

File Ref: AC22241 – 01 – R2

16 September 2022

Ms Liz White
Liz White Planning

Email: Liz@lwp.co.nz

Dear Liz,

Re: Plan Change 80, Selwyn District – Review of noise assessment

We have peer reviewed the noise assessment provided in support of an application for Plan Change 80 to the Selwyn District Plan. This application is to rezone Rural Inner Plains Zone on Two Chain Road, Rolleston to Business 2A Zone.

Our review is based primarily on the following documents:

- Acoustic Design Advice Memo A01 titled *Two Chain Road – Business 2A rezoning*, as prepared by Powell Fenwick, and dated the 24th of September 2021
- Integrated Transport Assessment titled *7 – 183 Two Chain Road Rolleston*, as prepared by Novo Group, and dated April 2022 (the ITA)

We have also reviewed the twelve submissions where they raise noise related concerns. Please find our comments below.

1.0 POWELL FENWICK ASSESSMENT

1.1 Operative Selwyn District Plan limits

Powell Fenwick (PFC) reproduce the relevant rural and living zone noise limits in the operative Selwyn District Plan (ODP). If this Plan Change were approved, new development could be considered against these rules. They could also be superseded by the Proposed District Plan rules which are anticipated by Selwyn District Council to be in full effect by the end of 2023. We note that the SDC website (accessed 8/09/22) currently states that “*all land use and subdivision activities need to be considered under both the Operative and Proposed District Plans until all of the relevant Proposed Plan provisions become operative.*” This section discusses the operative provisions, and in section 1.2 following we discuss the proposed changes relevant to this site.

At the boundary of the rural Inner Plains / Outer Plains zones across Two Chain Road, and Walkers Road, daytime noise limits of 60 dBA L_{10} and 80 dBA L_{max} (7.30 am – 8.00 pm) and night-time noise limits of 40 dBA L_{10} and 65 dBA L_{max} (8.00 pm – 7.30 am) would apply under the ODP. Many nearby sites in these zones are used for residential purposes, including a number of dwellings across Two Chain Road from the subject site, and the Rolleston Prison across Walkers Road.

The 60 dB L_{10} daytime noise limit is higher than would normally be considered to provide adequate amenity protection for rural dwellings, being more lenient than the World Health Organisation and NZS 6802:2008 guidelines typically referenced. We understand that this is because the ODP considers the rural zone as a

business area, and therefore people can reasonably expect a higher level of noise and noise at hours which differ from Living Zones.

The night-time noise limit of 40 dBA L_{10} , however, provides a high level of protection against sleep disturbance. It is lower than the World Health Organisation guidelines typically referenced, which allow residents to sleep undisturbed with windows open for ventilation. The night-time limit also applies for a relatively long period, starting from 8 pm and extending until 7.30 am.

The ODP noise limits that apply to Living Zone sites to the south across Main South Road, are lower than the rural noise limits. Daytime noise limits of 50 dBA L_{10} / 85 dBA L_{max} and night-time noise limits of 35 dBA L_{10} / 70 dBA L_{max} apply. The daytime limit is generally consistent with residential amenity protection, and the night-time limit is unusually restrictive.

1.2 Proposed Selwyn District Plan limits

The PFC assessment does not discuss the Proposed Selwyn District Plan noise limits. However, these are also likely to be a relevant consideration.

In the Proposed Plan the Rural Inner Plains and Outer Plains Zones become a General Rural Zone. Under the current proposal, the limits for noise received at the notional boundary of any noise sensitive activity on General Rural Zone sites would become 55 dB L_{Aeq} between 0700 and 2200 hours and 45 dB L_{Aeq} / 70 L_{Amax} outside these hours. When compared to the ODP, the daytime noise limit is lower, and the night-time noise limit higher. The night-time period is also shorter protecting only core sleeping hours, and the limits are assessed at the notional, rather than the site boundary. These limits represent values that should not be exceeded to provide “reasonable protection of health and amenity” for residential land use (NZS 6802:2008).

