



30 July 2018

SF2016/032905; WST16/00045/07

The Manager
Resource Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Phillipa Duncan

Dear Ms Duncan

SSD-7538: Lots 7313, 7314, 7316, 7318 & 7319 DP 1185108 and Lots 3870, 3871 & 4143 DP 757298; Broken Hill North Mine, Broken Hill; Recommencement of Operations

I refer to emails from Geoff Hender, Deputy General Manager at Perilya Broken Hill Pty Ltd on 19 and 25 July 2018 forwarding proposed amendments to haulage operations for the Broken Hill North Mine Recommencement Project.

I write to advise Roads and Maritime does not object to proposed amendments, subject to the following:

- Prior to the commencement of haulage operations, the intersection of the Potosi-North Mine haulage road and the Barrier Highway (HW5) is to be upgraded to include:
 - A Basic Right (BAR) turn treatment as shown in Figure A 28 of the *Austroads Guide to Road Design: Part 4* (copy enclosed) and relevant Roads and Maritime supplements. The widened shoulder is to be sealed and built for a 110km/h speed environment to provide a reasonable level of safety for traffic turning right into the site and to allow following eastbound traffic an area to pass the right turning vehicle on the left hand side.
 - A Basic Left (BAL) turn treatment as shown in Figure 8.2 Part 4A of *Austroads Guide to Road Design* (copy enclosed), and relevant Roads and Maritime supplements. The BAL facility and the access is to be sealed a minimum of 40 metres from the edge of the Barrier Highway travel lane and built for a 110km/h speed environment.
 - Safe Intersection Sight Distance (SISD) requirements outlined in the *Austroads Guide to Road Design Part 4A* and relevant Roads and Maritime supplements is to be provided in both directions at the intersection. For a 110km/h speed zone the minimum SISD is 300 metres.

Roads and Maritime Services

- The Barrier Highway is a state road and the developer will be required to undertake private financing and construction of works on a road in which Roads and Maritime Services has a statutory interest. A formal agreement in the form of a Works Authorisation Deed (WAD) is required between the developer and Roads and Maritime Services prior to works commencing.
- Prior to the commencement of construction work, the proponent is to contact Roads and Maritime's Field Traffic Manager to determine if a Road Occupancy Licence (ROL) is required. In the event that an ROL is required, the proponent is to obtain the ROL prior to works commencing within three (3) metres of the travel lanes in the Barrier Highway.

Please note, given the proposed amendments and above conditions, the intersection of Argent Street (HW5) and the North Mine access no longer requires upgrading. All other road works under SSD7538, including works at the intersection of Argent/Crystal/Iodide Streets (HW22) intersection and the intersection of Gypsum Street and South Road (HW22), are still required.

Please forward a copy of the Department's determination of the modification application to Roads and Maritime at the same time it is sent to the applicant. Should you require further information please contact Andrew McIntyre, Manager Land Use Assessment, on 02 6861 1453.

