Bushfire Advisory Committee

MINUTES

24th October 2019

PLEASE NOTE – THESE MINUTES HAVE YET TO BE CONFIRMED BY THE COMMITTEE AS A TRUE AND ACCURATE RECORD OF PROCEEDINGS.

THIS DOCUMENT IS AVAILABLE IN OTHER FORMATS ON REQUEST FOR PEOPLE WITH DISABILITY.

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SHIRE OF BROOMEHILL-TAMBELLUP
Minutes of Bushfire Advisory Committee meeting held at the Tambellup St John Ambulance Sub Centre on Thursday 24 October 2019 commencing at 4.40pm.

1. ATTENDANCE AND APOLOGIES

1.1 Attendance

Cr Mark Paganoni	Shire of Broomehill-Tambellup
Alastair Clarke	Tambellup East
Mario Cristinelli	Tambellup East
Neil Tears	Broomehill Central *(retired from the meeting at 5.15pm)*
Kim Oliver	Deputy Chief Bush Fire Control Officer
Ed Anderson	Broomehill West
Derek Sadler	Broomehill West
Ian Cunningham	Chief Bush Fire Control Officer
Wayne Newbey	Deputy Chief Bush Fire Control Officer
Laurie Hull	Tambellup VFES *(from 5.20pm)*
Cindy Pearce	Community Emergency Services Manager
Keith Williams	Chief Executive Officer
Pam Hull	Minutes

1.2 Apologies

Luke Simpson, Craig Beacham, Scott Thompson, Carl Letter, Ben Hewson, Murray Hatton - Department of Fire & Emergency Services (DFES)

2. ELECTION OF CHAIR

As this was the first meeting of the Committee since the Ordinary Elections on 19 October 2019, the Chief Executive Officer took the chair and declared the meeting open at 4.40pm.

In accordance with the 'Committee Structure and Meeting Procedure' endorsed by the Committee in March 2017, the Council delegate (or proxy) shall chair all meetings of the Committee.

Cr Paganoni took the Chair.

3. CONFIRMATION OF PREVIOUS MEETING MINUTES

3.1 Confirmation of the minutes of the committee meeting held on 15 April 2019

Moved Ian Cunningham/Mario Cristinelli

That the Minutes of the Bushfire Advisory Committee Meeting of 15 April 2019 be accepted.

CARRIED

4. BUSINESS ARISING FROM PREVIOUS MINUTES

Keith advised Council has approved the appointment of the Shire Ranger Damon Powell as a Fire Control Officer, which will allow him to conduct compliance inspections and any required follow up as an authorised officer.

Total Fire Ban (TFB) exemptions – it was noted by the Committee that instances of TFBs being implemented across the region last fire season were due to lack of available resources (deployed at other incidents in the region) and not necessarily in response to forecast weather conditions. This impacted the Shire and contractors who were not able to continue working despite the fact conditions were not dangerous in the Shire. Cindy advised in the future DFES will consult with CBFCOs when considering a TFB due to lack of available resources.

Cindy will apply for a TFB exemption for the Shire to get around this situation.

Keith advised the matter of power outages affecting mobile phone towers had been escalated to the District Emergency Management Committee, which in turn had raised the matter to the State Emergency Management Committee for action.

5. STANDARD ITEMS

5.1 Brigade Reports

CBFCO : Ian thanked Cindy for her support and assistance through the year, and acknowledged the huge amount of work she does on behalf of the brigades, behind the scenes. He also thanked Keith, Scott, Wayne, Kim and the brigade captains to their support. He has enjoyed the role, and is looking forward to a quiet fire season this year. A number of infringements were issued last season, including for unattended fires. He noted a significant issue this season will be the lack of water in many parts of the district.

DCBFCO: Wayne thanked Cindy for her support during the season.

Tambellup East: Mario advised the fuel card had been received.

Broomehill Central: Neil advised tenders for the new fire shed in Broomehill had closed and the decision would be made by the Shire. Fundraising and a grant from Rick Wilson's office will fund a new 100kL tank to be installed at the new premises. The Broomehill Central truck is in good condition with a member taking responsibility for ongoing checks and maintenance. Neil advised an ad would be placed in the Topics asking residents on hobby blocks to retain some water in their tanks in case it was required by the Brigade in fire response. Cindy has sourced additional hose fittings that will allow the truck to connect to a variety of tank fittings. There have been no changes to brigade positions.

Neil raised concerns with the delay in enforcement of non-compliant lots to reduce their fire hazard, with slashing still being completed mid-January this year. He asked if the timeframes can be tightened up to reduce the liability to neighbours and the townsite.

Keith advised the Shire had previously engaged a contract Ranger service, and delays to inspections and follow up resulted in the ongoing non-compliance. The employment of a local Ranger will result in a more efficient process and earlier compliance. The Ranger will work with the town FCOs to call on non-compliant landowners personally if required.

Cindy advised letters had already gone out to landowners who were non-compliant last year and inspections would be carried out after 1 November with follow letters to be sent.

Broomehill East: Mark advised (on Luke Simpson's behalf) that no permits had been issued to date, the fuel card funds had been received, modifications to the fast fill trailer were still to be done and Nick Bowman would be allocated a hand held radio (BH East 8 to be added to the sched list).

Tambellup West: Derek advised no modifications were required to the fast fill, no change to radio allocations, the Fuel card had been received and funds will be transferred to the brigade's Shire trust fund. Last season a number of road verge fires were noted.

Broomehill West: Ed advised there were no changes to brigade positions, and the BH West 4 call sign will not be used this season. The second fast fill trailer is working well.

Tambellup VFES: Laurie advised last season had been quiet fire wise, but members had attended a number of road crash incidents. He also raised the matter of smaller landowners not complying with the fire break order and the extended timeframes in achieving compliance. As Laurie was not present for the discussion on this matter earlier, Keith advised the matter had been discussed (see Broomehill Central report) and the Shire would work to achieving more timely compliance this season.

5.2 CESM Report

Incident reports and Membership lists were distributed for information and update. Cindy encouraged the consistent reporting of fires as this information assists landowners with insurance claims, and also supports the increasing number of Freedom of Information requests being received.

Water bomber training scheduled for 27 October has been cancelled due to low numbers.

49 permits were issued last season in Broomehill-Tambellup, with 244 issued across the three shires (Broomehill-Tambellup, Woodanilling and Katanning).

Bushfire training organised to be held in Katanning has been cancelled and will be rescheduled.

Mitigation works on Unallocated Crown Land (UCL) has been completed by the contractor, including maintenance of firebreaks on Rourke St, Keith St and Lavarock St. The Shire will maintain smaller parcels of UCL by slashing when required.

The regional Bushfire exercise held in Tambellup on 16 October was well supported by the local brigades and was well done. Thanks to everyone who participated.

Ian noted the exercise was a valuable experience, and highlighted the amount of experience that is available within the Shire's brigades to be able to manage a fire incident in conjunction with DFES. It was noted DFES has respect for local knowledge and continued to utilise local personnel in key roles during and after handover of a large incident.

Cindy distributed Critical infrastructure lists and maps to brigades. Pam advised these had been developed as part of the Shire's Local Emergency management Arrangements and hoped they would be useful in planning incident response. The lists are a static document and can be updated with additional information at any time. If brigades are aware of infrastructure that should be included, please let Cindy know.

5.3 DFES Report

Nil

5.4 CEO Report

Keith acknowledged the great work that Cindy and Ian had done through the year, and reiterated the appointment of the Shire Ranger as a Fire Control Officer. He also noted Cr Paganoni, as the newly elected Shire President, would take the Chair of the Local Emergency management Committee.

6. MATTERS FOR DISCUSSION

6.1 GREAT SOUTHERN REGIONAL ADVISORY COMMITTEE: REGIONAL RESOURCE TO RISK (R2R)

Attachment: **Nil**
File Ref: **ADM0238**
Author: **C Pearce, Community Emergency Services Manager**
Date: **7 October 2019**
Disclosure of Interest: **Nil**

SUMMARY
Each year local governments are able to submit Resource to Risk (R2R) applications for a Capital Grant consideration from DFES. These grants relate to significant capital works initiatives, including the acquisition of facilities, appliances, vehicles and major items of equipment.

This proposal is not related to the operating grant each Local Government receives to manage the day to day running of brigades.

BACKGROUND
There are limited applications that are successful and each Local Government is competing for the allocation of funds for these capital grants.

At a recent Great Southern Regional Operations Advisory Committee (ROAC) meeting it was recommended a need for change in the R2R process to have a collaborative and more strategic approach in how the region prioritises these applications.

It was agreed the ROAC is an appropriate committee to prioritise the collective submissions from each local government and submit a more strategic group of R2R applications that have been endorsed by all CBFCO's of this committee in consultation with the Local Governments.

COMMENT
If agreed by the Local governments a model or concept plan would be initiated by a working group. This concept would not likely to start until the 2021 year.

If agreed to, there will need to be a shift in timings of applications to allow for alignment of ROAC meetings and BFAC meetings.

One option is for each Local Government who wishes to apply for the R2R grant to submit to all CBFCO's a short (150-300) overview of the proposed application for consideration before a ROAC meeting.

At the meeting each LG presents to the committee on their application to give members the opportunity to discuss each application. The Chiefs would rank these into priority order for the region and vote to accept these nominations.

It would then be up to those highest priority applications to submit a more comprehensive document to be signed off with support from all contributing Local governments.

CONSULTATION
Community Emergency Services Manager

STATUTORY ENVIRONMENT
Bushfire Act 1954

POLICY IMPLICATIONS
Nil

STRATEGIC IMPLICATIONS
Key Result Area 1: Our People
1.1 Our community is safe, connected and harmonious
1.1.3 Promote and support activities that enhance the community's sense of safety and wellbeing.

FINANCIAL IMPLICATIONS
Nil

VOTING REQUIREMENTS
Simple Majority

OFFICER RECOMMENDATION

Moved Ian Cunningham/Wayne Newbey

That the Bushfire Advisory Committee recommends to Council that a more collaborative approach to prioritising the Resource to Risk applications from Local Governments within the Great Southern Regional Operations Advisory Committee be supported.

CARRIED

5.2 FARM RESOURCE LIST FOR LOCAL EMERGENCY MANAGEMENT COMMITTEE

Attachment:	**Local Emergency Management Arrangements Resources Register**
File Ref:	**ADM0238**
Author:	**PA Hull, Strategic Support & Projects Officer**
Date:	**22 October 2019**
Disclosure of Interest:	**Nil**

SUMMARY

The committee to consider items of plant and equipment that may be available to emergency services in a response situation, for noting in a Resource Register.

BACKGROUND

The Local Emergency Management Committee (LEMC) is a statutory committee of the Council, and is required to meet quarterly. Membership of the LEMC includes representatives from the Shire, Police, emergency service organisations, schools, health services, welfare organisations, government agencies and others.

The LEMC is responsible for the development, testing and maintenance of the Local Emergency Management Arrangements (LEMA), a document which comprises relevant information to assist the community in the event of an emergency, from response through to recovery.

The LEMA includes a Resource Register (attached), which is updated quarterly to ensure its continued relevance. Items on the Resource Register range from heavy plant and earthmoving equipment, through to portable stock yards, mobile standpipes and firefighting appliances that may be available (in consultation and with the permission of the owner), for use during an emergency incident. The Resource Register will be provided to key Brigade personnel for reference during an incident.

The LEMC is seeking support from brigade members to nominate suitable items of plant and equipment for inclusion on the Resource Register, which will ideally highlight resources that are located in various areas of the Shire to enable a quick response if needed.

COMMENT

As can be seen from the attachment, the Register to date is fairly limited. A call for the inclusion of portable stockyards in particular was put out some time ago, with minimal response. The LEMC is aware that many farming businesses have items available that may be useful in an emergency response situation and request support for items to be noted on the Register.

