**BEFORE THE INDEPENDENT HEARINGS PANEL**

IN THE MATTER of the Resource Management Act 1991 ("RMA")

AND

IN THE MATTER Resource consent applications by Te Puna Industrial Limited in relation to 297 Te Puna Station Road

# summary

## My full name is Bruce John Harrison. I am a self-employed Transportation Engineer.

## I was engaged by TPIL in May 2021 to assess the potential traffic effects of the Application and provide recommendations as to mitigation. As part of this, I prepared the Transportation Assessment Report dated September 2023.

# eXISTING ENVIRONMENT

## Te Puna Station Road is a Local Road that provides access to the local rural area as well as historically providing an alternative route between Te Puna Road and State Highway 2. It has a 7.1m wide carriageway.

## WBOPDC propose to widen the Te Puna Station Road carriageway to 8.5 m and to construct a 3.0 m wide cycle path along the southern side of the road.

## Te Puna Station Road, between Clarke Road and State Highway 2, is presently closed to through traffic due to slips that occurred in February 2023. A decision on re-opening the road is expected in September 2024.

# Traffic Count Data

## Traffic count data for Te Puna Station Road prior to the closure of the road recorded a 7-day average daily traffic ("**ADT**") volume of 2,865 veh/day.

## Data indicates that, with the closure, the ADT has reduced to approximately 1,484 veh/day.

## The PCE ADT on Te Puna Station Road prior to the closure was assessed at 4,154 veh/day. With the closure, I have assessed that this has reduced to approximately 2,152 veh/day.

# structure plan

## The Structure Plan specifies road upgrading works to be carried out. Of particular relevance is at the Te Puna Station Road / Te Puna Station Road Intersection, where provision for right turn movements is required. While some upgrading of the intersection has been carried out, there is presently no right turn lane on the Te Puna Road southern approach.

# Assessment of effects

Te Puna Road

## I have assessed, with the full development of the Site, an expected daily traffic generation of 774 veh/day, with a peak hour traffic generation of 125 veh/h. Please note that there is a typing error in paragraph 6.2 of my evidence which incorrectly gives these figures as 74 veh/day and 12 veh/h respectively.

## I have assessed the PCE daily traffic generation at 1,609 veh/day.

## It is proposed that all heavy vehicles will be required to enter and exit the Site to and from the west, using Te Puna Road. I have recommended that, if Te Puna Station Road is re-opened, then all staff travelling to the Site also be required to use the Te Puna Road route. This can be managed with the use of a Site Travel Management Plan.

## The Project on its own, without the other two sites within the Business Park, is expected to increase the ADT on Te Puna Station Road to 2,258 veh/day and the PCE ADT to 3,760 veh/day.

## The District Plan requires rural roads with a PCE ADT greater than 2,500 veh/day to be subject to specific design.

## Council has advised that they propose to widen Te Puna Station Road to 8.5m. While the proposed width is less than the Austroads standard of 10.0 m, given that Council also proposes a separate shared pedestrian and cycle path, I consider this width to be appropriate.

Intersection of Te Puna Station Road and SH2

## If Te Puna Station Road remains closed at the slips, then any effects at the intersection with SH2 will be minimal.

## I have recommended that, if Te Puna Station Road is re-opened, then all heavy vehicles and all staff be required to use the alternative Te Puna Road route, which will minimise any effects at this intersection.

Intersection of Te Puna Station Road and Te Puna Road

## My assessment shows that the provision of a right turn bay on Te Puna Road is warranted during the morning peak. The provision of a right turn bay is proposed. A concept design for the proposed right turn bay is shown on drawings 01 to 04.

## With the provision of the right turn bay, the intersection is expected to operate efficiently with moderate delays, short queues, and an acceptable level of service.

Sight Distances

## The Austroads Guide specifies sight distance requirements based on both the Normal Design Domain (NDD) and Extended Design Domain (EDD). The Guide recommends that the NDD be used wherever practical, but allows the use of the EDD when improving the standard of existing intersections in constrained locations. I have carried out my assessment using both criteria.

## The available SISD to the north complies with both requirements. The available SISD to the south, measured from the traffic lane, also complies with both requirements. The SISD measured from the side road however only complies with the EDD requirement. Given that Austroads permit the use of the EDD when improving the standard of existing intersections in constrained locations, I consider the available sight distances to be sufficient for the safe operation of the intersection.

Site access

## With the continued full closure of the road, the warrant criteria for the provision of a right turn bay at the site access is not met. With the partial re-opening of Te Puna Station Road east of the Site, the warrant criteria is however met.

## The provision of a right turn bay at the Site access is proposed, regardless of whether Te Puna Station Road is re-opened or remains closed.

## The access is expected to operate efficiently with minimal delays, a high level of service and negligible queues.

## I have prepared a concept design for the access. This is shown on my Drawings 01 to 03.

## The proposed provision of the right turn bay exceeds the right turn requirements of Diagram E, as specified in the Structure Plan.

## Diagram E includes a requirement for additional widening for the left turn movement into the Site. As I have recommended that all heavy vehicles and staff travelling to the Site be required to use the Te Puna Road route, I consider that this widening is not required.

## I consider that the proposed right turn bay will have no material effect on the operation and safety of the JMC access.

## The available sight distance to the west is suitable for an operating speed of 92 km/h, which I consider to be sufficient for the safe use of the access.

Earthworks

## Based on 86,000m3 of fill to be imported using single unit trucks with both an inbound and an outbound vehicle movement, approximately 31,000 truck movements will be required.

## Allowing for the fill to be transported over a two-year period, with approximately 150 work days each year, this is an average of 103 truck movements per day and an average of 13 truck movements per hour.

## A Construction Traffic Management Plan ("**CTMP**") is proposed to manage the movement of trucks transporting the fill. With this, I expect that any adverse safety or congestion effects due to earthworks will be low and acceptable.

# submissions

## Most of the issues raised by submitters have been covered in the body of my evidence.

# SECTION 42a REPORT

## I generally agree with the issues raised in the planner's section 42A Report.

## **Bruce Harrison**

## 8 July 2024