In any residential zones (i.e. those to the south across Main South Road), the limits for noise received at any point within a site would become 50 dB L_{Aeq} between 0700 and 2200 hours and 40 dB L_{Aeq} / 70 L_{Amax} outside these hours.

These limits are more consistent with current best practice and guidance than the ODP limits. On balance, the lower daytime limit for rural properties will be more restrictive than the ODP in line with this guidance. However, the longer daytime period, and notional boundary assessment location could be less restrictive for some activities / sites. The residential limits will be similar during the daytime, and less restrictive during the night-time.

We consider that achieving compliance with the currently proposed limits would ensure that reasonable protection of residential amenity is provided for nearby dwellings and similar noise sensitive locations. While the limits control noise from individual activities to an acceptable level, rather than cumulative noise from multiple activities generating levels which approach the limits, reasonable levels would often inherently be achieved with large lot sizes, variation in activities, and activity locations relative to a single assessment location.

1.3 Reverse Sensitivity

We agree with the comments in section 3 of the PFC assessment that reverse sensitivity is unlikely to be a key concern for development of Business 2A zoned sites in this area. While there would be southern sections of the zone, exposed to relatively high traffic and rail noise levels, noise sensitive spaces such as offices, we agree that these can achieve suitable internal levels.

1.4 Noise generation

PFC identify the dwellings across Two Chain Road, as likely to be the most sensitive receiving environment to noise from the proposed Business 2A zone. We agree these areas are likely to be more sensitive than the residential areas to the south, which will receive higher levels of traffic and rail noise. PFC do however discount Rolleston Prison as “not expected to be particularly noise sensitive”. No reasoning is provided, and

this appears at odds with the submission from Ara Poutama Department of Corrections, who describe the prison as a place of residence, with people unable to avoid the effects of surrounding activities. Sensitive areas of the prison (i.e. common outdoor areas) may however have greater setbacks from the site boundaries.

PFC primarily rely on the ODP limits as providing a suitable level of control, because (A) there are aspects that are more restrictive than the general rural limits which would otherwise apply and, (B) there are other B2A / Inner Plains interfaces in the District.

While the ODP limits do illustrate the permitted baseline, as identified above, the daytime ODP limit received in the rural zone is higher than would normally be considered to provide adequate amenity protection for rural dwellings. Activities which established under this rule, may therefore be able to generate relatively high noise levels. Rural activities which generate high noise levels would also often be of a transient or seasonal nature. The night-time level however, would provide suitable protection against sleep disturbance and we agree with PFC that it would provide an appropriate level of control. As noted above, we consider that compliance with the PDP limits would ensure that reasonable protection of residential amenity is provided for nearby dwellings and similar noise sensitive locations.

For night-time activities, PFC note that activities fronting Two Chain Road may need to control their noise output to meet the noise limits. While not stated, a similar case would also occur near Walkers Road. Further comments follow this theme, and PFC note that *“Emphasis should be placed on locating, enclosing and/or screening of the louder activities, particularly if any of the activities may be carried out during the night-time assessment period. Night-time activities would be more limited, particularly with regards to activities undertaken outside if near to the north rural boundary. The site has sufficient width to provide flexibility when considering the location of a range of tenant activities.”* We agree, but note that compliance with the Plan standards relies on noisier activities in this zone establishing in suitable locations for their type, and undertaking a robust acoustic assessment to ensure they will comply with the limits. A meaningful zone wide setback, or other control in the ODP does not appear to have been considered.

While there are other B2A / Rural interfaces in the District, they are not necessarily similar with respect to the number of existing dwellings in close proximity, or the access arrangements and where the majority of vehicles accessing the site will travel relative to dwellings. We also note that AES have also been involved with monitoring of complaints from residents in the vicinity of existing B2A zones in Rolleston, both at locations where the noise complies with the ODP limits, and at locations where it does not.

