



The Flinders Ranges Council

HVSI Round 6

Final Report

The Flinders Ranges Council

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1. Executive Summary

Rural councils have the annual struggle to maintain 1000s of kilometres of sealed and un-sealed road networks with very minimal rating capacity to draw upon. Smaller councils rely heavily on local knowledge and experience to maintain and schedule annual programs as they don't always have access to the latest and greatest technology to help capture and record Assets, which then allows them guidance on how to best manage.

The Flinders Ranges Council wanted to strengthen its position in respect to its Asset Management Database and the information it held regarding its un-sealed road network.

Following a successful grant application through the NHVR HVSI Round 6, The Flinders Ranges Council engaged an expert in the field of transport and heavy vehicles to undertake a route assessment and risk analysis of local roads to get a better understanding of their asset and its condition, its suitability for heavy vehicle access, potential issues into the future and where best to focus its attention for annual programs and what to target for possible grant funding.

The report has identified safety and road deficiencies along the assessed roads and also identified any possible roads suitable for gazetting of B Double GML routes and B Double Commodity routes within the Flinders Ranges Council boundary.

This information will allow council to undertake a higher level of work when on site during capital work projects, know knowing where deficiencies lay and how they can be best rectified.

2. Project Stages

2.1 Stage 1 – Planning and Field Assessment

Development of a detailed understanding of the extent of gazetted B-Double GML and Commodity routes, as well as other rural roads coming under Council's control which are likely to have permits requested for them. This task will be overseen by a Senior Traffic & Transport Engineer and Admin Officer at HDS. The task will involve confirming road asset data supplied by Council, ensuring that all council managed roads in the supplied spreadsheet are appropriately identified and are listed in the correct category as a GML, Commodity or Other route. This will establish the length and location of all routes to be assessed.

Other stage 1 tasks:

Confirmation of individual road lengths and optimisation of the field assessment program. Plan the field trip. (one trip of up to 7 days duration is expected).

- Conduct field assessments, including production of a preliminary risk assessment for each road link. Allowance to cover 100 km per day for assessment of all GML, Commodity and Other routes.

The network level heavy vehicle route assessment process is a subset of the standard detailed heavy vehicle route assessment which is typically undertaken as a pre-approval requirement for gazettal of B-Double GML and Commodity routes. The detailed assessment typically addresses the following points:

- Carriageway width (general) – seal & shoulder
- Carriageway width (structures) – key standards being 8.4m, 7.8m, 7.2m
- Carriageway widening requirement (curves)
- Turning movements at junctions / site distance
- Clear zones and recovery capability (batter slopes)
- Overtaking opportunities
- Acceleration / deceleration lanes
- Rest areas
- Bridge / culvert capacity

The network analysis will still address all of the above, if an obvious critical deficiency is identified, but will tend to focus on the higher risk elements associated with the following:

- Carriageway width (general) – seal & shoulder or total unsealed width
- Carriageway width (structures) – key standards being 8.4m, 7.8m, 7.2m
- Turning movements at junctions / site distance
- Clear zones (sub 3m)
- Bridge load limits

It is expected that the accredited heavy vehicle route assessor will determine a preliminary risk profile for each assessed route, determining the worst case risk along each road link then adding this to the network spreadsheet, along with suitable comments as to the reason for that assessment. The overall risk along each road link will be categorized as Low, Moderate, High or Very High in accordance with accepted heavy vehicle route assessment criteria. However, individual site risks will not be documented, nor will the cost of lowering the risk profile at individual sites.

Stage 2 – Risk Analysis and Presentation of Results.

Review the preliminary risk profiles generated during our field assessment, then separately summarise the overall risk profile for gazetted B-Double GML routes and gazetted B-Double Commodity routes. It is likely that any gazetted B-Double GML routes with a Very High or High risk profile will need measures taken to reduce risk to at least a Moderate level (Low is preferred but may be economically prohibitive in the short term). It is also likely that any gazetted B-Double Commodity routes with a Very High risk profile will need measures taken to reduce risk to at least a High (but preferably Moderate) level, or the route removed as a gazetted Commodity route.

List individual spreadsheet based risk profiles for Other routes, plus summarise the amount of Other routes categorized with a Low, Moderate, High or Very High risk profile. This will identify potential Other routes that can be gazetted for regular B-Double use (i.e. those with Low or Moderate risk profile), as well as Other routes for which B-Double use should continue to be managed through the permit process (typically those with a High risk profile) and Other routes for which B-Double use should be avoided or require significant permit restrictions (typically those with a Very High risk profile).

Stage 2 tasks included:

- Finalise the risk analysis for all assessed road links and prepare a summary report.
- Prepare for and facilitate a presentation to Council explaining the results of the route assessment and risk analysis.

3. Milestones

Milestones agreed upon between the NHVR and The Flinders Ranges Council as per grant agreement:

ITEM	MILESTONE		DATE FOR MILESTONE COMPLETION / REPORT DUE DATE
Milestone 1	Execute Agreement.		Upon execution of Agreement
Milestone 2	Planning and Field Assessment + Draft report		30 February 2022
Progress Report 1	Progress Report from		31 March 2022
Milestone 3	Risk Analysis and Presentation		30 April 2022
Progress Report 2	Progress Report From		
Final Report	Final Project report		June 30 2022
Total of Funding			

4. Conclusion

The project was a great undertaking for council, to have the expertise of HDS provide detailed data on our local road network will allow council to plan for and better develop its Asset Management plan when due for review in 2023, it will also aid as a great tool for our operations team who will be able to utilise the assessment criteria and suggestions on how to improve any deficiencies that were identified within the report.

During the on-site assessment stage, it was decided that the initial contract scope of 700km was not going to be required and scaled back to approx. 600km, council contacted NHVR about how best to spend the remaining funds that would be left over from the HDS portion of the work.

It was decided on and agreed to by both parties that additional signage be purchased using the remaining funds, which would coincide with recommendations made through the HDS assessment to various roads to improve their safety and trafficability.

The assessment and data that has been captured will also be utilised during councils planning and budgeting sessions as it will be able to determine priority roads either requiring urgent work, or requiring work that can bring that road to an acceptable level that it can take heavy vehicles.

The initial driver behind the application for this assessment was to prioritise local roads that can be additions to a heavy vehicle local road network to assist council and its local operators, council is now in a position where it can achieve this.