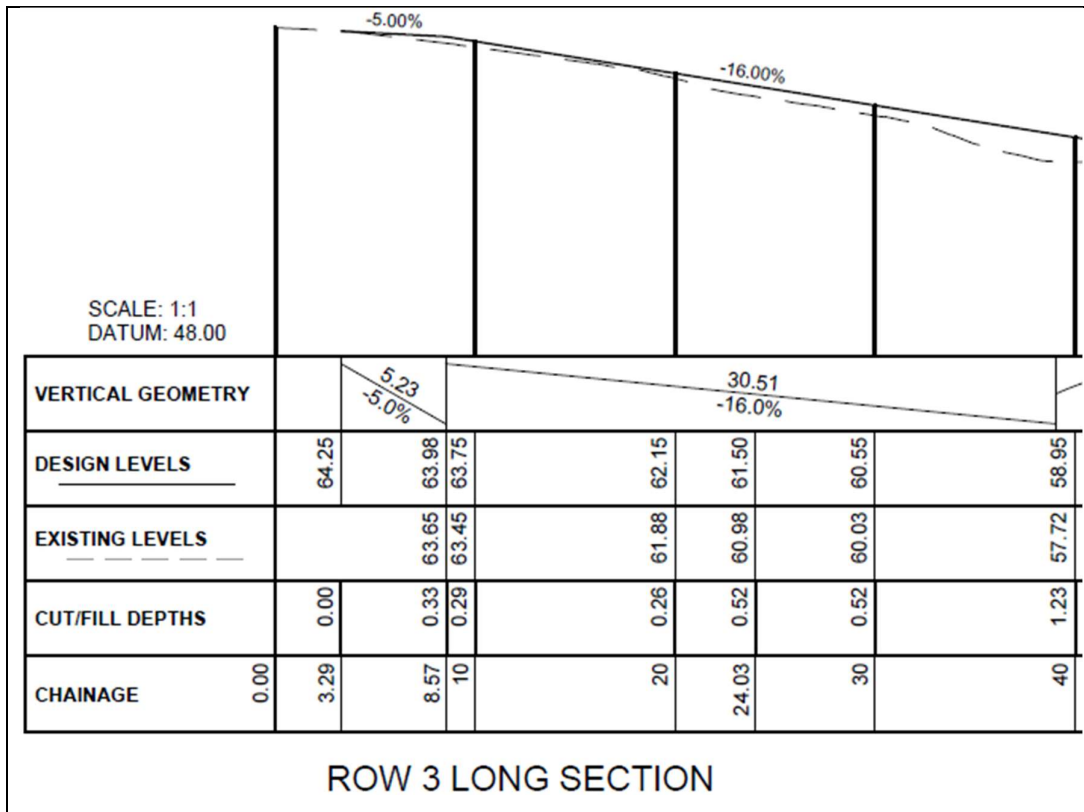


Figure 6 – Williams Road Northern Access Exit Gradient

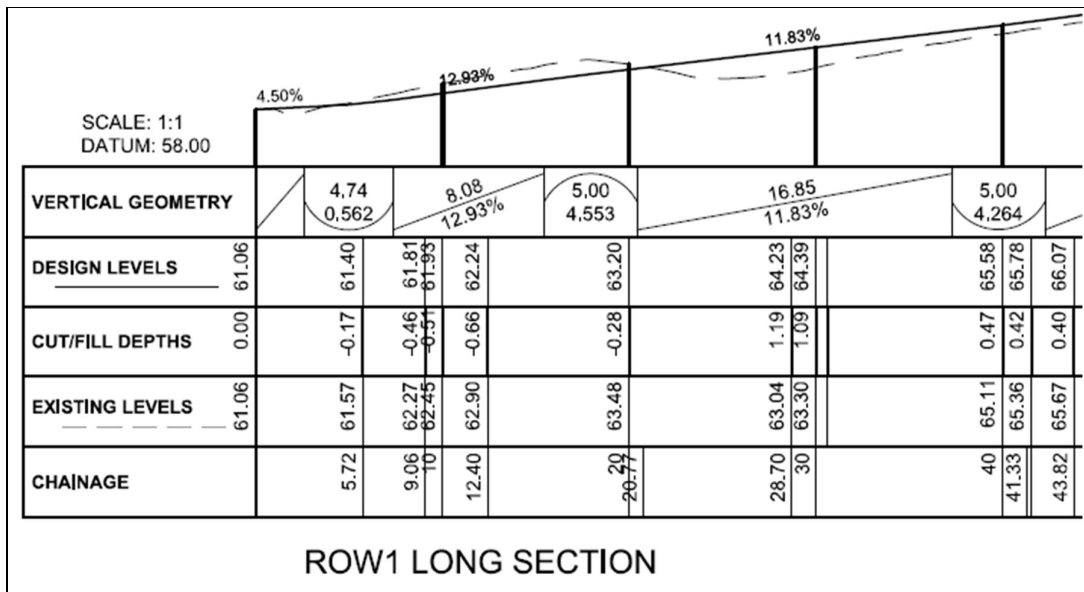


Figure 7 – Williams Road Southern Access Exit Gradient

For more detail see Strata Group Limited plans.

7. Applicant to identify a potential future extent of the low speed zone and appropriate measures to encourage low speeds on Williams Road.

No low speed zones are recommended. The Okura Road access falls within an existing low speed zone. The Williams Road accesses are within a rural environment, and even though an open road speed limit applies the vertical and horizontal road geometry restricts vehicle speeds to less than 50 km/h.

8. Applicant to update the ROW2 / Okura Road crossing design so that a medium length truck can turn without leaving the carriageway.

Figure 8 has been extracted from the Strata Group Limited plans to demonstrate the accessway provisions are suitably dimensioned as recommended by the TAR. The access is 