



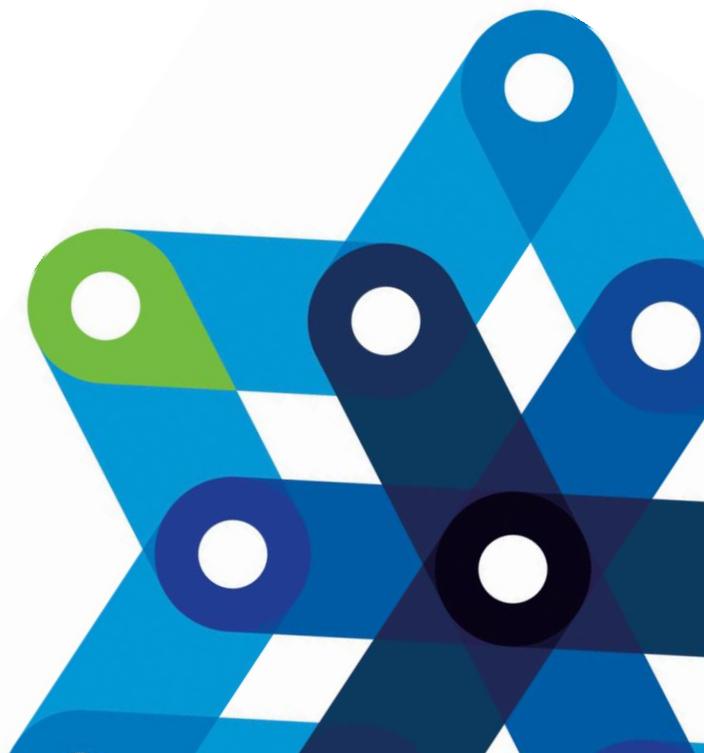
Government of **Western Australia**
Department of **Treasury**

Western Australia's Submission to the

Commonwealth Grants Commission's 2020 Methodology Review

Rural Road Length

December 2018



Key Points

- Although the Commonwealth Grants Commission (CGC) has improved its synthetic network by including road connections to significant mines, ports and national parks, it does not go far enough.
 - Further roads relating to operating mines should be included.
 - As well, the inclusion of other economically important areas of significance would improve its quality and accuracy. In addition to operating mines, roads provide access to grain bins and areas of mining exploration activity.
- The higher capacity of local governments to provide regional and local distributor roads in more densely populated areas needs to be recognised.
- The algorithm does not adequately allocate road connections between towns in sparsely-populated areas.
 - The CGC's modification to reduce the number of connections between smaller UCLs¹ does not provide the reasonable levels of access between population centres that would be reflected in standard policy for sparsely-populated areas.

This submission responds to the CGC's Rural Road Length paper, as provided for the all-States telepresence on 3 December 2018.

We agree with the CGC staff decisions to develop and extend the synthetic network. However, we have concerns about the algorithm used to capture rural roads. Our concerns centre on three main issues:

- the omission of some roads to economically-important areas;
- the capacity of local governments to fund regional and local distributor roads; and
- the algorithm for road connections between towns in sparsely-populated areas.