As an example, a number of years ago a stock truck overturned on the Great Southern Highway at Peringillup, causing a full closure of the road, and the dispersal of live and injured sheep throughout the reserve. A set of portable stock yards was sourced from a nearby farmer, and the sheep were able to be herded and driven safely to a nearby paddock. Fortunately the portable yards were in close proximity to the crash site and could be obtained reasonably quickly.

Fire incidents during recent fire seasons have required the use of privately owned earthmoving equipment for both fire control and mop up purposes. The Shire's loader and graders are not always located centrally and the delay experienced in moving these to a fire ground may be significant.

It is anticipated that the Register will include items of plant and equipment from all parts of the Shire, to minimise any delays in sourcing these during an incident when time is critical.

For discussion.

CONSULTATION
Bushfire Advisory Committee
Local Emergency Management Committee

STATUTORY ENVIRONMENT
Emergency Management Act 2005
s.39 Functions of local emergency management committees
The functions of a local emergency management committee are, in relation to its district or the area for which it is established —
(a) to advise and assist the local government in ensuring that local emergency management arrangements are established for its district;
(b) to liaise with public authorities and other persons in the development, review and testing of local emergency management arrangements; and
(c) to carry out other emergency management activities as directed by the SEMC or prescribed by the regulations.

POLICY IMPLICATIONS
Nil

STRATEGIC IMPLICATIONS
Key Result Area 1: Our People
1.1 Our community is safe, connected and harmonious
1.1.3 Promote and support activities that enhance the community's sense of safety and wellbeing.

FINANCIAL IMPLICATIONS
There are no financial implications associated with this matter.

VOTING REQUIREMENTS
Simple majority

OFFICER RECOMMENDATION
No recommendation required. Information submitted to be collated and provided to the LEMC for inclusion in the Local Emergency Management Arrangements Resource Register.

It was noted there was an opportunity to build on the information available by sharing with neighbouring local governments. A flyer may also be put out to the community to source local information. Pam to action this

Appendices

Appendix 1: Resource Register

CONTRACT EQUIPMENT REGISTER

NAME	CONTACT	EQUIPMENT AVAILABLE
Bootrock Bobtrack: Peter Guazzelli	9824 1309 0439 241309	Truck, skid steer, small grader, 7000lt water truck, slasher
Greg Holly	9821 0068 0427 210067	Truck, mini excavator
Gray Carter	0429 983836	Truck, water tank, grader, loader
Andrew Gibbons	0428 229613	Front end loader, large generator
Rapid Response Team (Ben Richardson – Gnowangerup)	0409 329935	Bulk water tanker 42,000lt capacity, suitable for non-potable purposes

SHIRE OF BROOMEHILL-TAMBELLUP RESOURCES LIST	
Graders	3
Trucks (heavy)	2
Trucks (light)	2
Water Tank 9000ltrs	1
FEL & tree rake	1
Backhoe	1
Prime Mover and float	1
Skid steer	1
Water Pump and hoses (3inch)	1
Chainsaws	2
Generators	1
Signage and accredited traffic management personnel	Road, traffic management signs
Fire Truck 4.4 (Broomehill – 4x4, 4000lt capacity)	1
Brigade Resources	Standpipe trailers/fast fill pumps x 4

TAMBELLUP VFES EQUIPMENT LIST	
Mobile stand pipe	1
Water Pump and hoses (3inch)	1
Fire Truck 4.4 (4x4, 4000lt capacity)	1
Generator	2
Light Tanker (4x4, 600lt capacity)	1
Road Crash Rescue trailer	Inc hydraulic cutting equipment, acroprops, portable lighting, traffic cones and emergency signage, rescue equipment

WELFARE & SUPPORT RESOURCES

NAME	ADDRESS	PHONE	FAX
Medical			
AMBULANCE		000	
HOSPITAL – Katanning		9821 6222	
HOSPITAL - Kojonup		9831 2222	
HOSPITAL - Gnowangerup		9827 2222	
HOSPITAL – Mt Barker		9851 1422	
Tambellup Health Centre		9821 6222	
Katanning Pharmacy		9821 1677	
Gnowangerup Pharmacy		9827 1046	
Mt Barker Pharmacy		9851 1010	
St Lukes Family Medical Centre	Katanning	9821 2155	
	Kojonup	9831 0622	
Gnowangerup Medical Centre		9827 1116	
Mt Barker Medical Centre		9851 1566	
Food and Catering			
Broomehill			
Broomehill Hall	Gt Southern Hwy Broomehill (Shire)	9825 3555	Kitchen, some equipment
Broomehill Recreation Complex	Tieline Rd Broomehill (Lisa Thompson)	0417 184185	Kitchen, equipment
Broomehill CWA	India Street Broomehill (Margaret Nalli)	9821 4861	Personnel
Henry Jones Winery & Cafe	Cnr India St & Journal St Broomehill (Jim Witham)	9824 1513	Extended events – require notice
Tambellup			
Tambellup CWA	Henry St, Tambellup (Anne-Marie Lockyer)	9825 1162	Personnel
Tambellup Golf Club	Rourke St, Tambellup (Sophie Lane)	9825 1199	Kitchen, equipment
Tambellup Deli	Norrish St, Tambellup	9825 1104	Extended events – require notice
Tambellup Hotel	Garrity St, Tambellup	9825 1010	Extended events – require notice
Tambellup Post Office Cafe	Norrish Street Tambellup	9825 1169	Extended events – require notice
Tambellup Community Pavilion	Sports Ground, East Tce, Tambellup (Jane Cunningham)	9825 3061	Kitchen, equipment

Tambellup Hall	Norrish St, Tambellup (Shire)	9825 3555	Kitchen, equipment
Tambellup St John Ambulance Sub Centre	Norrish St, Tambellup (Bronwyn Bradshaw)	9825 3046	Kitchen, some equipment
Katanning			
Chicken Treat	Shop Trevor	98214411 0401 194282	10.30am – 8pm Chicken chips, burgers, rolls, wraps, drinks. Cannot cater for large numbers, will require approx. 2 hours.
Café on Cornwall	Jane Fornero	98211155 0447 177255	24/7 as lives on the premises. Rolls, Sandwiches, Burger, Pizza Wraps Drinks, Choc Bars, Cakes. Will need 30-60 minutes depending on quantity. $14-$20
Sandy Boxall		0428166433	24/7 Mixed sandwiches, lasagnas, sausage rolls and sauce, cakes and biscuits 3-4 Hours' Notice
Emu Lane	Julie David	0405 770 634 0418 912 359	24/7 Tea and coffee, sandwiches sausage rolls, roasts, meat pies, cakes and slices 90 Minutes to supply.
Gnowangerup			
Rapid Relief Team	Ben Richardson Mike Richardson	0409 329935 0437 873931	Incident Catering Basecamp Catering Provides trained personnel, trailers, equipment and operators Will set up and serve food and refreshments, organise procurement of food in consultation with DFES or agency controlling incident. No charge for first 24 hours, for extended incidents catering provided at $10 per head on purchase order from emergency services or purchase order to local suppliers from emergency services.

Fuel			
Tambellup G & T Motors	Gt Southern Hwy Tambellup (Diesel only)	9825 1009	9825 1191
Tambellup Deli	Norrish St Tambellup	9825 1105	9825 1105
Shire of Broomehill-Tambellup	Broomehill Depot – Tieline Road (Diesel only)	9825 3555	
	Tambellup Depot – Bridge Street (Diesel only)	9825 3555	
Mechanical			
G & T Motors Tambellup		9825 1009	
Shire of Broomehill-Tambellup		9825 3555	
Transport (Bus Hire)			
T & L Lay		9825 1717 0429 651751	
Suzanne Leckie		0407 271525	
Animal Welfare			
Department of Primary Industries and Regional Development	10 Dore St, Katanning Contact: Christine Thompson	0427 986351	
Portable Stock Yards			
Scott Thompson	Nardlah Rd, Broomehill Contact: Aaron Steve Scott	 0428 241222 0438 241311 0428 916131	
Department of Primary Industry and Regional Development (Agriculture and Food)	Katanning Research Facility Nyabing Rd, Katanning Contact: Gavin D'Adhemar Christine Thompson	 0427 082203 0427 986351	
Garry Sheridan	Warrenup Rd, Tambellup Contact: Garry Nigel	 0417 184977 0427 253097	9825 1836
Counselling and Welfare Services			
Southern Agcare		9827 1552	
Department of Communities (Child Protection & Family Support)	25 Duke Street, Albany WA 6330	9845 0777	

7. OTHER BUSINESS

Alternate water sources: Ian queried the availability of alternate water sources in the Shire given the dry conditions experienced this year. These include:

- Tambellup Shire Depot standpipe (in the yard)
- 320kL water tanks at Shire Depot – these are fitted with camlock fittings for emergency use.
- Standpipes (all require a standpipe card) – Tambellup West Rd
  Crawford St
  Cemetery Rd
  Greenhills North Rd

  Laurie noted the flow at the Cemetery Rd standpipe was slow, and the Greenhills North standpipe has no hose or fitting at present.

  Broomehill town dam – fast flow
- Dams/other: CBH dam Broomehill
  Water Corp dam (at Webster's) Tambellup
  Water Reserve dam Tambellup
  Oval tanks Tambellup – investigate fittings, can't use treated water
  Gordon River in Tambellup
  Tank on Donald St opposite Tambellup Shire Depot – easy access
  Hydrants Broomehill and Tambellup townsites

  It is noted that not all the water sources listed are easy for fire appliances to access and preference is for water to be sourced close to an incident.

Water supplies: Brigade captains are asked to consider what water is available in their brigade area, and also to check that fast fill trailers are serviced, pumps have been started pre-season, and locations have been confirmed. Clipboards with paper providing for registration of volunteers at a fire ground should be left with trailers and following an incident, a photo of the registration list should be forwarded to Cindy for recording.

Scheds: full scheds are to be carried out on Tuesdays, with the CBFCO and DCBFCO checking repeaters every morning. On forecast bad days, a Whats App message will go out at 6.30 for a 7.00 full sched.

WhatsApp: members are asked to keep WhatsApp traffic to a minimum to reduce the likelihood of a fire call being overlooked.

Chaff piles: at the previous BFAC meeting the wind speed for permitted burning of chaff piles was increased to 26km/hr. This will be trialled this season, and would back if required.

Operations on a fire ground: Ian reiterated that the brigade captain should control the fire on the ground, with CBFCO and/or DCBFCO providing remote logistic support as required.

Cindy advised new Water and Road Traffic Warning signs were available for brigades – these were distributed. Captains to check if more are required.

8. CLOSURE

There being no further business, Cr Paganoni thanked everyone for their attendance and declared the meeting closed at 5.50pm.