5m wide over approximately 50m to ensure sufficient space for vehicles to manoeuvre past each other. No widening is recommended along the beach side of Okura Road. Medium rigid trucks (MRTs²) are only expected to access the site during construction or if a large fire appliance is called, in this case the vehicle body may overhang the edge of seal but wheels are expected to remain on the sealed surface.

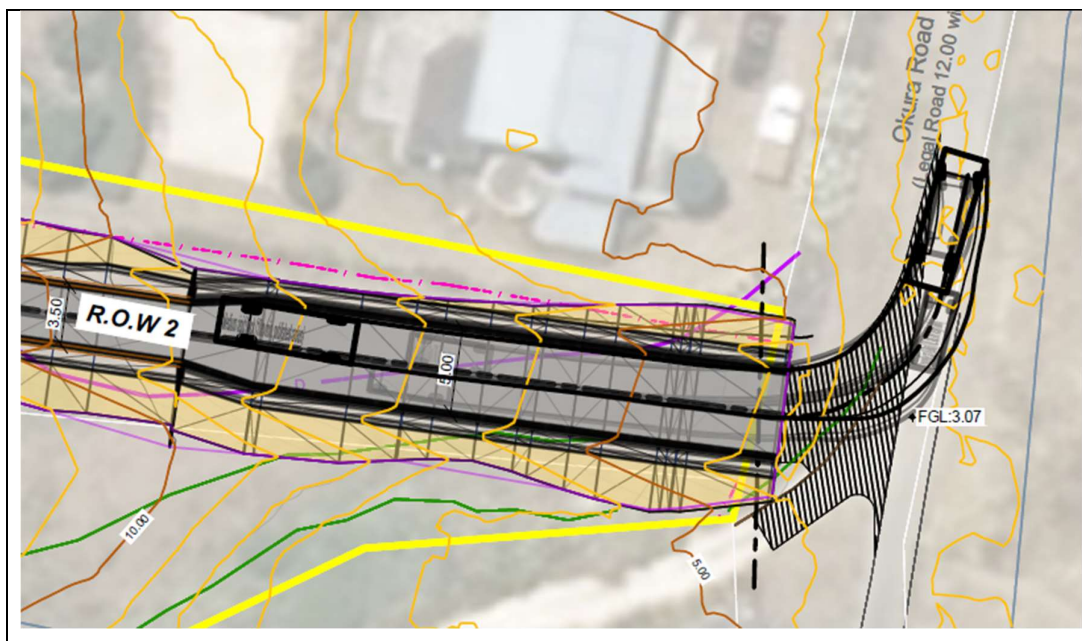


Figure 8 – Okura Road Access Vehicle Tracking

9. Applicant to update all vehicle tracking and confirm that the carriageway widths are sufficient to accommodate a medium length rigid truck.

The Figures below have been extracted from the Strata Group Limited plans to demonstrate the accessway provisions are suitably dimensioned as suggested in the TAR. Vehicle tracking has been checked using a MRT and the accessway is 5m wide over at least 25m to provide a passing opportunity at the ROW entry/exit and avoid queuing onto Williams Road.