Omission of some roads to economically-important areas

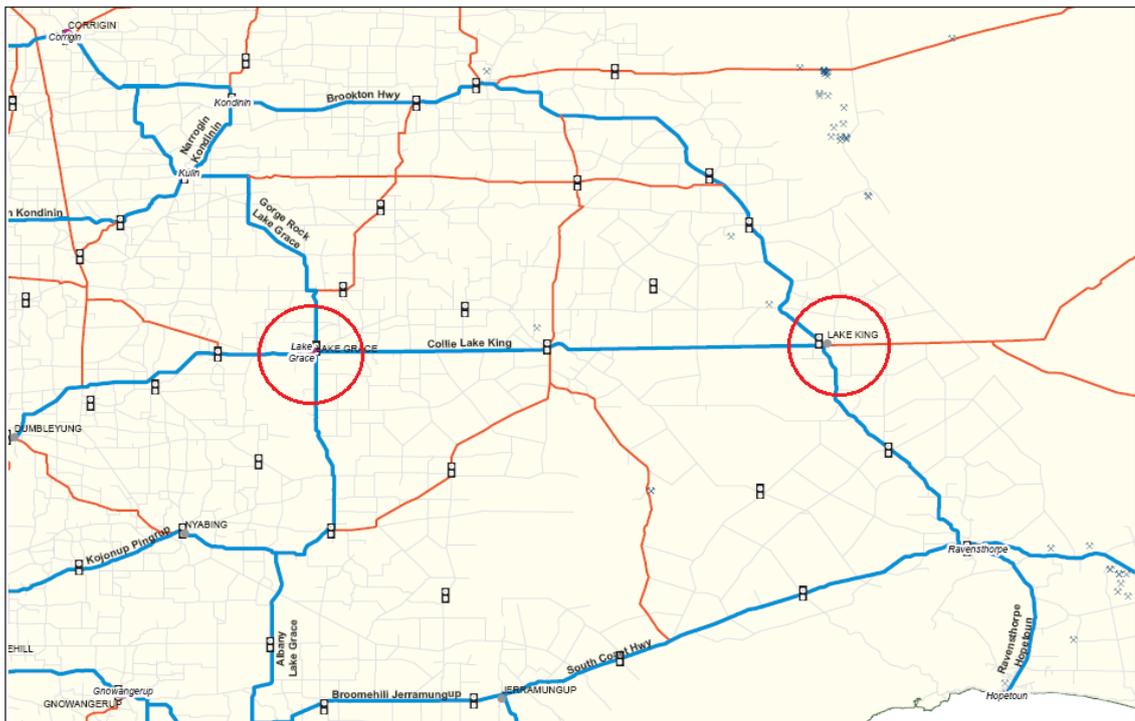
The CGC's proposed synthetic rural road network does not properly take into account Western Australia's circumstances. In other States, roads in more densely populated regions are primarily used to support their communities, whereas in Western Australia, where towns are more dispersed, a greater proportion of roads are used for economic purposes, rather than to connect communities.

¹ Australian Bureau of Statistics (ABS) Urban centres/localities (UCLs)

As stated in our submission on the draft assessment papers, the inclusion of all economically important areas of significance (including to mines and grain bins) would improve the quality and accuracy of the synthetic network.

However, the CGC's decision to limit the number of road connections to two for smaller UCLs (see also discussion below) means that the algorithm has omitted many agriculturally important regional distributor roads in Western Australia's Wheatbelt region. For example, the 115 kilometre direct road connecting Lake Grace (population ~500) to Lake King (population ~300) in Figure 1 is a State road that provides access to multiple grain bins, but is not included in the CGC's proposed synthetic network.

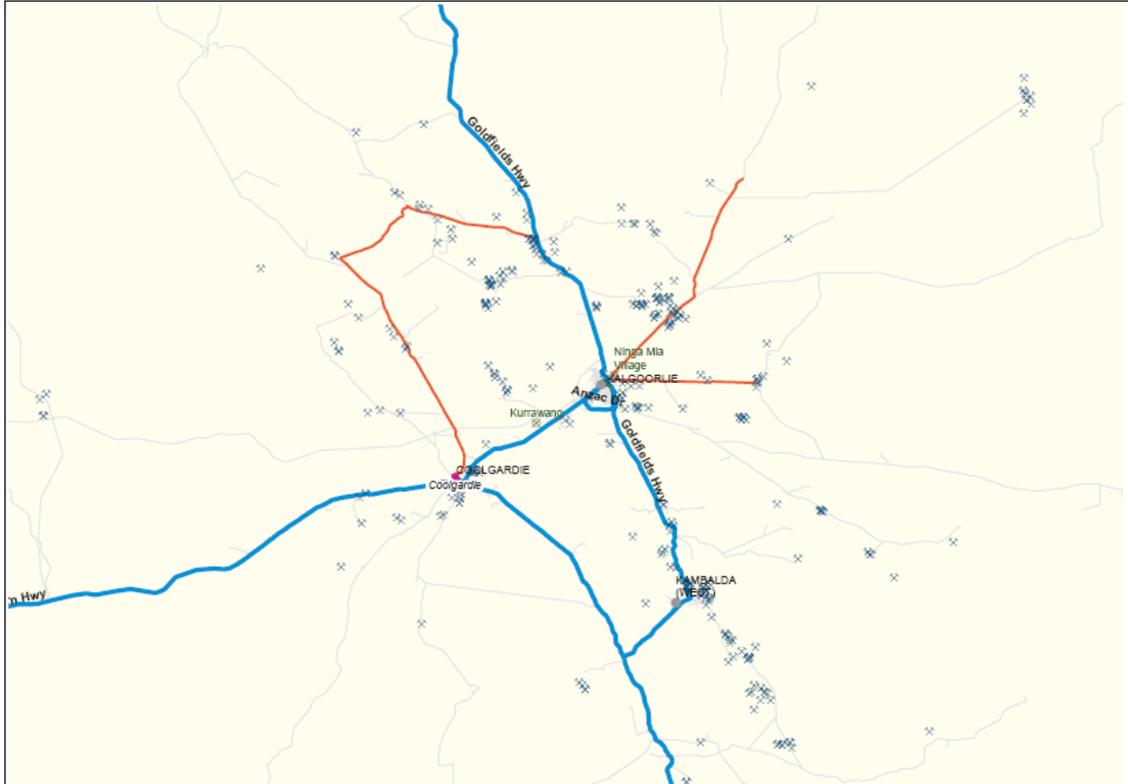
Figure 1: State road connecting Lake Grace to Lake King