SHIRE OF BROOMEHILL-TAMBELLUP

MONTHLY FINANCIAL REPORT

For the Period Ended 31 October 2019

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LOCAL GOVERNMENT ACT 1995
LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996

SHIRE OF BROOMEHILL-TAMBELLUP
STATEMENT OF FINANCIAL ACTIVITY
By Nature or Type
For the Period Ended 31 October 2019

	Note	Adopted Budget 2019/20	YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(b)	
Operating Revenues							
Rate Revenue		2,493,900	2,493,900	2,504,390.92	10,491	0.4%	
Grants, Subsidies and Contributions		1,416,400	506,986	485,256.17	(21,730)	(4.5%)	
Profit on Asset Disposal	10	556,800	732	0.00	(732)	(100.0%)	
Fees and Charges		279,700	131,992	134,118.85	2,127	1.6%	
Interest Earnings		61,200	17,332	19,920.39	2,588	13.0%	
Other Revenue		93,200	75,728	74,131.59	(1,596)	(2.2%)	
Total		**4,901,200**	**3,226,670**	**3,217,817.92**	**(8,852)**		
Operating Expense							
Employee Costs		(2,194,100)	(815,868)	(802,862.25)	13,006	1.6%	
Materials and Contracts		(1,770,800)	(599,192)	(632,264.37)	(33,072)	(5.2%)	
Utilities Charges		(198,500)	(66,100)	(71,801.44)	(5,701)	(7.9%)	
Depreciation (Non-Current Assets)		(1,780,700)	(593,516)	0.00	593,516	100.0%	▼
Interest Expenses		(56,100)	(21,500)	(25,562.91)	(4,063)	(15.9%)	
Insurance Expenses		(163,700)	(119,832)	(151,643.91)	(31,812)	(21.0%)	▲
Loss on Asset Disposal	10	(71,800)	(23,928)	0.00	23,928	100.0%	▼
Other Expenditure		(87,500)	(26,803)	(25,032.97)	1,770	7.1%	
Total		**(6,323,200)**	**(2,266,739)**	**(1,709,167.85)**	**557,571**		
Funding Balance Adjustment							
Add Back Depreciation		1,780,700	593,516	0.00	(593,516)	(100.0%)	▼
(Profit)/Loss on Asset Disposal	10	(485,000)	23,196	0.00	(23,196)	(100.0%)	▼
Adjust Provisions and Accruals		0	0	0.00	0	0.0%	
Net Operating		**(126,300)**	**1,576,643**	**1,508,650.07**	**(67,993)**		
Capital Revenues							
Grants, Subsidies and Contributions	8	4,362,700	353,600	413,587.00	59,987	14.5%	▲
Proceeds from Disposal of Assets	10	1,796,700	81,000	81,134.00	134	0.2%	
Transfer from Reserves	9	1,668,700	0	0.00	0		
Proceeds from New Loans		995,700	0	0.00	0		
Total		**8,823,800**	**434,600**	**494,721.00**	**60,121**		
Capital Expenses							
Land Held for Resale		0	0	0.00	0	0.0%	
Land and Buildings	12	(5,057,500)	(1,750,000)	(1,704,620.85)	45,379	2.7%	
Plant and Equipment	12	(1,259,400)	(160,000)	(161,150.65)	(1,151)	(0.7%)	
Furniture and Equipment	12	0	0	0.00	0		
Infrastructure - Roads	12	(1,633,700)	(160,000)	(159,102.29)	898	0.6%	
Infrastructure - Other	12	(392,500)	(50,000)	(47,677.69)	2,322	4.9%	
Repayment of Debentures	12	(62,000)	(20,500)	(20,590.25)	(90)	(0.4%)	
Transfer to Reserves	9	(1,519,400)	(350,000)	(351,750.28)	(1,750)	(0.5%)	
Total		**(9,924,500)**	**(2,490,500)**	**(2,444,892.01)**	**45,608**		
Net Capital		**(1,100,700)**	**(2,055,900)**	**(1,950,171.01)**	**105,729**		
Total Net Operating + Capital		**(1,227,000)**	**(479,257)**	**(441,520.94)**	**37,736**		
Opening Funding Surplus(Deficit)		1,227,000	1,227,000	1,259,154.88	32,155	2.6%	
Closing Funding Surplus(Deficit)	4	**0**	**747,743**	**817,633.94**	**69,891**		

SHIRE OF BROOMEHILL-TAMBELLUP
STATEMENT OF FINANCIAL ACTIVITY
By Reporting Program
For the Period Ended 31 October 2019

	Note	Adopted Budget 2019/20	YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(b)	
Operating Revenues							
Governance		37,100	12,352	11,786.75	(565)	(4.80%)	
General Purpose Funding		3,503,000	2,792,890	2,807,983.43	15,093	0.54%	
Law, Order and Public Safety		537,900	76,752	84,586.32	7,834	9.26%	
Health		1,800	592	2,027.16	1,435	70.80%	
Education and Welfare		62,800	20,932	0.00	(20,932)	(100.00%)	▼
Housing		3,086,600	37,828	22,569.62	(15,258)	(67.61%)	▼
Community Amenities		88,500	70,496	69,018.69	(1,477)	(2.14%)	
Recreation and Culture		45,100	15,020	9,975.69	(5,044)	(50.57%)	
Transport		1,468,400	509,528	578,343.26	68,815	11.90%	▲
Economic Services		320,000	22,984	28,054.86	5,071	18.07%	
Other Property and Services		112,700	20,896	17,059.14	(3,837)	(22.49%)	
Total		**9,263,900**	**3,580,270**	**3,631,404.92**	**51,135**		
Operating Expense							
Governance		(653,700)	(242,164)	(180,259.04)	61,905	34.34%	▼
General Purpose Funding		(252,300)	(77,339)	(80,230.84)	(2,892)	(3.60%)	
Law, Order and Public Safety		(278,600)	(98,664)	(95,575.03)	3,089	3.23%	
Health		(50,000)	(16,632)	(13,451.09)	3,181	23.65%	
Education and Welfare		(71,600)	(23,852)	(14,495.59)	9,356	64.55%	
Housing		(128,200)	(69,288)	(52,144.74)	17,143	32.88%	▼
Community Amenities		(431,800)	(143,832)	(135,010.49)	8,822	6.53%	
Recreation and Culture		(1,354,400)	(455,952)	(340,250.51)	115,701	34.00%	▼
Transport		(2,786,900)	(928,904)	(416,763.17)	512,141	122.89%	▼
Economic Services		(216,400)	(76,728)	(78,632.11)	(1,904)	(2.42%)	
Other Property and Services		(99,300)	(133,384)	(302,355.24)	(168,971)	(55.89%)	▲
Total		**(6,323,200)**	**(2,266,739)**	**(1,709,167.85)**	**557,571**		
Funding Balance Adjustment							
Add back Depreciation		1,780,700	593,516	0.00	(593,516)	(100.00%)	▼
(Profit)/Loss on Asset Disposal	10	(485,000)	23,196	0.00	(23,196)	(100.00%)	▼
Adjust Provisions and Accruals		0	0	0.00	0		
Net Operating		**4,236,400**	**1,930,243**	**1,922,237.07**	**(8,006)**		
Capital Revenues							
Proceeds from Disposal of Assets	10	1,796,700	81,000	81,134.00	134	0.17%	
Transfer from Reserves	9	1,668,700	0	0.00	0		
Proceeds from New Loans		995,700	0	0.00	0		
Total		**4,461,100**	**81,000**	**81,134.00**	**134**		
Capital Expenses							
Land Held for Resale		0	0	0.00	0	0.00%	
Land and Buildings	12	(5,057,500)	(1,750,000)	(1,704,620.85)	45,379	2.66%	
Plant and Equipment	12	(1,259,400)	(160,000)	(161,150.65)	(1,151)	(0.71%)	
Furniture and Equipment	12	0	0	0.00	0	0.00%	
Infrastructure Assets - Roads	12	(1,633,700)	(160,000)	(159,102.29)	898	0.56%	
Infrastructure Assets - Other	12	(392,500)	(50,000)	(47,677.69)	2,322	4.87%	
Repayment of Debentures		(62,000)	(20,500)	(20,590.25)	(90)	(0.44%)	
Transfer to Reserves	9	(1,519,400)	(350,000)	(351,750.28)	(1,750)	(0.50%)	
Total		**(9,924,500)**	**(2,490,500)**	**(2,444,892.01)**	**45,608**		
Net Capital		**(5,463,400)**	**(2,409,500)**	**(2,363,758.01)**	**45,742**		
Total Net Operating + Capital		**(1,227,000)**	**(479,257)**	**(441,520.94)**	**37,736**		
Opening Funding Surplus(Deficit)		1,227,000	1,227,000	1,259,154.88	32,155	2.55%	
Closing Funding Surplus(Deficit)	4	**0**	**747,743**	**817,633.94**	**69,891**		

SHIRE OF BROOMEHILL-TAMBELLUP
BALANCE SHEET
For the Period Ended 31 October 2019

	Actual 2019/20	C/fwd 1 July 2019
CURRENT ASSETS		
Cash	2,128,290.10	2,241,337.68
Receivables	733,664.49	925,798.52
Inventories - Stock on Hand	40,025.15	26,157.55
TOTAL CURRENT ASSETS	2,901,979.74	3,193,293.75
CURRENT LIABILITIES		
Creditors and Provisions	694,849.09	896,392.44
Borrowings	41,411.11	62,001.36
TOTAL CURRENT LIABILITIES	736,260.20	958,393.80
NET CURRENT ASSETS	**2,165,719.54**	**2,234,899.95**
NON-CURRENT ASSETS		
Receivables	64,723.42	64,723.42
Inventories - Land Held for Resale	216,000.00	216,000.00
Financial Assets	70,965.45	70,965.45
Property, Plant and Equipment	17,427,036.47	15,642,398.97
Infrastructure Assets	117,979,359.68	117,772,579.70
TOTAL NON-CURRENT ASSETS	135,758,085.02	133,766,667.54
NON-CURRENT LIABILITIES		
Creditors and Provisions	73,064.60	73,064.60
Borrowings	1,098,430.74	1,098,430.74
TOTAL NON-CURRENT LIABILITIES	1,171,495.34	1,171,495.34
NET ASSETS	**136,752,309.22**	**134,830,072.15**
EQUITY		
Accumulated Surplus	37,156,069.39	35,585,582.60
Reserves - Asset Revaluation	97,756,142.50	97,756,142.50
Reserves - Cash Backed	1,840,097.33	1,488,347.05
TOTAL EQUITY	**136,752,309.22**	**134,830,072.15**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

1: (a) Nature or Type Classifications

REVENUES

Rates
All rates levied under the Local Government Act 1995. Includes general, differential, specific area rates, minimum rates, interim rates, back rates, ex-gratia rates, less discounts offered. Exclude administration fees, interest on instalments, interest on arrears and service charges.

Operating Grants, Subsidies and Contributions
Refers to all amounts received as grants, subsidies and contributions that are not non-operating grants.

Non-Operating Grants, Subsidies and Contributions
Amounts received specifically for the acquisition, construction of new or the upgrading of non-current assets paid to a local government, irrespective of whether these amounts are received as capital grants, subsidies, contributions or donations.

Profit on Asset Disposal
Profit on the disposal of assets including gains on the disposal of long term investments. Losses are disclosed under the expenditure classifications.

Fees and Charges
Revenues (other than service charges) from the use of facilities and charges made for local government services, facility hire charges, fee for service, photocopying charges, licences, sale of goods or information, fines, penalties and administration fees. Includes rubbish collection fees, rental of property, fines and penalties, other fees and charges.

Service Charges
Service charges imposed under Division 6 of Part 6 of the Local Government Act 1995. Regulation 54 of the Local Government (Financial Management) Regulations 1996 identifies these as television and radio broadcasting, underground electricity and neighbourhood surveillance services.

Interest Earnings
Interest and other items of a similar nature received from bank and investment accounts, interest on rate instalments and interest on rate arrears.

Other Revenue / Income
Other revenue, which can not be classified under the above headings, includes dividends, discounts, rebates etc.

EXPENSES

Employee Costs
All costs associate with the employment of person such as salaries, wages, allowances, benefits such as vehicle and housing, superannuation, employment expenses, removal expenses, relocation expenses, worker's compensation insurance, training costs, conferences, safety expenses, medical examinations, fringe benefit tax, etc.

NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

1: (a) Nature or Type Classifications

Materials and Contracts
All expenditures on materials, supplies and contracts not classified under other headings. These include supply of goods and materials, legal expenses, consultancy, maintenance agreements, information technology and communications expenses, advertising, memberships, periodicals, publications, hire expenses, rental, leases, postage and freight etc.

Utilities (Gas, Electricity, Water, etc.)
Expenditures made to the respective agencies for the provision of power, gas, telephone or water services.

Insurance
All insurance premiums - excluding worker's compensation which is included as a cost of employment.

Loss on asset disposal
Loss on the disposal of fixed assets.

Depreciation on non-current assets
Depreciation expense raised on all classes of assets.

