



East Cape Consulting Limited

4 Mc Hardy Street

Havelock North

Hastings 4130

Simon Gabrielle

Strata Group Consulting Engineers

PO Box 758

HASTINGS 4156

29 September 2023

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 Section 92 letter (S92) dated 18 September 2023 was subsequently received from Central Hawkes Bay District Council (CHBDC). This letter report has been prepared to address the Transportation questions raised by this letter.

2. Please have a transportation expert 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.

On the unsealed section of Williams Road (in the vicinity of Lots 6-10), the existing curve has an inside radius of approximately 35m. If this section of road was sealed this curve radius equates to a

speed environment of 30km/h (with about 4.6% superelevation¹). This existing road geometry is wide enough for two-way flow and encourages low speeds, therefore no speed limit changes or other measures are considered necessary.

3. Please provide a plan of the proposed walkway path network and confirm how this will be formed and maintained on an ongoing basis.

Figure 1 shows possible routes for internal paths within the development (yellow dashed lines). However, these are indicative routes and no formal paths are planned, rather each lot will have a “right to roam” over all of lot 11 (the coastal balance lot). This has been proposed to encourage the lot owners to enjoy the various plantings and other areas formed by the landscaping. It is anticipated that this approach will lead to more informal paths being developed.

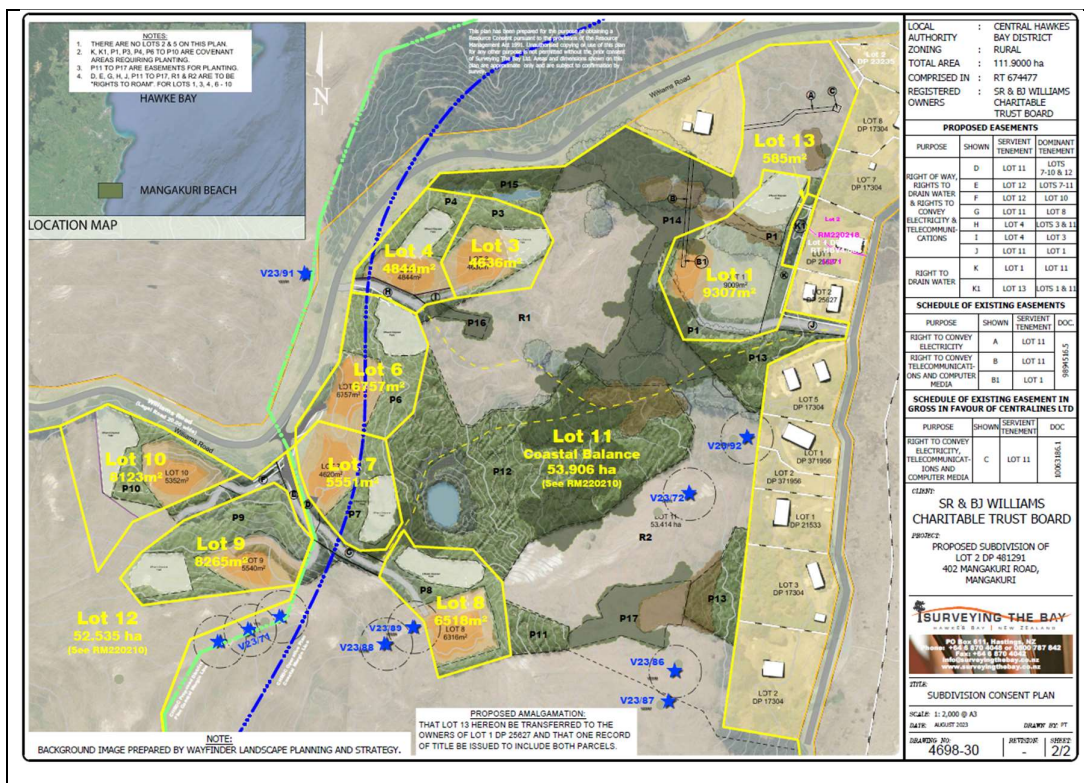


Figure 1 – Subdivision Consent Plan (Source: Surveying The Bay)

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

¹ In accordance with Waka Kotahi (NZTA) Technical Memorandum TM-2501 - 1 AUGUST 2021: Superelevation calculations

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	49.0
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 restricts 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 Approach², 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 as acceptable.