Source: Main Roads Western Australia (MRWA).

Regional distributor roads serving Kalgoorlie's mine-rich surroundings have also been omitted (see red roads in Figure 2).

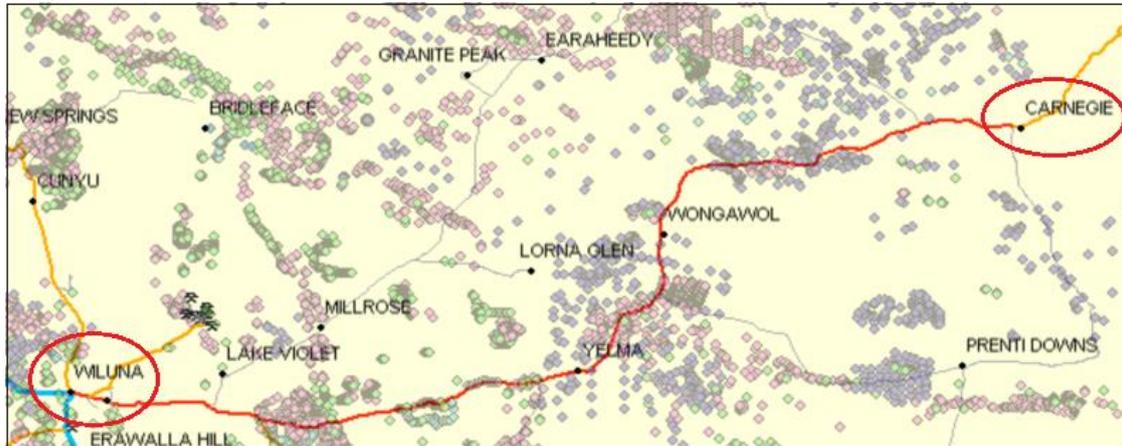
Figure 2: Roads to mining activity around Kalgoorlie



Source: Main Roads Western Australia (MRWA).

In addition to operating mines and grain bins, the rationale for the existence of roads also includes the provision of reasonable levels of access to exploration activity. For example, the road connecting Wiluna to Carnegie (Figure 3) is considered by Main Roads Western Australia to be a regional distributor of importance because of the significant presence of exploration activity (the grey, pink and green squares). However, the road is not included in the CGC's proposed synthetic network.

Figure 3: Road connecting Wiluna to Carnegie and the associated exploration activity



Source: Main Roads Western Australia (MRWA).

Western Australia would be interested to know the CGC's views on the proposed synthetic rural road network's underestimation of roads connecting economically important activities.

- For example, roads that provide access to operating mines, grain bins and areas of exploration activity.

Integrated management of State and local roads

The CGC's algorithm does not recognise differences in the fiscal capacity of local governments to fund roads across States. The algorithm uses the same rules for connecting rural towns in the eastern States and connecting rural towns in Western Australia, despite the fact that local governments in the eastern States are more densely populated and better able to finance their own roads. Due to sparse populations and the incomplete nature of fiscal equalisation of local governments, Western Australian local governments are less able to finance roads connecting towns of small populations.

This reduced capacity validates the greater need for the Western Australian government to be more involved with financing local roads. Western Australia is the only State to have a formalised agreement with local government for contributing to the cost of roads.

While the CGC correctly recognises the greater needs of local governments in areas with less than one person in 100 square kilometres, this captures only the most extreme circumstances.

Western Australia would be interested to know the CGC's views on the validity of using the current algorithm when comparing States with differing population densities.

Road connections between towns in sparsely-populated areas

We welcome the CGC's modifications to the synthetic network to include roads connecting all UCLs, but we are concerned over the CGC's modification to reduce the number of connections between the smaller UCLs.

