

Appendix 3 Potable Water evidence – WDC Water Asset
Manager

WAIMAKARIRI DISTRICT COUNCIL

REPORT

FILE NO and TRIM NO: DDS-06-05-01-26-04 / 150424067196

REPORT TO: Hearings Panel

DATE OF HEARING: 3-5 June 2015

FROM: Suresh Mudliar, Water Asset Manager

SUBJECT: Evidence on Water Servicing Issues Relating to Private Plan Change PC026 - Westpark Development, Rangiora.

INTRODUCTION

The purpose of this report is to provide evidence to the Hearings Panel on Water servicing matters relating to Private Plan Change 26 – Westpark Development in Rangiora.

My name is Suresh Mudliar and I am the Water Asset Manager for the Waimakariri District Council. In this position I have responsibility for the management of the entire public water supply network for the Council.

I hold a Bachelor's Degree in Civil Engineering and I have nine years of experience as a Water Asset Manager with Waimakariri District Council.

As the Council's Water Asset Manager, I have been requested to provide comments to the Hearings Panel on the water servicing aspects relating to Private Plan Change 26 (P026). If approved P026 will make provision to rezone approximately 15 hectares of rural land on the west side of Rangiora to Residential 2.

In my evidence, I will cover the following specific matters:

- Can the proposed development be adequately provided with water services?
- Resilience - Will the network be resilient for the proposed development if supplied with water services?
- Fire-fighting – Will the network have adequate capacity to meet levels of service as per the Fire Fighting Code?

WATER SUPPLY SERVICING

Feasibility of Providing Water Supply to the Development

The applicant has considered options for providing a potable water supply to the proposed development from the Rangiora water supply scheme.

The Rangiora water supply is an urban water supply scheme with on-demand supply to residential and commercial customers.

The primary source located on Smith Street bore field containing four bores has a secure status and is therefore un-chlorinated. The Council permits the extension of urban water supplies to supply outlying areas provided there is adequate capacity and the extension is cost neutral.

Currently the water supply network terminates about 500 metres east from the proposed development on Oxford Road.

Considering the development at its own merit, there is only one option to connect the proposed development to Rangiora water scheme. This is by extending the 200 mm water main along the Oxford Road and connecting the proposed development network to the existing water main.

The Rangiora Water Supply has sufficient capacity to supply the proposed development and would provide water quality that is fully compliant with the requirements of the Drinking Water Standards for New Zealand.

The water main to be extended along Oxford Road is solely for the benefit of the West Park development and therefore the cost of this main would be funded solely by the developer..

Resilience

One challenge with the proposed development is that of maintaining an acceptable level of resilience. As proposed, the West Park development would be supplied by a single main along Oxford Road.

Ideally, to provide a higher degree of resilience, the West Park development would be supplied by a main that links through the development. This would enable the community to be supplied from two directions, such that water supply could be maintained to the majority of the area in the event of a watermain failure.

There is another Plan Change P018 on the east of the proposed Plan Change 26, which is proposed to be developed. Once this development is complete, it would enable the West park development to be supplied from two directions and would provide greater resilience to the water supply. However, it is uncertain when this development will take place.

Due to the uncertainty in terms of timing of the neighbouring developments for Plan Change P018, servicing of Plan Change P026 will be a one-ended supply with reduced resilience. However, the flow and pressure will be maintained within the Council's levels of service under normal peak flow conditions.

Once the Plan Change 18 (P018) is developed, both P026 and P018 will have a network that will be resilient.

Levels of Service – Fire Fighting

The Rangiora water supply is operated and maintained at a constant pressure by way of the booster pumps at the headworks located at Ayers Street and South Belt.

The Council's Engineering Code of Practice requires a flow of 25 litres per second from two fire hydrants at a pressure of 100 kPa for fire-fighting purposes.

The Ayers Street headworks is operating at about 425 kPa and the South Belt headworks is operating at about 490 kPa.

These pressures will be maintained during high demand periods and will not affect the required fire flows of 25 litres per second from two fire hydrants even from an one-ended supply.

The water service will only be disrupted if the water main along Oxford Road and the water network within the development is out of service due to a failure.

Water Servicing Summary

From my evidence, I offer the following summarising statements:

- (a) There are no significant impediments to providing water services to the proposed Private Plan Change P026.
- (b) The only solution for providing water supply to the development is to extend the Rangiora Water supply along Oxford Road
- (c) There is no benefit to Council in extending a water main down Oxford Road at present. The extension of the water services will be undertaken at the developer's expense.
- (d) Plan Change P026 is likely to have a reduced level of resilience, until the land associated with Plan Change P018 is developed. While this is not ideal, it is acceptable.
- (e) Once the PC018 is developed, both these developments would have a resilient network.
- (f) Levels of service for fire-fighting will be maintained provided the water network within the development is not out of service due to a failure.