Austroads states that desirably sight distances at access should comply with the sight distance requirements for intersections³. 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 recommendations four trees within the road reserve should be selectively limbed (to allow sight lines below the canopy) and/or removed to the north of the northern access as shown in Figure 4.

² 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.

³ It is noted that this is a “desirable” standard and not an absolute minimum. The minimum required to ensure safety is not compromised is the Stopping Sight Distance which is 55m @ 50km/h.

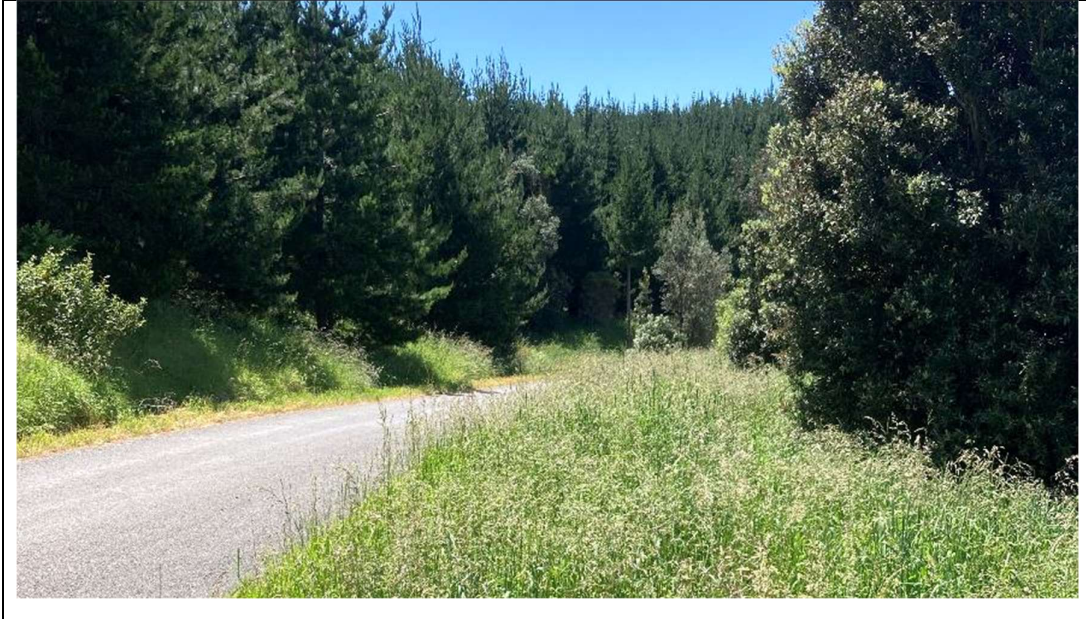


Figure 2 – Williams Road Northern Access North Approach

Once these trees are trimmed/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 ensure the sight lines are kept clear of vegetation, this will keep grass height low and prevent new trees/bushes from establishing.

5. Please confirm whether 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. If not, please confirm what approach/gradients will be provided with appropriate diagrams to demonstrate this, as necessary.

All three accessways include an approach platform as recommended in the TAR. The Figures below have been extracted from the Strata Group Limited plans to show each specific accessway approach platform gradient.