Interest expenses
Interest and other costs of finance paid, including costs of finance for loan debentures, overdraft accommodation and refinancing expenses.

Other expenditure
Statutory fees, taxes, provision for bad debts, member's fees or State taxes. Donations and subsidies made to community groups.

SHIRE OF BROOMEHILL-TAMBELLUP

NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

1: (b) Reporting Program Classifications (Function / Activity)

Shire operations as disclosed in these financial statements encompass the following service orientated activities/programs.

GOVERNANCE
Objective:
To provide a decision making process for the efficient allocation of scarce resources.
Activities:
Includes the activities of members of council and the administrative support available to the council for the provision of governance of the district. Other costs relate to the task of assisting elected members and ratepayers on matters which do not concern specific Shire activities.

GENERAL PURPOSE FUNDING
Objective:
To collect revenue to allow for the provision of services
Activities:
Rates; general purpose government grants and interest revenue.

LAW, ORDER, PUBLIC SAFETY
Objective:
To provide services to help ensure a safer and environmentally conscious community.
Activities:
Supervision and enforcement of various local laws relating to fire prevention, animal control and other aspects of public safety including emergency services.

HEALTH
Objective:
To provide an operational framework for environmental and community health.
Activities:
Inspection of food outlets and their control; mosquito control and maintenance of the Infant Health Clinic in Tambellup

EDUCATION AND WELFARE
Objective:
To provide services to the elderly, children and youth.
Activities:
Assistance to the Broomehill and Tambellup Primary Schools; support of the "A Smart Start" program.

HOUSING
Objective:
To provide and maintain staff housing, and accommodation for 'well aged' seniors in the Community.
Activities:
Provision and maintenance of staff housing; and the Independent Living Seniors accommodation in Tambellup.

COMMUNITY AMENITIES
Objective:
To provide services required by the Community.
Activities:
Rubbish collection services; operation of the tip sites and waste transfer stations; administration of the Town Planning Scheme; Cemetery maintenance at Broomehill, Tambellup and Pindellup cemeteries; public conveniences and protection of the environment.

SHIRE OF BROOMEHILL-TAMBELLUP

NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

1: (b) Reporting Program Classifications (Function / Activity)

RECREATION AND CULTURE
Objective:
To establish and effectively manage infrastructure and resources which will assist with the social well-being of the Community.
Activities:
Maintenance of public halls, recreation grounds, parks, gardens, reserves and playgrounds. Operation of the Broomehill Library and support to the Tambellup Community Resource centre for manangement of the Tambellup library. Museums and other cultural facilities.

TRANSPORT
Objective:
To provide safe, effective and efficient transport services to the Community.
Activities:
Construction and maintenance of streets, roads and bridges. Cleaning and lighting of streets; maintenance of the Broomehill and Tambellup works depots. Provision of the Department of Transport licensing services to the Community.

ECONOMIC SERVICES
Objective:
To assist in promoting the Shire and its economic wellbeing.
Activities:
Tourism and area promotion, including operation of the Broomehill Caravan Park. Provision of rural services which includes noxious weed control, vermin control and standpipes. Provision of Building

OTHER PROPERTY & SERVICES
Objectives:
To monitor and control councils works overhead operating accounts.
Activities:
Private works operations; public works overhead costs; plant operation costs and unclassified items.

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
By Reporting Program
For the Period Ended 31 October 2019

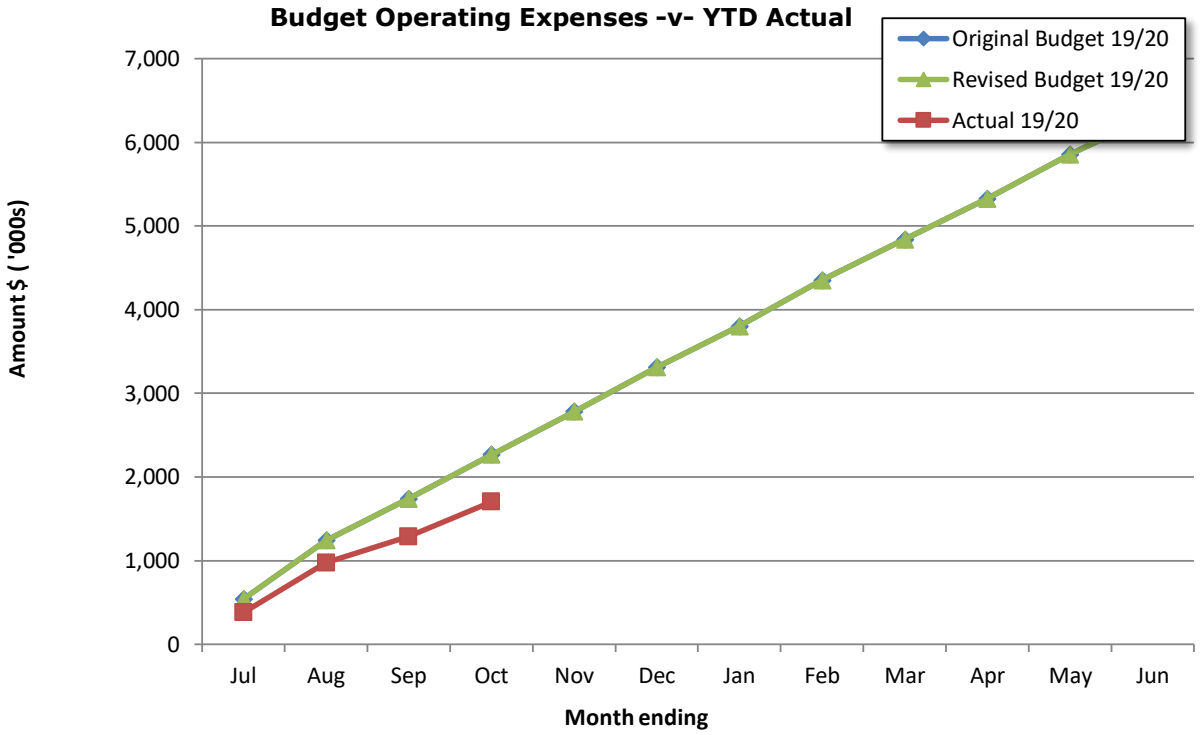
2: REPORT ON SIGNIFICANT VARIANCES

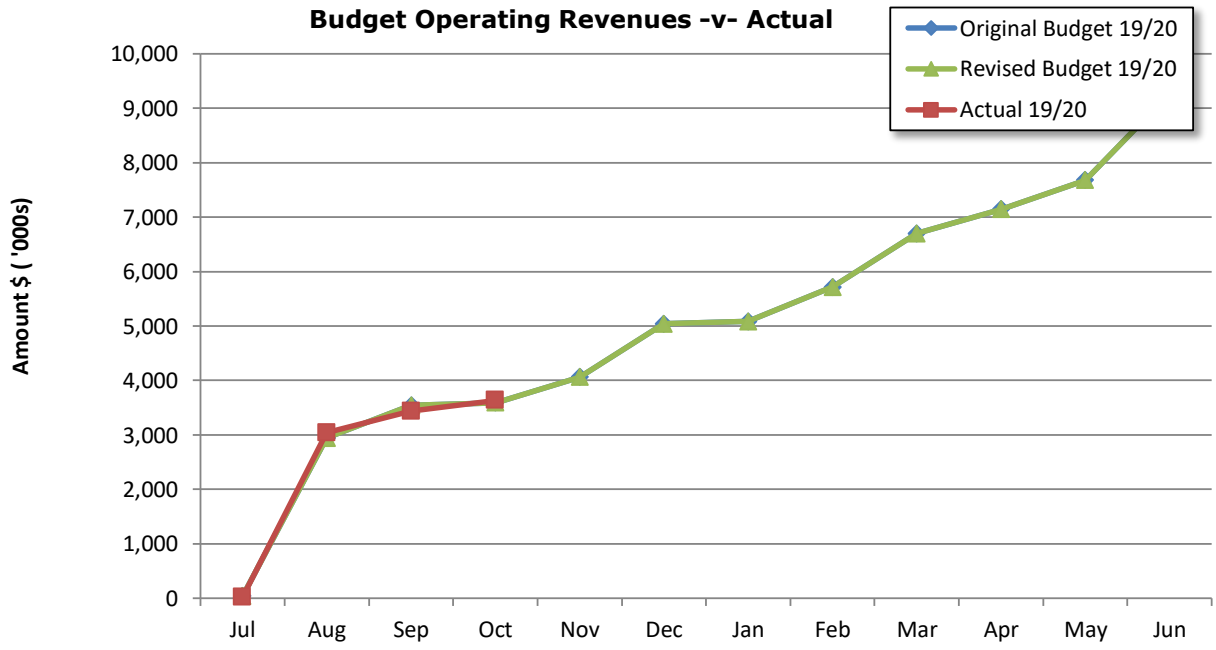
The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date budget materially.
The material variance adopted by Council for the 2019/20 year is $10,000 or 10% whichever is greater.

	Variance	
	Timing	**Permanent**
OPERATING REVENUES		
Education and Welfare Reimbursements are made from the Trust Fund for A Smart Start employee costs. A reimbursement has not yet been processed for July to October expenses	■	
Housing Shires participating in the Great Southern Housing Initiative have been invoiced for their share of Project Management costs in early November	■	
Transport The variance relates to accrued income from the final recoup of Regional Road Group funding for 2018/19.	■	
OPERATING EXPENSE		
Governance / Housing / Community Amenities / Recreation & Culture / Transport Asset depreciation has not yet been allocated as the asset register forms part of the end of year audit. Once the financial statements for 30 June 19 are signed off by the auditors, asset depreciation will be processed.	■	
Other Property & Services Public Works Overheads are the costs associated with the works crew. Costs are allocated as a percentage through the payroll system. It is not unusual for PWO to be underallocated this early in the year as some expenses are paid upfront (ie insurances) and allocated over the whole year.	■	
Plant Operation Costs are costs associated with operation of plant and equipment. Costs are allocated through the payroll system. It is not unusual for POC to be underallocated this early in the year as some expenses are paid upfront (ie insurances, licences) and allocated over the whole year.	■	
FUNDING BALANCE ADJUSTMENT		
Depreciation Asset depreciation has not yet been allocated as the asset register forms part of the end of year audit. Once the financial statements for 30 June 19 are signed off by the auditors, asset depreciation will be processed.	■	
(Profit)/Loss on Asset Disposal As with depreciation, sale of assets will not be processed in the asset register until the auditors have signed off the 30 June 19 financial statements.	■	

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

3: Graphical Representation - Source Statement of Financial Activity





SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

4: NET CURRENT FUNDING POSTION

	Note	Actual 2019/20	C/fwd 1 July 2019
		$	$
Current Assets			
Cash Unrestricted		(76,401.16)	701,485.11
Cash Restricted - Unspent Grants	8	364,593.93	51,505.52
Cash Restricted - Reserves	9	1,840,097.33	1,488,347.05
Receivables - Rates and Rubbish	6	596,728.10	252,395.65
Receivables - Other	6	44,424.93	511,793.90
Inventories		40,025.15	26,157.55
Accruals and Provisions		61,394.70	62,718.22
		2,870,862.98	3,094,403.00
Less: Current Liabilities			
Payables		(159,833.15)	(344,611.31)
Net GST & PAYG		(25,393.02)	25,615.78
Accruals and Provisions		(27,905.54)	(27,905.54)
		(213,131.71)	(346,901.07)
Less: Cash Restricted - Reserves	9	(1,840,097.33)	(1,488,347.05)
Net Current Funding Position		**817,633.94**	**1,259,154.88**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