Yours faithfully



Dane Hendry
Network & Safety Manager
Western

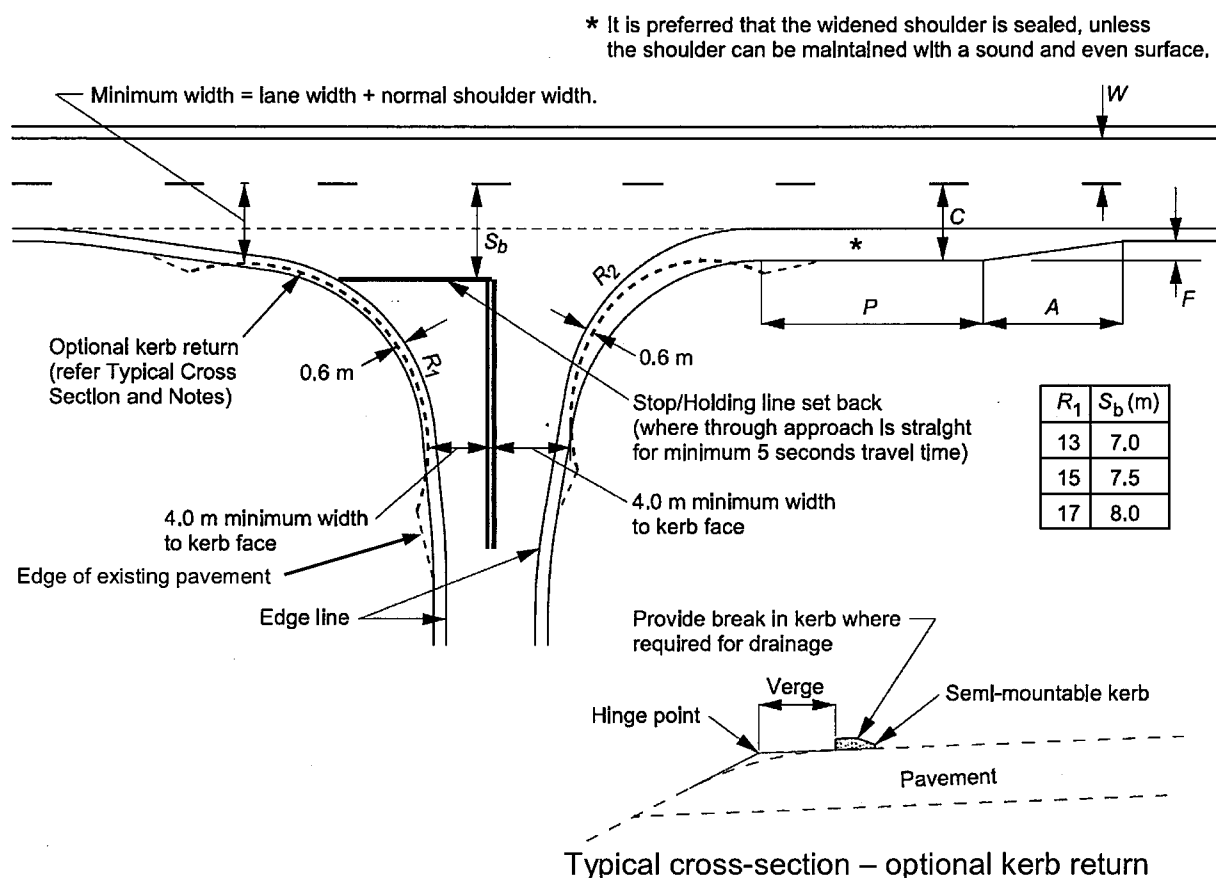
cc Mr Geoff Hender
Perilya Broken Hill Pty Ltd
Email: geoff.Hender@perilya.com.au

Figure 1 is a plan view of a road cross-section. It shows the layout of the road, including the edge line, edge of formation, and various dimensions. The dimensions are labeled as follows: A , 10 m , S , X , 15 m , C , S_b , and W . The diagram also includes labels for the 'Edge line' and 'Edge of formation'.

W = Nominal through lane width (m) (including widening for curves). Width to be continuous through the intersection.
C = On straights – 6.5 m minimum
 7.0 m minimum for Type 1 & Type 2 road trains
 On curves – widths as above + curve widening (based on widening for the design turning vehicle plus widening for the design through vehicle)
A = $\frac{0.5VF}{3.6}$
 Increase length A on tighter curves (e.g. those with a side friction demand greater than the maximum desirable). Where the design through vehicle is larger than or equal to a 19 m semi-trailer the minimum speed used to calculate A is 80 km/h
V = Design speed of major road approach (km/h)
F = Formation/carriageway widening (m)
S = Storage length to cater for one design turning vehicle (m) (minimum length 12.5 m)
X = Distance based on design vehicle turning path, typically 10–15 m

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Figure 8.2: Rural basic left-turn treatment (BAL)



Notes:

- R_1 and R_2 are determined by the swept path of the design vehicle.
- The dimensions of the treatment are defined thus:
 - W = Nominal through lane width (m) (including widening for curves).
 - C = On straights – 6.0 m minimum.
On curves – 6.0 m plus curve widening (based on widening for the design turning vehicle plus widening for the design through vehicle).
 - $A = \frac{0.5VF}{3.6}$
 - V = Design speed of major road approach (km/h).
 - F = Formation/carriageway widening (m).
 - P = Minimum length of parallel widened shoulder (Table 8.1).
 - S_b = Setback distance between the centre of the major road and the give way or stop line in the minor road.

 Source: Department of Main Roads (2006)³⁵.

35 Department of Main Roads (2006) has been superseded and Figure 8.2 has not been carried forward into Queensland Department of Transport and Main Roads (2016).