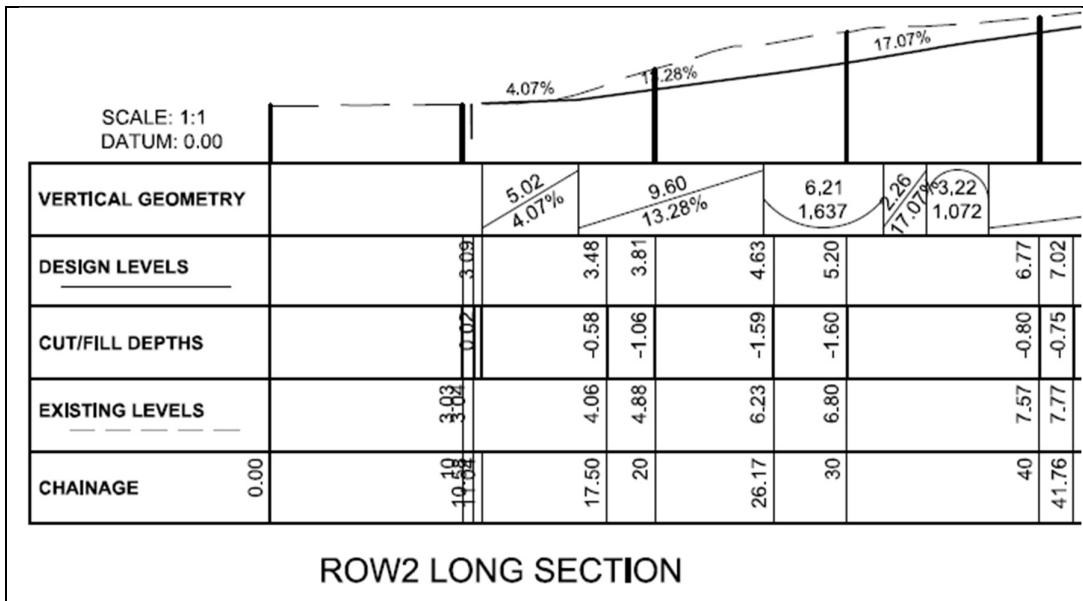


Figure 3 – Okura Road Access Exit Gradient

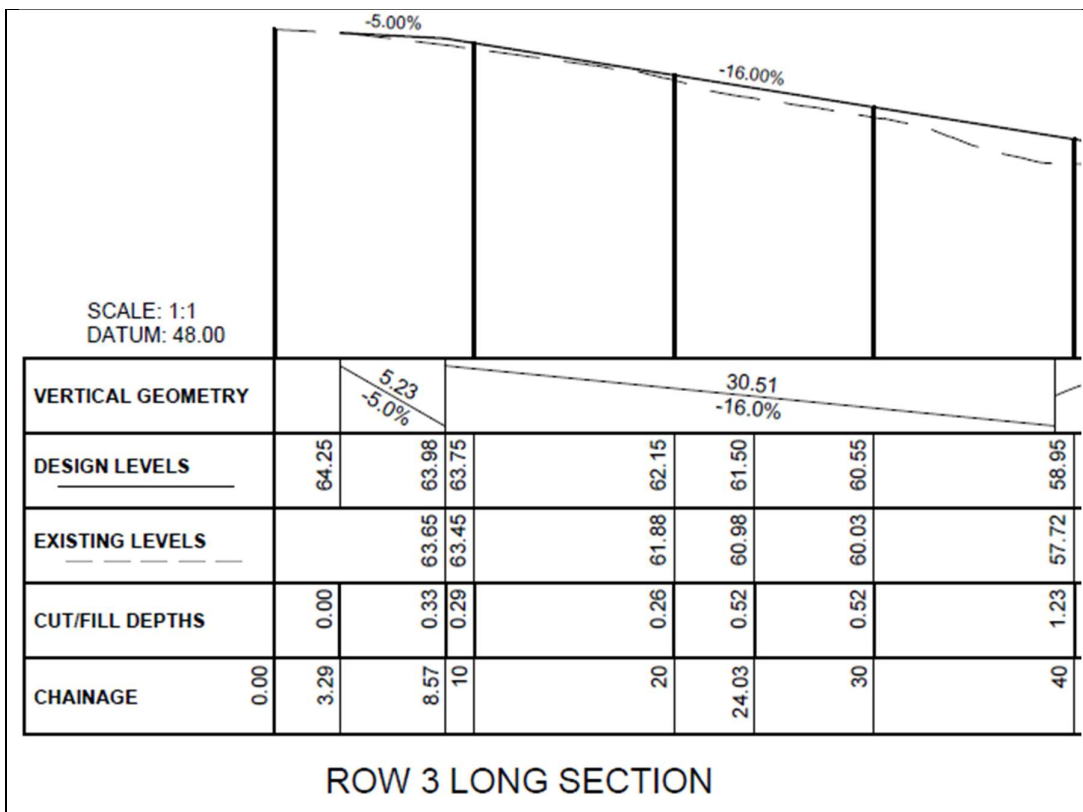


Figure 4 – Williams Road Northern Access Exit Gradient

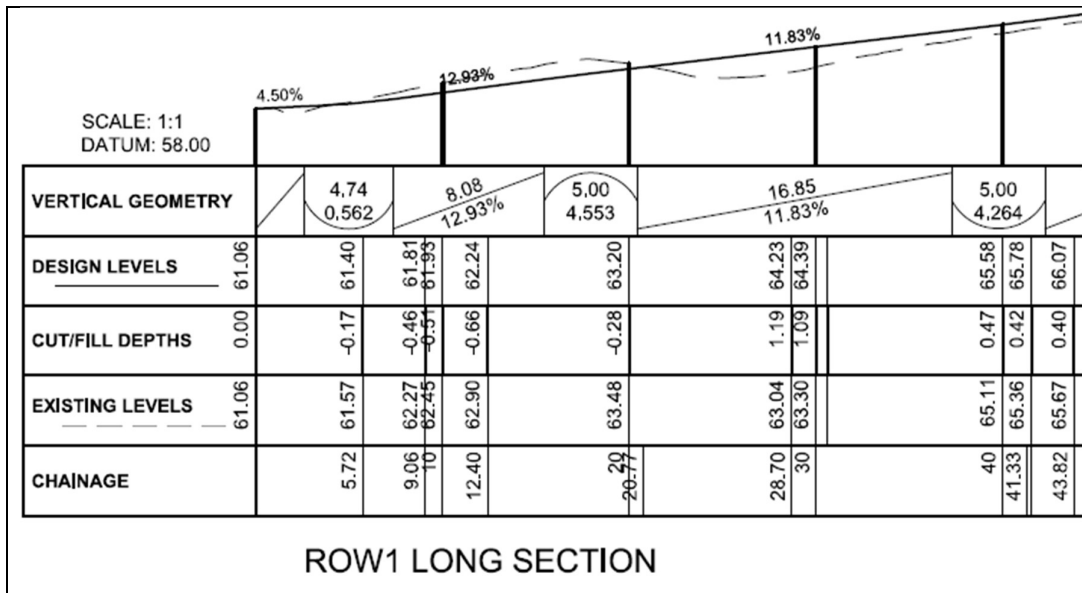


Figure 5 – Williams Road Southern Access Exit Gradient

For more detail see Strata Group Limited plans.

6. Please 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. Forward visibility along Williams Road is adequate for drivers to observe a slow moving vehicle (such as a tractor towing a boat) and moderate their speed appropriately.

7. Please advise whether a medium length truck can turn without leaving the carriageway for ROW 2. If this is proposed, please update the ROW2 / Okura Road crossing design.

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 (MRTs⁴) 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.

⁴ 8m long truck as specified by RTS18 “New Zealand on-road tracking curves for heavy motor vehicles”