Table 3 in the CGC's Rural Road Length paper shows the average number of connecting roads for UCLs of different sizes. Based on this data, CGC staff make an assumption that small UCLs (less than 1,000 people) only connect to two other UCLs. However, the average number of roads are calculated using only the State road system.

Although applying fewer connections between smaller UCLs may work in densely-populated States (as there are more alternative options), it is not the case in sparsely-populated States such as Western Australia. The table below shows that Western Australia is disproportionately disadvantaged by the proposed method, compared to other States.

Table 1: Comparison of replicated 2015 Review assessed rural road length (using more recent data) and the proposed measure (using revised algorithm parameters) - kms

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Replicated method	35,831	20,049	31,060	26,309	12,990	3,824	83	13,600	143,746
Proposed	34,033	19,193	32,243	22,821	13,559	3,774	92	13,467	139,181
Difference	-1,798	-856	+1,183	-3,488	+569	-50	+9	-133	-4,565
Difference	-5%	-4%	4%	-13%	4%	-1%	11%	-1%	-3%

Source: Western Australian Department of Treasury calculation using CGC assessments.

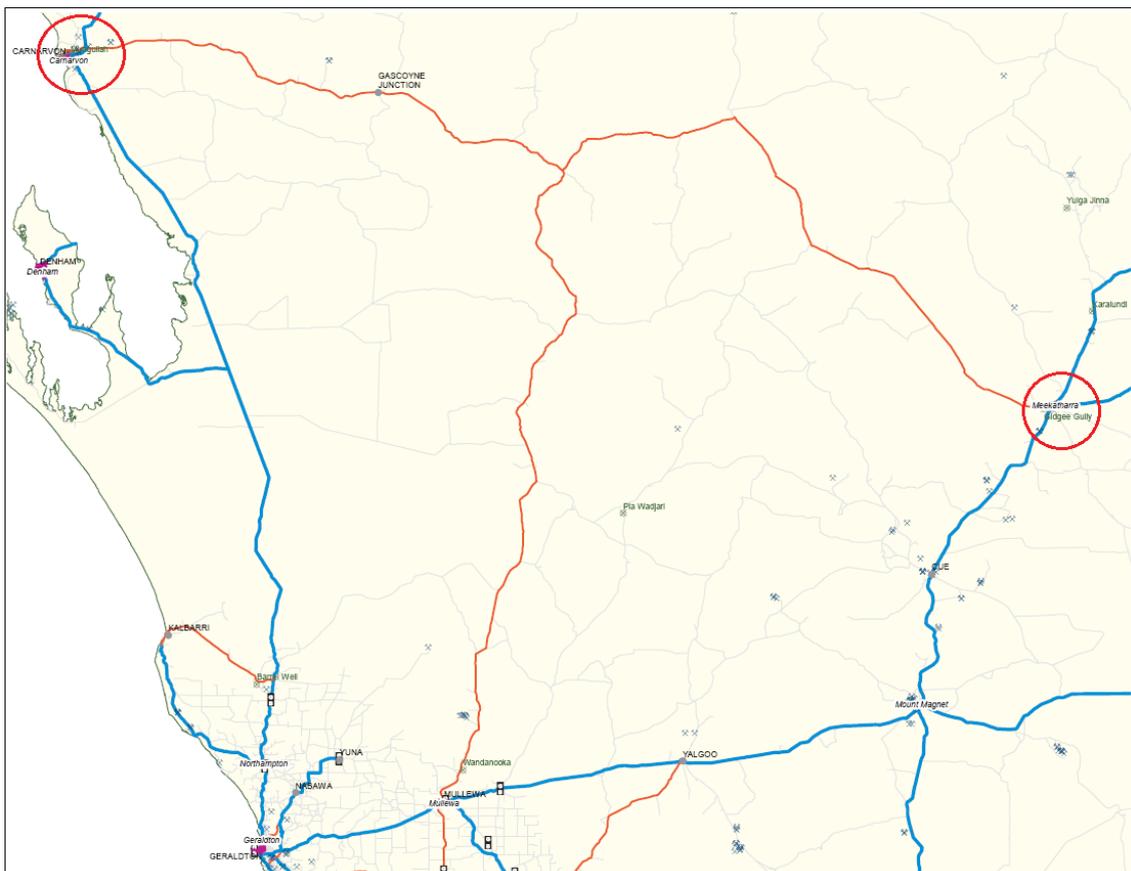
This reduction in the number of connections to smaller UCLs under the proposed synthetic network results in the elimination of some roads between sparsely-populated towns in Western Australia. Some of these roads provide community access where any alternative route would require a very long deviation.² The inclusion of such roads cannot be seen as anything but a standard policy that would be adopted by any State facing such settlement patterns.