Resulting traffic on nearby roads (particularly heavy vehicles), and the time when this may occur, has not been discussed at all by PFC. Increased traffic on nearby roads is likely to be a key noise effect for nearby sites, particularly if there are large increases in traffic volumes above the baseline at certain times of the day, or increases in the number of heavy vehicles at night. The ITA outlines that traffic generation from this site may result in a morning peak (2 hours) of 1,078 vehicle movements and an evening peak (2 hours) of 996 vehicle movements. It also outlines that Two Chain Road has a current volume in the order of 1,800 vehicles per day, and Walkers Road has a current traffic volume in the order of 1,700 vehicles per day. While this indicates a notable increase in traffic on these roads could result from this proposal, it is also relevant to consider how other proposed changes may affect the network. We understand from the ITA (figure 8 in particular), that Waka Kotahi future planned upgrades to construct a flyover and upgrade the SH1 / Walkers Road intersection, would result in Walkers Road and Two Chain Road becoming the *“southern access to industrial area and key freight route”*. We consider that an assessment of likely traffic noise effects is required in order to understand the noise implications, and effects on the closest residential neighbours of increased traffic resulting from the Plan Change. It is also relevant to note that Waka Kotahi have raised some questions about the Applicants traffic modelling, including the basis for the 2033 base traffic, which shows more than the Waka Kotahi 2038 modelling. Waka Kotahi have also noted further developments with regard to the proposed flyover have also occurred.

We also note that the ODP shows rail siding spurs, and indicative sidings into warehouses. Any noise effects associated with this increased activity have not been discussed. KiwiRail have also submitted in support of the proposal, noting *“The provision of additional industrial land immediately adjacent the Main South Line will allow for more co-location of warehousing and distribution facilities for freight forwarders, including large format, siding-served facilities. This again, improves efficiencies in freight movement throughout the*

Canterbury and the South Island.” This indicates that this Plan Change could result in changes to rail noise in the area, and we consider that further assessment by the Applicant should be provided, to allow a judgement about whether noise effects from increased rail activity are likely to be notable or not.

2.0 REVIEW OF SUBMISSIONS

We have reviewed the opposing submissions which mention noise. Our key observations are outlined below.

Assessment under the Proposed District Plan

One submitter raises concern that the PFC assessment considers only the ODP, and not the PDP limits which appear lower. The differences between these two Plans have been discussed in section 1.1 and 1.2 and we agree the PDP limits would be more consistent with best practice guidance. There are some aspects of the PDP that are more restrictive (i.e. the lower daytime limit) and others that are less restrictive (i.e. the higher night-time limits and longer daytime period).

Concerns about noise effects from Business 2A activity at the Rolleston Prison site

Ara Poutama Department of Corrections have raised concerns about the sensitivity of the prison site to noise. They have submitted that the prison is effectively a residence and may even be more sensitive than a typical residential site to noise (due to the inability to leave and vulnerability of the population). We agree that it may be reasonable to consider this site as similar in sensitivity to a general residential use, although we do not know how the areas of the site closest to the proposed B2A zoned area are used. Areas of the site further from SH1 are likely to be most sensitive to any increase in noise from the proposed activity.

However, as noted above, we consider that compliance of B2A activities with the PDP rural limits (which are likely to apply at this site) would ensure that reasonable protection of residential amenity is provided.

An increase in traffic noise on Walkers Road resulting from the proposed rezoning could also result in moderate noise effects at this site. Rail noise may also increase. As previously identified, an assessment of these aspects has not been provided by the Applicant.

General increase in noise from Business 2A activities

Many submitters raise concerns about noise resulting from the operation of various business and industrial activities that could establish in this Zone.

However, as noted above, we consider that compliance of B2A activities with the PDP rural limits (which are likely to apply at this site) would ensure that reasonable protection of residential amenity is provided.