Appendix 4 Reserves and Greenspace Evidence - WDC Green
Space and Community Facilities Planner

WAIMAKARIRI DISTRICT COUNCIL

REPORT

FILE NO: DDS-06-05-01-26-04 / 150603086730

REPORT TO: Hearing Panel

DATE: 25 May, 2015

FROM: Jon Read, Green Space and Community Facilities Planner

SUBJECT: Report on Issues Relating to Private Plan Change P026 Westpark Rangiora Limited

INTRODUCTION

My name is Jon Read and I am the Green Space and Community Facilities Planner for the Waimakariri District Council. In this position I have responsibility for planning matters relating to the District's parks and recreation activities. I have been engaged to provide comments to the Hearing Panel on parks, recreation and open space aspects of Private Plan Change application P026 Westpark Rangiora Limited.

I hold a Bachelor Degree in Resource Studies and have 26 years' experience in the local authority parks and recreation field.

In my evidence I will cover the following matters:

- Reserve space beneath national grid transmission lines
- Lehmans Road walkway/cycleway & Oxford Road frontage reserves
- Other green linkages and accessways
- Neighbourhood recreation reserve provision

CLEARWAY FOR TRANSMISSION LINES

In response to the submission by Transpower New Zealand Limited, it is acceptable to Council's Green Space Unit that the local purpose reserve beneath the national grid transmission lines be widened to meet the required 12m clearance from the centreline. Other relief options should be given due consideration.

A further look at aerial mapping of the area confirms that any requirement for widening should be in the vicinity of (or less than) the 4m estimate stated in the Mainpower submission. Any extension should be no more than is necessary to meet requirements. The widened reserve will ultimately be vested in Council and managed by the Green Space Unit.

LEHMANS ROAD WALKWAY/CYCLEWAY RESERVE & OXFORD ROAD FRONTAGE

Provision of a walkway/cycleway reserve strip running along the Lehmans Road boundary is supported for its connectivity, safe access, recreation and amenity benefits; as well as its ability to

soften the transition from urban to rural character. However, for the following reasons, the proposed 5m width of the strip will provide insufficient space to realise these benefits:

- There is inadequate space for specimen trees as proposed on the applicant's Lehmans Road cross-section. Council practice requires reserve trees to be located a minimum of 3-4m away from private property boundaries to avoid long-term problems caused by shading of properties, tree debris, fence damage and detrimental pruning. Consequently, the trees would need to be relocated to the road reserve berm space. The suitability of this space is constrained by the proposed swales and existing water race; which reduce the scope for overall tree provision and preclude the use of larger tree species within the overall planting scheme.
- There is insufficient space for both the pedestrian/cycle path (2.5m min. width) and important boundary landscaping. To meet Council's code of practice, a clear zone to a height of 2.5m needs to extend 1m out from each side of the path edge. This space (usually grassed) provides safe clearance from adjacent vegetation and avoidance/run-off space for path users.
- For community safety and resident security (maintenance of sightlines, elimination of hiding places, pathway clearances), it is good practice to avoid screening off the boundary fence with bulky shrub planting; much of which could ultimately exceed the proposed 2m fence height. Additional reserve width combined with low compact planting will significantly improve visibility and provide the extra time and space required to allow reserve users to react to and avoid any situation they perceive to be a potential threat to their safety. It is also likely to encourage a greater number of people to use the corridor, which will further promote safety via increased passive surveillance (see and be seen). These principles become particularly important if there is no artificial lighting along the pathway.
- It is noted that Mr. Brown made reference to provision for equestrian use in his written statement of evidence pertaining to traffic and road design. In the experience of Council's Green Space Unit it is clear that there is likely to be significant user conflict and perceived safety risks if horses, cyclists and pedestrians are required to use the same limited access space. In rural-residential areas where green linkages are designed to cater for such mixed use, a 10m clearway is now a minimum requirement.

As evidenced by Council surveys, horse riding is a popular pastime in rural and rural-residential areas of the Waimakariri District. Publically accessible routes for casual riders are generally in short supply; other than along rural roadsides. Nevertheless, being right on the urban boundary and accessed via Oxford Road, the P026 margin of Lehmans Road appears to be a less than ideal location for a 'designated safe route' for horse riding. From casual observation, it also appears that most riding is focussed on the Rangiora Racecourse to Ashley River section of Lehmans Road. Further information would be useful to help assess demand and confirm rider movements.

As no dwellings are to front Lehmans Road, it is important that subdivision fencing along this 650m long boundary is of a style sympathetic to the surrounding character. While the applicant's indicative Lehmans Road fencing plan goes some way to recognising this, a commitment to provide some visual permeability from each residential lot is needed. To enable visibility while retaining privacy, permeable fencing above a height of 1.2m is recommended. Without this, a 2m

high fence affords no opportunity for passive site surveillance and interaction. This is compounded by the lack of oversight from the western (rural) aspect. Use of intermittent low landscape planting and appropriately located specimen trees will further improve site visibility while softening the visual impact of the boundary fence. Landscaping detail can be resolved at subdivision stage.

The local purpose reserve along the Oxford Road frontage is supported. It makes sense to integrate the substantial stormwater areas into an attractive green frontage at what is a main gateway to Rangiora. If viable, retention of existing mature trees along this corridor will help maintain valuable landscape character at the rural boundary. To achieve its potential, the P026 frontage will ultimately require integration with complementary roadside improvements through to the Oakwood Drive intersection further east. Although passage of the cycleway through the P026 area is desirable, provision of a continuous and more easily followed route would be preferable to the configuration shown on the proposed ODP. Walkers and cyclists from within and outside the plan change area should also be able to follow this link without confusion; and without undue conflict with local residents and road users.