² Note that google maps often provides misleading information on optimal road trips and times.

For example:

- the direct road connecting Carnarvon (population >4,000) to Meekatharra (population ~700) is only partially included in the CGC's proposed synthetic network. The road also includes access to areas of exploration activity and tourism sites. The distance between the towns using the CGC's proposed network (via Geraldton and Mount Magnet – blue route in Figure 4) totals 967 kilometres. However, the direct route (via Gascoyne Junction - red route in Figure 4) is much shorter at 629 kilometres.

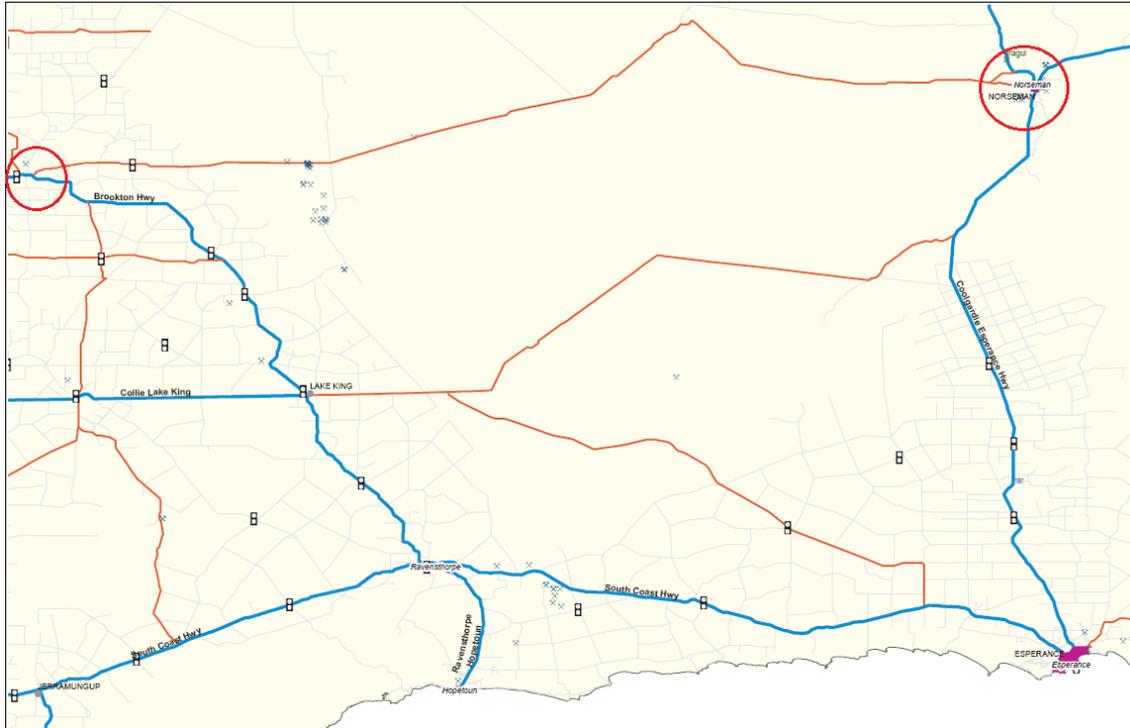
Figure 4: Roads connecting Carnarvon to Meekatharra



Source: Main Roads Western Australia (MRWA).

- the 312 kilometre direct road connecting Hyden (population ~500) to Norseman (population ~700) is not included in the CGC's proposed synthetic network. The shortest alternative (via Esperance) totals 552 kilometres. The Hyden-Norseman road also provides access to mining activity (see Figure 5).

Figure 5: Roads connecting Hyden to Norseman



Source: Main Roads Western Australia (MRWA).

It should be noted that the small number of State roads connecting small towns in Western Australia is not supportive of the low connectivity for small towns assumed by the CGC's synthetic model, because of the integrated funding of State and local roads in Western Australia.

- Western Australia would be interested in knowing the CGC's views on why some roads connecting sparsely populated towns would not be considered policy neutral and required options, given there are no reasonable alternatives.