5: CASH AND INVESTMENTS

	Ref	Interest Rate	Unrestricted $	Restricted $	Trust $	Total $	Institution	Maturity Date
(a) Cash Deposits								
Municipal Fund	133 904 987		(77,901.16)	364,593.93		286,692.77	Bendigo	
Trust Fund	133 905 067				291,152.64	291,152.64	Bendigo	
Cash on Hand			1,500.00			1,500.00		
(b) Term Deposits								
Reserve Funds		1.60%		1,840,097.33		1,840,097.33	Bendigo	23/12/2019
Total			**(76,401.16)**	**2,204,691.26**	**291,152.64**	**2,419,442.74**		

Comments/Notes - Investments

a) Cash Deposits

The balance reported for the Municipal Fund is the reconciled closing balance of the bank account at the end of the period. The closing balance takes into account unpresented items at the end of the reporting period.

b) Term Deposits

Reserve Funds

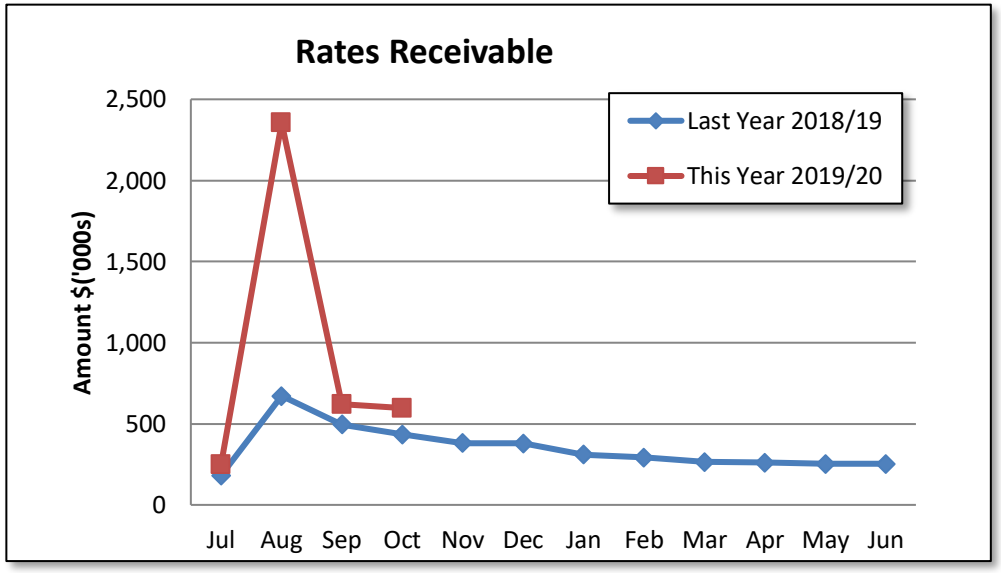
Councils Reserve Funds are held collectively in one investment. Further detail in relation to Councils Reserve Funds are shown in Note 9.

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

6: RECEIVABLES

Rates & Rubbish

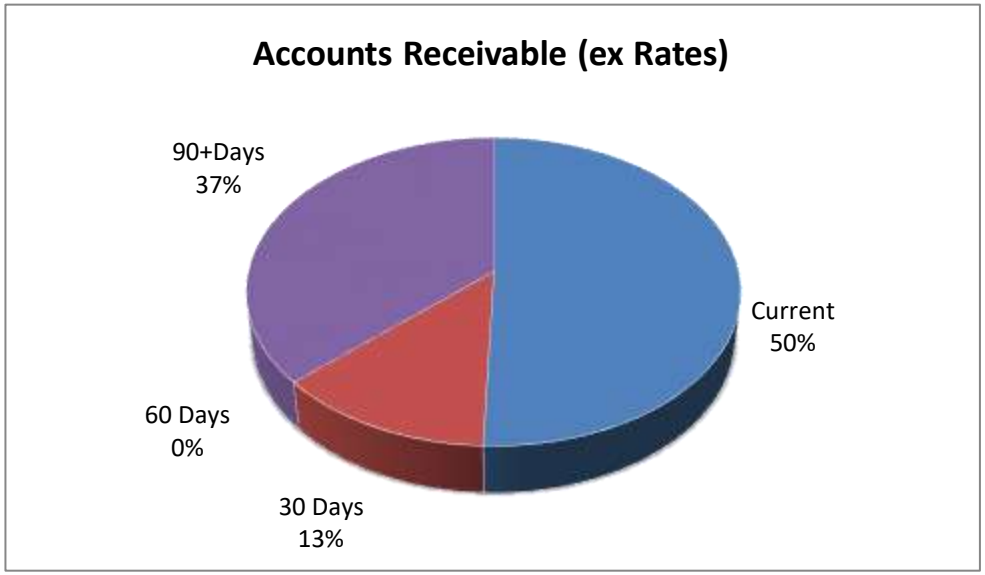
	Actual 2019/20	c/fwd 1 July 2019
	$	$
Opening Arrears Previous Years	252,395.65	210,694.51
Rates Levied this year	2,660,116.53	2,571,135.72
Less Collections to date	(2,315,784.08)	(2,529,434.58)
Equals Current Outstanding	**596,728.10**	**252,395.65**
Net Rates Collectable	**596,728.10**	**252,395.65**
% Collected	79.51%	90.93%



Comments/Notes - Receivables Rates and Rubbish

Accounts Receivable	Current	30 Days	60 Days	90+Days
	$	$	$	$
Sundry Debtors	762.58	6,290.56	-	18,120.76
Pensioner Rebates	656.14			
Emergency Services Levy	23,594.89			
	25,013.61	**6,290.56**	**-**	**18,120.76**
			Total Outstanding	**49,424.93**

Amounts shown above include GST (where applicable)



Comments/Notes - Receivables General

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

7: BUDGET AMENDMENTS

Amendments to original budget since budget adoption.

Council Resolution	GL	Revenue / (Expense)	Description	Comment	Adopted Budget	Revised Budget	Variance	Cumulative Balance
			Balanced Budget Adopted					0
Closing Funding Surplus (Deficit)					0	0	0	

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

8: GRANTS AND CONTRIBUTIONS

Program/Provider	Purpose	c/fwd 1 July 2019	Received 2019/20	Expended 2019/20	Closing Balance
		$			
GOVERNANCE					
Department of Local Govt	Amalgamation (Bhill & Tamb)	51,505.52	0.00	0.00	51,505.52
TRANSPORT					
Main Roads WA	Regional Road Group 2019/20	0.00	413,587.00	(100,498.59)	313,088.41
Dept Infrastructure, Regional Develop…	Roads to Recovery	0.00	0.00	0.00	0.00
TOTALS		**51,505.52**	**413,587.00**	**(100,498.59)**	**364,593.93**

Comments - Grants and Contributions

Bridge funding provided by the WA Local Govt Grants Commission is matched by 1/3 in funding from Main Roads WA.
The required works are undertaken by Main Roads WA approved contractors.

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

9. CASH BACKED RESERVES

	Budget 2019/20				Actual 2019/20			
	Opening Balance	Transfers To	Transfers From	Closing Balance	Opening Balance	Transfers To	Transfers From	Closing Balance
Leave Reserve	82,100	52,200	(52,700)	81,600	82,075.65	50,388.47	0.00	132,464.12
Plant Reserve	260,200	309,000	(387,700)	181,500	260,173.44	101,232.39	0.00	361,405.83
Building Reserve	261,500	1,045,000	(958,300)	348,200	261,528.09	101,238.73	0.00	362,766.82
Information Technology Reserve	42,700	11,000	0	53,700	42,739.31	10,202.34	0.00	52,941.65
Tambellup Rec Ground & Pavilion Reserve	51,600	6,200	0	57,800	51,615.94	5,244.64	0.00	56,860.58
Broomehill Rec Complex Reserve	86,100	10,600	0	96,700	86,052.34	9,007.51	0.00	95,059.85
Building Maintenance Reserve	67,300	10,800	(40,000)	38,100	67,323.57	10,318.67	0.00	77,642.24
Sandalwood Villas Reserve	82,100	12,000	0	94,100	82,085.89	10,389.18	0.00	92,475.07
Bhill Synthetic Bowling Green Reserve	65,600	10,100	0	75,700	65,635.08	8,910.92	0.00	74,546.00
Refuse Sites Post Closure Management Reserve	26,500	5,700	0	32,200	26,554.52	5,125.49	0.00	31,680.01
Lavieville Lodge Reserve	69,700	11,700	0	81,400	69,745.55	10,330.66	0.00	80,076.21
Townscape Plan Implementation Reserve	347,500	7,000	(200,000)	154,500	347,522.10	1,646.24	0.00	349,168.34
Tambellup Synthetic Bowling Green Reserve	15,300	7,800	0	23,100	15,295.57	7,572.62	0.00	22,868.19
Tourism & Economic Development Reserve	30,000	20,300	(30,000)	20,300	30,000.00	20,142.42	0.00	50,142.42
	1,488,200	1,519,400	(1,668,700)	1,338,900	1,488,347.05	351,750.28	0.00	1,840,097.33

In accordance with council resolutions in relation to each reserve account, the purpose for which the funds are set aside are as follows:

Reserve name	
Leave Reserve	- to be used to meet the Councils Long Service Leave liability for its employees.
Plant Reserve	- to be used for the purchase of plant and equipment in accordance with the Plant Replacement Program.
Building Reserve	- to be used to finance replacement, major repair or construction of new Shire buildings, and costs associated with subdivision of land.
Information Technology Reserve	- to be used to purchase, replace or upgrade computer hardware, software and associated equipment
Tambellup Recreation Ground & Pavilion Reserve	- to be used to maintain and develop sport and recreational facilities at the Tambellup Recreation Ground and Pavilion.
Broomehill Recreation Complex Reserve	- to be used for works at the Broomehill Recreation Complex in agreeance with the Complex Management Committee
Building Maintenance Reserve	- to be used to fund building maintenance requirements for all Shire owned buildings.
Sandalwood Villas Reserve	- to be utilised towards upgrade and maintenance of the 6 units at Sandalwood Villas.
Broomehill Synthetic Bowling Green Reserve	- to be used for the future replacement of the synthetic bowling green at the Broomehill Recreational Complex.
Refuse Sites Post Closure Management Reserve	- to meet the financial requirements for the closure of the Broomehill and Tambellup landfill sites when their useful life expires
Lavieville Lodge Reserve	- to be utilised towards upgrade and maintenance of the 4 units at Lavieville Lodge.
Townscape Plan Implementation Reserve	- to be used for implementation of the Townscape Plans for the Broomehill and Tambellup townsites.
Tambellup Synthetic Bowling Green Reserve	- to be used for the future replacement of the synthetic bowling green at the Tambellup Sportsground

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

10. DISPOSALS OF ASSETS

The following assets have been disposed of during the period under review:

	Budget 2019/20				Actual 2019/20			
By program:	**Net Book Value**	**Sale Proceeds**	**Profit**	**Loss**	**Net Book Value**	**Sale Proceeds**	**Profit**	**Loss**
Governance			0	0			0.00	0.00
Housing			0	0			0.00	0.00
Transport			0	0			0.00	0.00
Economic Services			0	0			0.00	0.00
	0	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**
By Class:								
Land and Buildings	0	0	0	0	0.00	0.00	0.00	0.00
Plant and Equipment	0	0	0	0	0.00	0.00	0.00	0.00
	0	**0**	**0**	**0**	**0.00**	**0.00**	**0.00**	**0.00**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