OTHER GREEN LINKAGES AND ACCESSWAYS

The proposed road to road green access linkages are supported. They provide important non-motorised connectivity off internal cul-de-sacs and integrate the plan change area with adjacent sites. They also promote active recreation and social interaction, while also enhancing open space amenity. The north-east linkage is important in providing direct access to a future local recreation reserve planned for the adjacent Bain land (see *West Rangiora Outline Development Plan 168*).

I believe the following additional linkages will further benefit connectivity; especially given a lack of external connections within the middle third of the development as shown on the proposed ODP. It is noted that Mr. Brown has also recommended a number of these linkages in his traffic and road design evidence:

- Pedestrian/cycle linkages running off the north and south cul-de-sac ends of the T shaped internal road to the adjacent collector and spine roads. This is consistent with a similar layout on Outline Development Plan 168 (Oxford Road West Rangiora).
- A possible 'future road' green linkage running from the T shaped internal road to the eastern plan change boundary. This will safeguard desirable west-east integration if the intention is to form a future connection with the corresponding east-west road link shown on Outline Development Plan 168 (Oxford Road West Rangiora).
- A green linkage which directly connects the northern portion of the plan change area to the local purpose reserve beneath the transmission lines; in the same manner as the Arlington High Density residential area immediately to the north-east. Subject to traffic safety considerations, an appropriate location for the link would be opposite the 90° bend in the spine road; requiring only a 25-30m long access corridor. It is noted that Mr. Simpson (WDC 3 Waters Manager) has recommended a green accessway be provided at the same location; to serve as an overland flow path for flood management. The transmission line reserve will ultimately form an important recreational access corridor for north-west Rangiora.

The local purpose reserve running alongside the primary north-south local road is supported. Although its primary function is stormwater management, it also provides an opportunity to create open space amenity. Landscape enhancement will be required. The stormwater detention areas have similar potential.

RECREATION RESERVE PROVISION

Council Neighbourhood Park provision for residents of the plan change area will be met via a planned recreation reserve within the adjacent Residential 2 zoned Bain land. This reserve will provide the local community with an attractive setting for informal recreation. Playground facilities will be provided. The specified location (less than 100m from the P026 boundary) meets Council's primary level of service guideline for neighbourhood park provision in urban areas. This guideline states that *"most residential properties should be within reasonable walking distance (ideally 500m radius or 10 minute walk) of a neighbourhood park"*. The planned reserve is shown on Outline Development Plan 168 (Oxford Road West Rangiora).

In addition, Council plans to provide future neighbourhood recreation reserve space within currently undeveloped Council-owned land on the opposite (south) side of Oxford Rd (89 Lehman's Road). Given the need to cross Oxford Road, this recreation provision is considered supplementary to the plan change, rather than primary.

Timely sequential development of newly zoned residential land east of the P026 area is likely. However, in the event of a time lag, two existing large and well-appointed neighbourhood parks (Oakwood and Arlington) are still accessible via a 1km walk/cycle or short commute from the north and south ends of the P026 site. Both of these parks cater for a wider 'community' (rather than local) catchment. If the Bain and P018 Brick Kiln Road land is developed in accordance with Outline Development Plan 168, Oakwood Park will then become directly accessible to P026 residents along a 500m stretch of the proposed east-west collector road.

The lack of a neighbourhood recreation reserve within the plan change area is not a serious impediment to the overall provision of open space. Given the narrowness of the site (<200m), there is a substantial amount of alternative well-distributed green space to help provide open space relief; especially if additional green linkages are provided.

RECOMMENDATIONS

That the Private Plan Change:

- Increase the clearway space beneath the overhead transmission lines to meet requirements of the National Policy on Electricity Transmission (2008). If necessary, it is acceptable that this be achieved by widening the underlying Local Purpose Reserve.
- Extend the width of the Lehman's Road reserve strip to more closely align it with the West Rangiora Structure Plan, afford better balance and depth to landscaping, and create a more inviting and safe setting. To meet WDC Code of Practice guidelines a width of 8 to 10 metres is required; depending on intended use.
- Adopt 3 additional linkages to better integrate the T shaped local road with surrounding areas. Also provide a direct link from the spine road to the transmission line reserve in the north-west corner of the plan change area.
- Support recommendations for a degree of permeability within the Lehman's Road boundary fence. At heights above 1.2m this will permit passive surveillance of the

walkway/cycleway, provide a reasonable level of privacy for residents, and help minimise potential risks to public safety and resident security.

- Recognise that a local catchment neighbourhood recreation reserve - which meets Council level of service standards for the P026 plan change area - will be provided upon development of immediately adjacent urban-zoned residential land earmarked for subdivision.
- Re-align the section of walkway/cycleway which runs from Oxford Road to Lehmans Road via the plan change area; so as to create a continuous and more easily followed route.