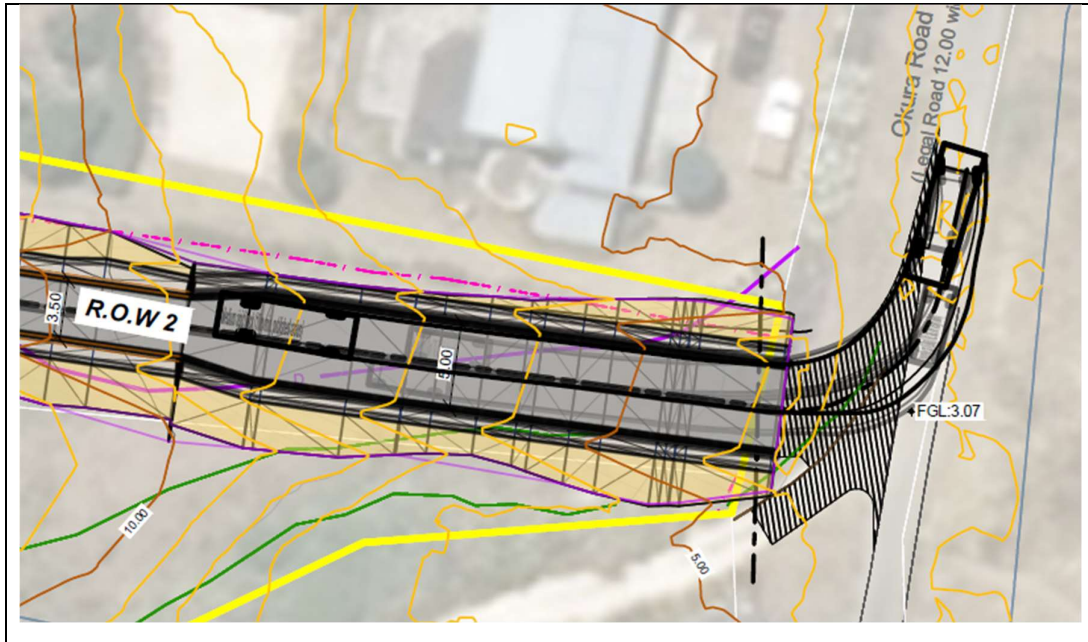


Figure 6 – Okura Road Access Vehicle Tracking

8. Please confirm whether the carriageway widths are sufficient to accommodate a medium length rigid truck. If so, please update all vehicle tracking and confirm this.

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 accessways are 5m wide over at least 25m to provide passing opportunities at each ROW entry/exit and avoid queuing onto Williams Road.



Figure 7 – Williams Road Northern Access Vehicle Tracking

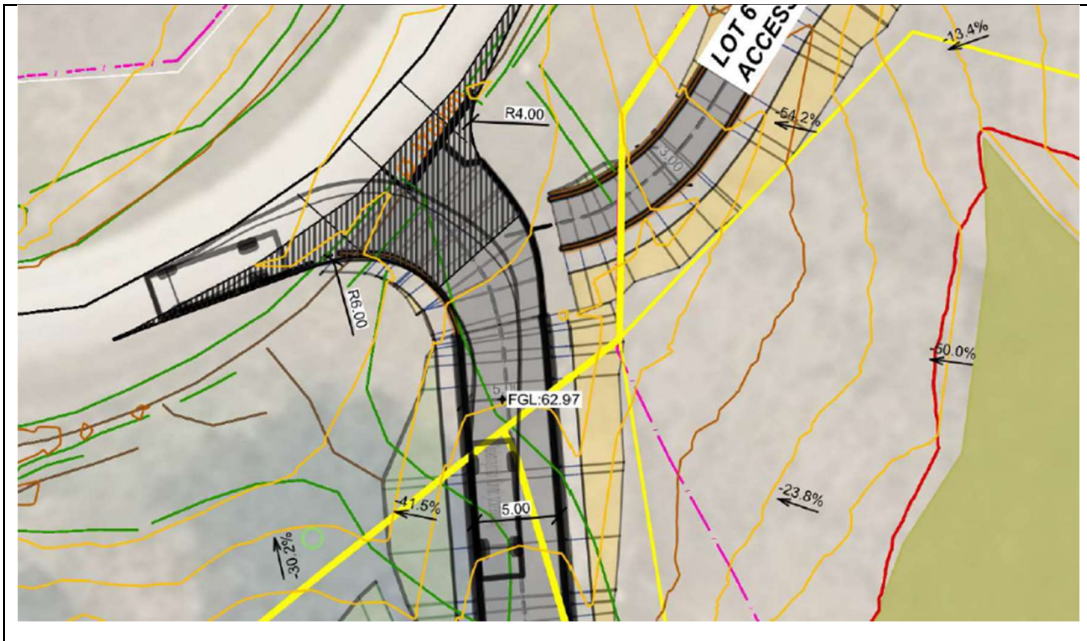


Figure 8 – Williams Road Southern Access Vehicle Tracking

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 S92 letter are acknowledged and consequently it is recommended that four existing trees are trimmed/removed on Williams Road to ensure all accesses comply with the relevant ODP standards for desirable sight distance. On going maintenance, regular berm mowing, and occasional vegetation trimming will be required to ensure the sight lines are kept clear.

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>
--	---

Attach:

Attachment 1 – Subdivision Plans (Strata Group Limited)