11: OPERATING REVENUE AND EXPENSE

	Budget Revenue 2019/20	Budget Expense 2019/20	Actual Revenue 2019/20	Actual Expense 2019/20
GENERAL PURPOSE FUNDING				
Rate Revenue	2,597,900	(190,300)	2,586,425.36	(58,752.11)
General Purpose Funding	869,400	0	213,972.50	0.00
Other General Purpose Funding	35,700	(62,000)	7,585.57	(21,478.73)
TOTAL GENERAL PURPOSE FUNDING	**3,503,000**	**(252,300)**	**2,807,983.43**	**(80,230.84)**
GOVERNANCE				
Members Of Council	16,000	(633,500)	10,673.70	(180,092.71)
Administration General	12,600	0	1,113.05	0.00
Other Governance	8,500	(20,200)	0.00	(166.33)
TOTAL GOVERNANCE	**37,100**	**(653,700)**	**11,786.75**	**(180,259.04)**
LAW, ORDER & PUBLIC SAFETY				
Fire Prevention	533,700	(206,100)	83,656.90	(64,466.96)
Animal Control	4,200	(71,500)	929.42	(31,108.07)
Other Law, Order & Public Safety	0	(1,000)	0.00	0.00
TOTAL LAW,ORDER & PUBLIC SAFETY	**537,900**	**(278,600)**	**84,586.32**	**(95,575.03)**
HEALTH				
Maternal & Infant Health	600	(13,700)	0.00	(1,767.41)
Health Inspection & Administration	1,200	(23,200)	2,027.16	(5,419.33)
Preventative Services - Pest Control	0	(13,100)	0.00	(6,264.35)
TOTAL HEALTH	**1,800**	**(50,000)**	**2,027.16**	**(13,451.09)**
EDUCATION & WELFARE				
Other Education	60,300	(66,600)	0.00	(14,495.59)
Other Welfare	2,500	(5,000)	0.00	0.00
TOTAL EDUCATION & WELFARE	**62,800**	**(71,600)**	**0.00**	**(14,495.59)**
HOUSING				
Staff Housing	1,304,600	0	0.00	(1.83)
Other Housing	1,782,000	(128,200)	22,569.62	(52,142.91)
TOTAL OTHER HOUSING	**3,086,600**	**(128,200)**	**22,569.62**	**(52,144.74)**
COMMUNITY AMENITIES				
Household Refuse	63,500	(250,000)	61,580.94	(80,669.72)
Protection Of The Environment	2,500	(2,500)	1,296.14	0.00
Town Planning & Regional Development	15,000	(75,200)	1,028.00	(23,973.06)
Other Community Amenities	7,500	(46,700)	5,113.61	(16,420.22)
Public Conveniences	0	(57,400)	0.00	(13,947.49)
TOTAL COMMUNITY AMENITIES	**88,500**	**(431,800)**	**69,018.69**	**(135,010.49)**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

11: OPERATING REVENUE AND EXPENSE

	Budget Revenue 2019/20	Budget Expense 2019/20	Actual Revenue 2019/20	Actual Expense 2019/20
RECREATION & CULTURE				
Public Halls & Civic Centres	13,000	(289,500)	1,597.28	(80,167.54)
Other Sport & Recreation	32,000	(938,900)	8,373.86	(223,432.58)
Libraries	100	(91,200)	4.55	(32,879.71)
Other Culture	0	(34,800)	0.00	(3,770.68)
TOTAL RECREATION & CULTURE	**45,100**	**(1,354,400)**	**9,975.69**	**(340,250.51)**
TRANSPORT				
Road Construction	1,288,200	0	413,587.00	0.00
Streets Roads Bridges & Depot Maint	158,000	(2,730,700)	160,009.00	(397,457.64)
Traffic Control	22,200	(56,200)	4,747.26	(19,305.53)
TOTAL TRANSPORT	**1,468,400**	**(2,786,900)**	**578,343.26**	**(416,763.17)**
ECONOMIC SERVICES				
Rural Services	0	(1,500)	0.00	0.00
Tourism & Area Promotion	208,000	(86,600)	3,179.92	(36,127.56)
Building Control	12,200	(63,700)	21,879.82	(20,515.02)
Other Economic Services	99,800	(64,600)	2,995.12	(21,989.53)
TOTAL ECONOMIC SERVICES	**320,000**	**(216,400)**	**28,054.86**	**(78,632.11)**
OTHER PROPERTY & SERVICES				
Private Works	15,000	(14,800)	1,077.07	(2,230.74)
Public Works Overhead	2,700	0	2,481.20	(3,797.14)
Plant Operation Costs	45,000	0	13,500.87	(103,128.90)
Workers Compensation	0	0	0.00	0.00
Salaries & Wages	0	0	0.00	(34,636.83)
Unclassified	50,000	(84,500)	0.00	(158,561.63)
TOTAL OTHER PROPERTY & SERVICES	**112,700**	**(99,300)**	**17,059.14**	**(302,355.24)**
TOTAL OPERATING	**9,263,900**	**(6,323,200)**	**3,631,404.92**	**(1,709,167.85)**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

12: CAPITAL DISPOSALS AND ACQUISITIONS

		Budget Revenue 2019/20	Budget Expense 2019/20	Actual Revenue 2019/20	Actual Expense 2019/20
GOVERNANCE					
Tambellup Admin Building - solar energy	P&E	0	(15,000)	0.00	0.00
Plant Replacement					
Ford Ranger dual cab - 0TA (3 changeovers)	P&E	146,000	(156,000)	0.00	0.00
Ford Everest wagon - BH000 (2 changeovers)	P&E	88,000	(98,000)	48,377.73	(49,741.36)
	Total	**234,000**	**(269,000)**	**48,377.73**	**(49,741.36)**
LAW, ORDER & PUBLIC SAFETY					
Broomehill Fire Shed	L&B	0	(460,000)	0.00	(9,714.69)
	Total	**0**	**(460,000)**	**0.00**	**(9,714.69)**
HOUSING					
27 East Terrace - replace ceiling in kitchen/dining	L&B	0	(7,500)	0.00	0.00
Independent Living Units - Broomehill	L&B	0	(1,280,000)	0.00	(482,507.25)
Staff housing - 4x2 Lathom St, Broomehill	L&B	0	(520,000)	0.00	(100,575.00)
Staff housing - 3x2 Leven St, Broomehill	L&B	0	(490,000)	0.00	(187,575.00)
Staff housing - 3x2 Taylor St,Tambellup	L&B	0	(490,000)	0.00	(325,237.05)
Sale of 1 Janus Street, Broomehill	L&B	280,000	0	0.00	0.00
Sale of 11 Lavarock Street, Broomehill	L&B	200,000	0	0.00	0.00
Sale of 20 Henry Street, Tambellup	L&B	220,000	0	0.00	0.00
Sale of 27 East Terrace, Tambellup	L&B	240,000	0	0.00	0.00
GROH Housing - 4x2 Parnell St, Tambellup	L&B	0	(550,000)	0.00	(267,749.58)
GROH Housing - 3x2 Taylor St, Tambellup	L&B	0	(500,000)	0.00	(166,204.81)
GROH Housing - 3x2 Taylor St, Tambellup	L&B	0	(500,000)	0.00	(165,057.47)
	Total	**940,000**	**(4,337,500)**	**0.00**	**(1,694,906.16)**
RECREATION & CULTURE					
Diprose Park - drainage improvements and shade over junior play	I-O	0	(55,000)	0.00	0.00
Tambellup Hall - replace kitchen ceiling (c/over)	L&B	0	(5,000)	0.00	0.00
Crawford Street basketball court - extend surface, improve lightir	I-O	0	0	0.00	(730.91)
	Total	**0**	**(60,000)**	**0.00**	**(730.91)**
TRANSPORT					
Plant Replacement					
Isuzu Jetpatcher - refurbish	P&E	0	(40,000)	0.00	0.00
Isuzu FRR500 tipper truck - TA386	P&E	27,700	(75,900)	27,727.27	(84,880.29)
Excavator	P&E	0	(100,000)	0.00	0.00
Reel Mower	P&E	0	(60,000)	0.00	0.00
Ford Ranger Wildtrak dual cab - TA001 (3 changeovers)	P&E	130,000	(140,000)	0.00	0.00
Ford Ranger Single Cab - TA052	P&E	35,000	(40,000)	0.00	0.00
Ford Ranger XLT dual cab - 1TA (3 changeovers)	P&E	125,000	(135,000)	0.00	0.00
Isuzu NLR55 SWB Light tipper - BH009	P&E	23,000	(43,000)	0.00	0.00
Ford Ranger dual cab - BH00 (2 changeovers)	P&E	70,000	(80,000)	0.00	0.00
Ford Ranger extra cab - BH014 (2 changeovers)	P&E	82,000	(90,000)	0.00	0.00
Ford Ranger dual cab - BH003 (2 changeovers)	P&E	90,000	(100,000)	0.00	0.00
Ford Escape wagon - TA005	P&E	35,000	(40,000)	0.00	0.00
John Deere Gator - TA417	P&E	5,000	(26,500)	5,029.00	(26,529.00)
Sundry Plant	P&E	0	(20,000)	0.00	0.00
TRANSPORT					
Townscape					
Townscape Plan - Broomehill & Tambellup	I-O	0	(200,000)	0.00	(46,946.78)
Road Construction					
Tambellup West Rd - stabilise patches & reseal SLK 23.29 to 26.5	I-R	0	(161,500)	0.00	(20,019.30)
Gnow-Tambellup Rd - stabilise patches & reseal SLK 21.06 to 26.2	I-R	0	(195,000)	0.00	0.00
Gnow-Tambellup Rd - stabilise patches & reseal SLK 9.96 to 13.21	I-R	0	(195,000)	0.00	0.00
Toolbrunup Road - stabilise patches & reseal SLK 21.44 to 23.98	I-R	0	(273,000)	0.00	(10,000.00)

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

12: CAPITAL DISPOSALS AND ACQUISITIONS

		Budget Revenue 2019/20	Budget Expense 2019/20	Actual Revenue 2019/20	Actual Expense 2019/20
Road Construction					
Pootenup Road - stabilise patches & reseal SLK 0.00 to 5.46	I-R	0	(141,600)	0.00	(10,519.29)
Toolbrunup Road - widen seal SLK 17.71 to 18.99	I-R	0	(360,000)	0.00	0.00
Roads to Recovery					
Flat Rocks Road - construct & seal 3km	I-R	0	0	0.00	(1,289.56)
Morgan Road - seal	I-R	0	0	0.00	(4,031.20)
McGuire Road - seal	I-R	0	0	0.00	(2,016.24)
Pallinup Road - reconstruct & seal 4km	I-R	0	(404,100)	0.00	(125,947.20)
Footpaths					
Footpath Plan	I-R	0	(35,000)	0.00	0.00
Add back Job Depreciation	I-R	0	131,500	0.00	14,720.50
	Total	**622,700**	**(2,824,100)**	**32,756.27**	**(317,458.36)**
ECONOMIC SERVICES					
Tambellup Caravan Park - investigate development of former Bov	I-O	0	(10,000)	0.00	0.00
Design - Holland Track Interpretive Centre & incorporate existing	I-O	0	(20,000)	0.00	0.00
Chalets - Broomehill Caravan Park	L&B	0	(255,000)	0.00	0.00
Water Harvesting - CBH Dam to Complex/Caravan Park	I-O	0	(107,500)	0.00	0.00
	Total	**0**	**(392,500)**	**0.00**	**0.00**
Total		**1,796,700**	**(8,343,100)**	**81,134.00**	**(2,072,551.48)**
LAND HELD FOR RESALE	LR	0	0	0.00	0.00
LAND & BUILDINGS	L&B	940,000	(5,057,500)	0.00	(1,704,620.85)
PLANT & EQUIPMENT	P&E	856,700	(1,259,400)	81,134.00	(161,150.65)
INFRASTRUCTURE - ROADS	I-R	0	(1,633,700)	0.00	(159,102.29)
INFRASTRUCTURE - PARKS	I-O	0	(392,500)	0.00	(47,677.69)
		1,796,700	**(8,343,100)**	**81,134.00**	**(2,072,551.48)**
RESERVE TRANSFERS - from/(to)					
Leave Reserve		52,700	(52,200)	0.00	(50,388.47)
Plant Replacement Reserve		387,700	(309,000)	0.00	(101,232.39)
Building Reserve		958,300	(1,045,000)	0.00	(101,238.73)
Computer Reserve		0	(11,000)	0.00	(10,202.34)
Tambellup Rec Ground & Pavilion Reserve		0	(6,200)	0.00	(5,244.64)
Broomehill Rec Complex Reserve		0	(10,600)	0.00	(9,007.51)
Building Maintenance Reserve		40,000	(10,800)	0.00	(10,318.67)
Sandalwood Villas Reserve		0	(12,000)	0.00	(10,389.18)
Broomehill Synthetic Bowling Green Replacement Reserve		0	(10,100)	0.00	(8,910.92)
Refuse Sites Post Closure Management Reserve		0	(5,700)	0.00	(5,125.49)
Lavieville Lodge Reserve		0	(11,700)	0.00	(10,330.66)
Townscape Plan Implementation Reserve		200,000	(7,000)	0.00	(1,646.24)
Tambellup Synthetic Bowling Green Replacement Reseve		0	(7,800)	0.00	(7,572.62)
Tourism & Economic Development Reserve		30,000	(20,300)	0.00	(20,142.42)
		1,668,700	**(1,519,400)**	**0.00**	**(351,750.28)**
LOANS					
Loan Repayments		0	(62,000)	0.00	(20,590.25)
Proceeds from New Loans		995,700	0	0.00	0.00
		995,700	**(62,000)**	**0.00**	**(20,590.25)**
TOTAL CAPITAL		**4,461,100**	**(9,924,500)**	**81,134.00**	**(2,444,892.01)**