² 8m long truck as specified by RTS18 “New Zealand on-road tracking curves for heavy motor vehicles”



Figure 9 – Williams Road Northern Access Vehicle Tracking

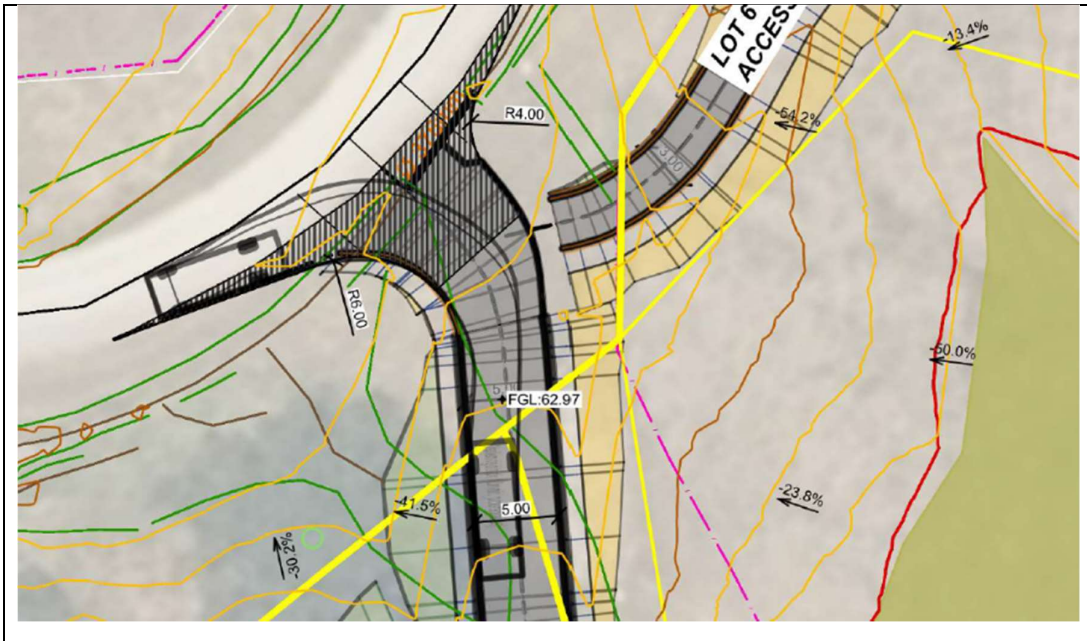


Figure 10 – Williams Road Southern Access Vehicle Tracking

The proposed designs are expected to exceed the relevant ODP minimums for residential activities but may not meet the CHBDC standard for rural residential properties. No stock truck or other heavy vehicle servicing is anticipated via any ROW, therefore this non-compliance is assessed as technical only and the accesses are expected to appropriately accommodate the proposed activities, with no adverse operational or safety effects on public roads.

For more layout details see Strata Group Limited plans.

CONCLUSION


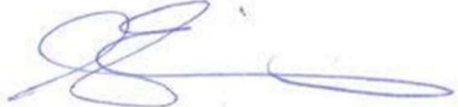
A rural subdivision is proposed in Mangakuri Beach to create 8 new residential lots. The lots are accessed via three different vehicle accesses, two on Williams Road and one on Okura Road.

The matters raised in the TER are acknowledged and consequently it is recommended that four existing trees are removed on Williams Road to ensure each access complies with the relevant ODP standards for sight distance. On going maintenance, regular berm mowing, and occasional vegetation trimming will be required to ensure the sight lines are kept clear at all accessways.

A path is provided through the subdivision so that all lots have walking/cycling access to Mangakuri Beach via the Okura Road access. The path will be maintained by the servient landowner.

Overall, it is concluded that the proposed development can be appropriately integrated with the surrounding transport network. Other than standard engineering approval conditions for access works, no specific transportation conditions are recommended.

Yours sincerely,

<p>Anna Wilkins (CMEngNZ)</p>  <p>Principal Engineer East Cape Consulting Limited</p>	<p>George Eivers (CMEngNZ, CPEng, IntPE)</p>  <p>Principal Engineer / Director East Cape Consulting Limited</p>
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Attach:

Attachment 1 – Subdivision Plans (Strata Group Limited)

Attachment 2 – Proposed Landscape Management Zones Plan (Wayfinder Limited)