

Appendix E Problems – Causes and Effects

'Connectivity' problem – causes and consequences.

Cause	Effect / Consequence
<ul style="list-style-type: none"> • Lack of route choice • Lack of network resilience • High volume of inter-regional traffic • Employment focused on the northern side of the river. • Increasing residential population • Key community facilities focused on the northern side of the river, including early childhood centres. • High volume of trucks • High weekend and holiday peak demands • Land use development on either side of the river • Proximity of the train tracks / crossing barriers. This can cause additional unexpected delays. • Limited capacity on SH1 • Increasing number of retirees 	<ul style="list-style-type: none"> • Longer journey times. • Unreliable journey times • Lack of social connection - people do not make trips they would otherwise want to • Severance (both across the state highway and the river)

'Travel choice' problem – causes and consequences.

Cause	Effect / Consequence
<ul style="list-style-type: none"> • Lack of route choice • Poor quality active travel facilities across the river (inc. narrow width of the SH1 Bridge) • Limited active mode provisions on local roads • Poor access to recreational routes • Lack of public transport services • Poor lighting on SH1 	<ul style="list-style-type: none"> • Reliance on the car for most journeys • Increased emissions • Personal security when crossing the bridge is compromised. • People undertaking a recreational walking or cycling trip tend to drive to the start of the trail. • The mountain bike trails on either side of the river are poorly connected, which limits their full potential use (potential local tourism impact) • Cycling is unappealing, which means there is suppressed cycling demand. • Difficult to encourage the younger generation to use active modes. This makes it harder to align with GPS and achieve long term objectives

'Safety' problem – causes and consequences.

Cause	Effect / Consequence
<ul style="list-style-type: none"> • High volumes of traffic on SH1 during peak periods (inc. holiday periods) • High volume of trucks • Oversize trucks using the state highway (sometimes during peak times). Including slow (and large) agricultural machinery using the bridge. • Lack of controlled safe access points onto the state highway • Poor quality active travel facilities across the river (inc. narrow width of the SH1 Bridge) • Limited active mode provisions on local roads • Northern approach lane geometry 	<ul style="list-style-type: none"> • SH1 is busy all day. • Slow travel speeds • Poor travel time / reliability • Difficult to enter the state highway for heavy vehicles. • Difficult to merge (crash risk) • Difficult to cross SH1 • Poor driver behaviour (e.g., merging like a zip) • Tendency for drivers to make dangerous manoeuvres. • Emergency services are delayed. • Increased likeliness of crashes (particularly rear end) • Increased safety risk (actual and perceived)

'Economy' problem – causes and consequences.

Cause	Effect
<ul style="list-style-type: none"> • Agricultural and residential development growth • Employment focused on the northern side of the river. • Lack of route choice • Limited capacity on SH1 	<ul style="list-style-type: none"> • Reduction in economic productivity • Land value impact for East Tinwald (rental & property) • Economic impact of poor network resilience