SHIRE OF BROOMEHILL-TAMBELLUP
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 October 2019

13: TRUST FUND

Funds held at balance date over which the Shire has no control and which are not included in this statement are as follows -

Description	Opening Balance 1 July 2019	Amount Received	Amount Paid	Closing Balance
Hall Bonds	1,500.00	1,924.00	(2,200.00)	**1,224.00**
Key Bonds	150.00	0.00	0.00	**150.00**
Equipment Bonds	0.00	0.00	0.00	**0.00**
House Bonds	1,940.00	0.00	0.00	**1,940.00**
Nomination Deposits	0.00	240.00	0.00	**240.00**
Hidden Treasures	48,837.19	35,500.00	(11,978.27)	**72,358.92**
Broomehill Liaison Group	1,243.74	0.00	0.00	**1,243.74**
Fire Prevention	4,834.27	1,000.00	0.00	**5,834.27**
Youth Support Donations	130.00	0.00	0.00	**130.00**
Tourism Donations	43.83	0.00	0.00	**43.83**
Roadwise	329.18	0.00	0.00	**329.18**
University Block - Building Retention Bonds	2,456.49	0.00	0.00	**2,456.49**
YMCA - A Smart Start Program	131,993.96	0.00	0.00	**131,993.96**
Broomehill Dramatic Society	3,417.86	0.00	0.00	**3,417.86**
Rates - held in trust upon sale of property	4,149.34	0.00	0.00	**4,149.34**
Buildng Retention Bonds - RM Smith	0.00	29,447.30	0.00	**29,447.30**
Building Retention Bonds - K Built	0.00	22,927.75	0.00	**22,927.75**
Building Retention Bonds - NW Tears	0.00	11,700.00	0.00	**11,700.00**
Unclaimed Monies (2003)	1,566.00	0.00	0.00	**1,566.00**
	202,591.86	**102,739.05**	**(14,178.27)**	**291,152.64**

Broomehill Heritage Group

11 November 2019

Shire of Broomehill - Tambellup
46 - 48 Norrish St
Tambellup WA 6320
mail@shirebt.wa.gov.au

Dear Keith & Shire Councillors,

Application for $16 000 from reserve funds for Museum building
Update of Broomehill Heritage Group

The members of the re-established Broomehill Historical Society would like to update The Shire of Broomehill Tambellup and Councillors on the recent activities of the group.

An inaugural meeting was held at the Henry Jones Cafe on 24 September, where the Broomehill Historical Society officially came out of recess! The newly formed committee agreed that a new modern name would take the group into the next 100 years. Broomehill Heritage Group was formed with a new excited, dedicated committee and many community members pledging there support. The project to preserve the heritage of the Broomehill district, starting with the Broomehill Museum had begun.

As the previous committee had removed the contents of the museum it was obvious the first task was to liaise with the Shire of Broomehill Tambellup to discuss the improvements needed to the building. We moved to the museum building for an inspection at that first meeting. It was agreed that the improvements needed where:

- ceiling repairs in 'office' area
- structural floor components (bearers and stumps)
- electrical wiring replacement / updating (including more power points inside and out)
- painting

We have met with Keith Williams and were very impressed with his support when he attended our second meeting on 22 October. Discussions at that meeting resolved that we were to apply to the Shire for an agenda item at the November council meeting to release the $16,000 put in reserve for repairs to the museum (original Roads Board) building. As a group we believe that having a positive working relationship with the shire as the owner of the building is paramount to the success of our group and to the preservation of the heritage of the Broomehill district.

We are willing to offer our skills and time to the completion of improvements but as we have the task of returning the extensive collection back into the museum we believe that the money held by the group will be needed for shelving, display units and other expenses that at this stage we are not yet aware of! As a cultural community group we will be eligible for Lotteries funding for some these items.

The group has become a member of the Australian Museums and Galleries Association and is planning on meeting with them in January for training and advice on all aspects of museum management. We have also reinstated our membership with the Western Australian Historical Society as they too will be a great support going forward.

At our second meeting we agreed by special resolution to adopt rules of the association to comply with the 2015 Associations Incorporation Act and also applied for the name change. This was lodged on 25 October with Associations and Charities Branch, Consumer Protection.

Planning is underway for the Broomehill Heritage Group to host a Antique and Collectors Fair during the Bloom festival in September 2020. A market day may be added to this event to attract a broader range of community participation. It has been mentioned that this could also be the perfect event for the "Grand re-opening of the Broomehill Museum".

The committee, members and community can only benefit from a positive relationship between the Shire of Broomehill Tambellup and the Broomehill Heritage Group during these building improvements and into the years ahead. We also believe that maintaining the first and longest standing building in Broomehill is important to the history of our region (the building was the original Mechanics Institute built in 1898, it has had a very interesting history of its own).

If you would like to discuss any aspects of this letter please contact either myself - Colleen Paganoni 0418950277 or President, Dan Bignell 0427241270 at any time.

Kind regards

Colleen Paganoni
Secretary
Broomehill Heritage Group
PO Box 4 Broomehill WA 6318
e: broomehillhg@gmail.com

Enc: minutes of Broomehill Heritage Group meeting, 24 September & 22 October.
photo of Mechanics Institute - Museum building 1899

Broomehill Heritage Group

BROOME HILL c.1899

RAILWAY STATION, STORE, MECHANICS' INSTITUTE (Now MUSEUM), GARRITY'S HOTEL, R.H. JONE
In the Background: To the Right - POLICE STATION; Extreme Right - POST OFFICE


23 India St
23 India St, Broomehill Village WA 6318
17 min
DIRECTIONS
START
SAVE
LABEL
Measure distance
(-33.8437300, 117.6371400)
Report a problem
GREAT SOUTHERN HWY
120
67
India St
India St
Jetsam St
Jetsam St
Jetsam St

1.2m SIGN

← 2.5m SIGN →

Gray Carter Pty.Ltd.

EARTHMOVING

*Truck & Loader Hire * Grader Hire
*Sand & Gravel Supplies
*Site Pads & Road Construction

BHT CONCRETE & CIVIL

Katanning
Broomehill Tambellup & Districts

"NO JOB TOO SMALL OR TOO BIG"

Phone: Gray 0429 983 836

2m HIGH STAND LEGS (STEEL PIPE)

Broomehill Village

Broomehill West

SHIRE OF BROOMEHILL-TAMBELLUP

Bobalong

Borderdale

Tambellup

Moorries Hill

Lake Toolbrunup

120

30

Current Legend

Local Government Areas

Tandem Drive Network 1

Tandem Drive Network 2

Tandem Drive Network 3

Broomehill Village

Broomehill West

120

SHIRE OF BROOMEHILL-TAMBELLUP

Bobalong

Borderdale

Tambellup

120

30

Moorries Hill

120

Lake Toolbrunup

Current Legend

Local Government Areas

Tandem Drive Network 1

Tandem Drive Network 2

Tandem Drive Network 3

Tandem Drive Network 4

ROAD NAME	Current RAV Rating	Propsed RAV Rating	Max Speed	No operation on Wet Road	Headlights on at all times	Radio contact with other RAVs	Bus comms	Carry written approval	Additional Information
Anderson Road	4	4	70kph	-	-	-	-	-	**No left/right turns into Carr or Pallinup South** | SLK 0.00 to 4.77 max 40kph
Aylmore Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Batchelor North Road	7	7	60kph	-	Yes	Yes	-	-	Max 40kph night with amber light
Batchelor South Road	7	7	60kph	-	Yes	Yes	Yes	-	Max 40kph night with amber light
Beejenup Road	2	4	-	Yes	Yes	-	-	Yes	SLK 18.55 to 32.60 (Toolbranup to Stirling Access)
Beejenup Road	4	7	-	Yes	Yes	-	-	-	**No turns into Pallinup** | SLK 0.00 to 18.55 | Max 60kph from SLK 0.00 to 2.50
Bessen Road	4	4	60kph	-	-	-	-	-	**No turns into Nymbup** | Type A Conditions
Bignell Road	4	4	-	-	-	-	-	-	Type B Conditions
Binninup Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Birt Road	3	4	-	Yes	-	-	Yes	-	SLK 4.21 to 11.48
Birt Road	4	4	-	Yes	-	-	Yes	-	SLK 0.00 to 4.21 (TA West to Crosby)
Brassey Road	4	4	-	-	-	-	-	-	**No left turn into GS Highway** | Type A SLK 1.58 to 9.01 | Type B SLK 0.00 to 1.58, 9.16 to 15.09
Bridge Street	3	4	-	Yes	-	-	Yes	Yes	No operation During Bus hours
Broomehill-Kojonup Road	5	7	-	-	-	-	-	-	
Burridge Road	7	7	-	-	-	-	-	-	
Carr Road	4	4	60kph	-	Yes	Yes	-	-	**No turning into Anderson Rd**
Chillicup Road	4	4	60kph	-	Yes	Yes	Yes	-	
Clinic Road	4	4	60kph	-	Yes	Yes	-	-	**No right turn into Rae Rd**
Collins Road	7	7	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Crosby Road	4	4	-	Yes	Yes	-	Yes	Yes	Type A Conditions
Curnow Road	3	4	-	-	-	-	-	Yes	**No left turn into GS Highway**
Darcy Street	4	4	60kph	Yes	Yes	-	-	-	Connecting Old Nardlah and Nardlah - CBH
Donald Street	3	4	-	-	-	-	-	Yes	**No left turn into TA West**
Etna Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Eureka Road	4	4+7	70kph	-	-	-	-	-	Type A Conditions | Proposed rating from SLK 0.00 to 0.46
Fairfield Road	5	7	-	-	-	-	-	-	
Flat Rocks Road	5	7	-	-	-	-	-	-	
Gillespie Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Gnowangerup-Tambellup Road	7	7	-	-	Yes	-	-	-	
Greenhills South Road	4	4	80kph	-	-	-	-	-	Type A Conditions for SLK 0.00 to 11.95, 18.00 to 22.25 | Max 60kph SLK 11.95 to 22.25
Hamilla Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Hassell Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Heron Road	6	7	70kph	-	-	-	-	-	