We agree with the PFC assessment that activities fronting Two Chain Road may need to control their noise output to meet the noise limits (both ODP and PDP). A similar case also likely occurs for Walkers Road. We have recommended above that it would be appropriate for the Applicant to reflect these types of measures in the ODP, for example by showing buffer zones, screening or an indication of the type of activities which would be most suited to establishing along these boundaries.

Increased vehicles on roads

Many submitters have raised increased traffic on local roads as a primary concern. As discussed in section 1.4, we agree that this is a fair concern. The PFC assessment is lacking in this regard and we recommend that the Applicant provides an assessment of potential noise effects.

Increased rail noise

Some submitters have raised the potential for increased noise levels from rail movements and shunting operations. We also agree that this is a relevant consideration, and one that does not appear to have been assessed by PFC. Again, we recommend that the Applicant provides an assessment of potential noise effects.

Adverse effects on Te Puna Wai o Tuhinapo

This site is 900 metres away on the other side of the prison site. While we accept that this is a noise sensitive location, noise effects are expected to be more significant for closer residential sites and Rolleston Prison. Activities will be constrained by meeting the District Plan limits at these closer sites.

Burnham Military Base

The New Zealand Defence Force (NZDF) seek to ensure that the operation of the Burnham Military Camp is not affected, due to potential reverse sensitivity effects.

NZDF state that they undertake a wide variety of activities on the Burnham Military Camp site; however, do not provide any further comment on the specific activities. We understand that this site is largely an operational and accommodation base; however, has some proposed areas for training – including a 25 metre rifle range within the golf club to the east.

The rifle range is more than two kilometres from the proposed Plan Change area. There are a number of residential dwellings in closer proximity, or at a similar setback than this. We are not aware of any existing reverse sensitivity issues for these closer dwellings.

We would not anticipate reverse sensitivity from the Burnham Military Base to be problematic for proposed B2A activities.

3.0 CONCLUSIONS

We have reviewed the noise assessment provided in support of an application for Plan Change 80 to the Selwyn District Plan, to rezone Rural Inner Plains Zone on Two Chain Road, Rolleston to Business 2A Zone.

We consider that the ODP limits would generally provide appropriate protection against unreasonable noise effects for residential uses in nearby residential zones, and during the night-time at adjoining rural zoned properties. However, the daytime limit of 60 dBA _{L10} is higher than would normally be considered to provide adequate amenity protection for rural dwellings, being more lenient than the World Health Organisation and NZS 6802:2008 guidelines typically referenced. However, this is the daytime limit that applies in rural zones across the district currently and is not specific to this location. Ultimately the appropriateness of this rule is being reviewed through the PDP.

The PDP limits have not been discussed in the PFC assessment. While these would be less restrictive in some ways, they better align with current best practice guidance for the protection of residential amenity. If the Plan Change is approved, these limits are likely to be applicable, when activities establish on site. Achieving compliance with the currently proposed PDP limits would ensure that reasonable protection of residential amenity is provided for nearby dwellings and similar noise sensitive locations.

We agree with PFC that reverse sensitivity effects (i.e. occupiers of the Business zoned sites complaining about other noise in the area) are unlikely to be a key issue for a B2a zoned development in this location.

However there appear to be some aspects of likely noise generation from the proposed rezoning which have not been discussed in the PFC assessment. Primarily an assessment of traffic noise and how this may increase for nearby residents, and also any increase in rail noise resulting from the site. We recommend that the Applicant provides this assessment to enable a complete judgement about the likely noise effects.

We agree with the PFC assessment that activities fronting Two Chain Road may need to control their noise output to meet the noise limits (both ODP and PDP). A similar case also likely occurs for Walkers Road. We note that compliance with the Plan standards relies on noisier activities in this zone establishing in suitable locations for their type and undertaking a robust acoustic assessment to ensure they will comply with the limits. A meaningful zone wide setback, or other control in the ODP does not appear to have been considered.

Kind Regards,

A handwritten signature in black ink, appearing to read 'W. Reeve'.

William Reeve
BE(Hons) MASNZ
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Acoustic Engineering Services