Hodgson Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Holding Road	4	4	40kph	Yes	Yes	Yes	-	Yes	Max 40kph at night with Amber light
Holly Siding East Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Holly Siding Road	4	4	60kph	-	-	-	-	-	**No turning at intersection** | Type A Conditions, Max 40kph night with amber light
Jam Creek Road	4	4	-	-	-	-	-	-	**No left turn into TA-GNP, no left turn into Peringillup East**
Janus Street	4	4	50kph	-	-	-	Yes	-	
Johnston Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Journal Street	5	7	60kph	-	-	-	-	-	
Kimberley Street	7	7	-	-	-	-	-	-	
Kings Cross Road	4	4	-	-	-	-	-	-	Type B Conditions
Lombardia Road	2	4	-	-	-	-	-	-	DRIVEWAY Off Birt Road
Marshall Road	5	7	-	-	-	-	-	-	Connecting between two RAV 7 + KA shire
Martinup Road	4	4	-	-	-	-	-	-	SLK 0.00 to 0.96 | Type B Conditipns
Martinup Road (8)	4	4	60kph	-	-	-	-	-	SLK 0.00 to 3.04 (BH-GNP rd end) | Type A Conditions
Mindora Road	2	4	-	-	-	-	-	-	DRIVEWAY
Moore Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Morgan Road	4	4	40kph	-	-	-	Yes	-	Max 40kph night with amber light
Nardlah Road	7	7	60kph	Yes	Yes	-	-	-	
Nazzari Road	7	7	40kph	-	-	-	-	-	Type B Conditions, Max 40kph night with amber light
Ngopitchup Road	4	7	60kph	Yes	Yes	Yes	-	-	
Nookanellup Road	4	7	-	-	-	-	-	-	
Norrish Road	3	4	80kph	-	Yes	-	-	-	SLK 4.21 to 11.48
Norrish Street	4	4	-	Yes	Yes	-	-	Yes	SLK 0.00 to 0.43 (CBH)
North Greenhills Road	4	4	80kph	-	-	-	-	-	Type A Conditions
North Nookanellup Road	6	7	80kph	-	-	-	-	-	
North Stirling Road	7	7	80kph	Yes	Yes	-	-	-	
North Terrace	6	7	-	-	Yes	-	-	-	until CBH turnoff
North West Road	2	4	60kph	Yes	Yes	-	-	Yes	
Nymbup Road	2	4	80kph	Yes	Yes	-	-	Yes	
Old Broomehill-Kojonup Road	5	7	-	-	-	-	-	-	
Old Nardlah Road	7	7	-	-	-	-	-	-	
O'Neill Road	3	4	80kph	-	-	-	-	-	**No left turn into Flat Roacks, No right turn into Ngopitchup**
Pallinup Road	4	4	60kph	-	-	-	-	-	**No left turn from BH-GNP , no right turn into Peringillup East** | Type A conditions from Gillespie
Pallinup South Road	7	7	80kph	Yes	Yes	-	-	-	**No left turn into TA-GNP**
Palomar Road	4	4	60kph	-	-	-	-	-	Type A Conditions
Paul Valley Road	4	4	70kph	-	-	-	-	-	**No left turn into TA West**
Peringillup East Road	4	4	70kph	-	-	-	-	-	**No access into Pallinup**
Peter Valley Road	2	4	-	Yes	Yes	-	-	Yes	SLK 0.00 to 2.81 (Nymbup to Paul Valley)
Peter Valley Road	4	4	-	-	-	-	-	-	SLK 2.81 to 8.85 (Paul Valley to Boundary)

Pindellup Road	4	4	60kph	-	-	-	-	-	
Poonawariup Road	4	4	40kph	-	Yes	Yes	-	-	Type B Conditions, Max 40kph night with amber light
Pootenup Road	4	4	-	-	-	-	-	-	SLK 16.74 to 17.53 (railway crossing from highway)
Pootenup Road	7	7	80kph	Yes	Yes	-	-	-	SLK 0.00 to 16.74 (railway crossing to Toolbranup)
Punchmirup North Road	4	4	60kph	-	-	-	-	-	Connects to RAV 7 KA LGA border | Type A Conditions
Rae Road	4	4	40kph	-	-	-	-	-	**No left turn into Clinic Rd** | Type B Conditions, Max 40kph night with amber light
Sprigg-Simpson Road	7	7	40kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Stirling Access	2	4	80kph	Yes	Yes	-	-	Yes	
Stirling North Road	6	7	80kph	-	-	-	-	-	Connects to RAV 7 in GNP Shire
Stock Route Road	4	4	60kph	-	-	-	-	-	Type A Conditions, Max 40kph night with amber light
Tambellup West Road	7	7	-	-	Yes	-	-	-	
Tie Line Road	7	7	60kph	-	Yes	-	Yes	Yes	Max 40kph night with amber light
Tieline North Road	5	7	-	-	-	-	-	-	
Toolbrunup Road	6	7	80kph	Yes	Yes	-	-	-	SLK 0.00 to 11.16 (Burridge Rd)
Toolbrunup Road	7	7	80kph	Yes	Yes	-	-	-	SLK 11.16 to 38.50 (Burridge Rd)
Warrenup Road	4	7	80kph	Yes	Yes	-	-	-	
Wansbrough West Road	4	4	70kph	-	-	-	-	-	**No access to or from GS Highway** | Type A Conditions
West Peringillup Road	4	4	80kph	-	-	-	-	-	Type A Conditions
White Road	6	7	70kph	Yes	Yes	-	-	-	
Winkelanup Road	2	4	-	Yes	Yes	-	-	Yes	DRIVEWAY
Wray Road	4	4	40kph	-	-	-	-	-	Type B Conditions, Max 40kph night with amber light
Yetemerup Road	6	7	70kph	Yes	Yes	-	-	-	Connects to RAV 7 in Cranbrook Shire
Grahams Well Rd	4	4	40kph	-	-	-	-	-	Type B Conditions, Max 40kph night with amber light

Type A Conditions

Current written approval from the Road Owner, endorsing use of the road, must be obtained, carried in the vehicle and produced upon request;
School bus curfews must be obeyed. Operators must contact the relevant schools directly for school bus timetables;
Headlights must be switched on at all times;
Operation only during daylight hours;
No operation on unsealed road segment when visibly wet, without Road Owner's approva
Direct radio contact must be maintained with other RAV's to establish their position on or near the road (UHF channel 40).

Type B Conditions

All conditions stipulated in subclause 7.3(a) for "Type A" Low Volume roads apply; and
For a single lane road, the road must not to be entered until the driver has established via radio contact that there is no other RAV on the road travelling in the oncoming direction, and
The RAV must not exceed a speed of 40 km/h.

Standard Restricted Access Vehicle (RAV) Route Assessment Guidelines

September 2018

Contents

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Amendments

Revision Number	Revision Date	Description of Key Changes	Clause / Page No.
1	May 2016	Removed Appendix G 'Turning Radii' Removed Appendix K 'Assessment Form Template' Updated Appendix H 'Low Volume Condition 7' Updated Appendix D to include the wording 'with dedicated cycle lane' Updated contact details	Appendices & 1.5
2	July 2016	Updated to include revised minimum road widths for RAV Categories 2-7 and 9-10 & moved Type B traffic volume / road length table Added Type B traffic volume / road length table	Appendix C and 2.4.4
3	October 2016	Amended list of standard turning templates Updated web location for turning templates Amended low volume condition 1	Appendix G & H, 2.92
4	March 2017	Remove section	2.9.5
5	April 2017	Updated Main Roads website details	1.4
6	May 2017	Amended low volume condition 6	Appendix H
7	July 2017	Note added relating to private driveways	1.2
8	December 2017	Amended stopping sight distances Amended entering sight distances Amended wording relating to road parking Amended wording to include load/vehicle height being 4.6m	Appendix E, F, D, 2.3
9	August 2018	Amended wording relating to provision for overtaking Amended wording relating to turning at intersections Amended wording and requirements for railway level crossing Amended wording relating to off-road parking Amended appendices Appendix E, G (Templates) & I removed Added Figure 1 to 8 Incorporated concessional assessment requirements Amended section 2.4.1 Signage, 2.8.1 Acceleration Lanes, 2.9.1 Signage & 2.9.4 Rail Crossings	2.6, 2.9, 2.10, 2.11, Appendix A, B, C, D, E 1.1, 2.21

10	September 2018	Amended wording relating to turning at intersections Amended wording relating to provision of overtaking and removed Figure 1. Amended wording relating to Approach Sight Distance and Entering Sight Distance	2.6, 2.8, 2.84, 2.85

DEFINITIONS

The following are definitions for terms used in these Guidelines. Refer to the definitions in the Road Traffic (Vehicles) Act 2012 and any subsidiary legislation to this Act for the meanings of any terms not defined in this section.

Term	Definition
AADT	Annual Average Daily Traffic (AADT) the daily number of vehicles travelling on a road, averaged over one year. It is determined by the total yearly two-way traffic volume divided by 365, expressed as vehicles per day.
Approach Sight Distance (ASD)	The distance required for a driver of a RAV, travelling at a given speed, to observe the approaching intersection, and react or stop if necessary.
Bridge	A structure (with the exception of gantries) having a clear opening in any span of greater than 3 metres measured between the faces of piers and/or abutments or structures of a lesser span with a deck supported on timber stringers.
Carriageway Width	That portion of a road or structure devoted particularly to the use of vehicles that is between guide posts, kerbs or barriers where these are provided, inclusive of shoulders and auxiliary lanes.
Culvert	A structure under a road having only clear openings of less than or equal to 3 metres measured between the faces of piers and/or abutments or a pipe shaped structure of any diameter.
Entering Sight Distance (ESD)	The required sight distance for a RAV driver to see a sufficient gap in oncoming traffic that will allow a RAV, with greater length and lower acceleration capacity, to clear the intersection safely.
HVS	Main Roads Heavy Vehicle Services.
Main Roads website	www.mainroads.wa.gov.au
Passenger Car Equivalence	Passenger Car Equivalence (PCE) factors are a relative measure of the traffic flow impedance effects of different vehicle types. The PCE factor for a particular vehicle type is the equivalent number of passenger cars (AUSTROADS Vehicle Class 1) that would have the same impedance effect as a single vehicle of that type.
Order	An Order issued under the Road Traffic (Vehicles) Act 2012.
RAV	Restricted Access Vehicles (RAV) consists of all combinations of vehicles exceeding 19 metres in length or 42.5 tonnes gross mass including B-Doubles, road trains and truck-and-trailer combinations.
Remote Road	A general term for a main arterial road carrying mostly long distance traffic.
Rural Road	All roads that provide a secondary network of National, State and local government roads connecting cities and towns.

Term	Definition
Seal Width	Width between edges of sealed surface or between edge lines (where installed on undivided carriageways), whichever is less.
Structure	A bridge or culvert.
TPA	Tonnes per annum.
Urban and Town Site Road	All roads within a populated area of established dwellings, a central place of trade and recognised as a distinct place. Generally the area will act as a central hub of activity for the community.
VPD	Vehicles Per Day (VPD) is the number of vehicles observed passing a point on a road in both directions for 24 hours. It is a measure of daily traffic volume, often more relevant to low volume, local government roads, typically rural roads in these guidelines. VPD can differ from AADT in being a better measure of traffic volume during periods of more intensive RAV usage or seasonal tourist traffic.
Vehicle Regulations	The *Road Traffic (Vehicles) Regulations 2014*.

Related Documents

Document #	Title
D16#198414	Guidelines for Approving RAV Access
D16#374056	Tri Drive Route Assessment Guidelines
NA	RAV Route Assessment Form

1 INTRODUCTION

1.1 General

These guidelines have been prepared by Main Roads Western Australia to assist local government, Main Roads' staff and transport operators or consultants in assessing the suitability of routes proposed for the operation of "standard" Restricted Access Vehicles (RAVs) on roads within the State of Western Australia.

For the purpose of these guidelines, "standard" RAVs are those vehicle combinations specified as Category 1 to 10 vehicle combinations under the *Prime Mover, Trailers Combinations Order 2017 and Truck, Trailer Combinations Order 2017.*

- The RAV Categories have been grouped into four (4) assessment levels, as follows:
- Level 1 - RAVs Categories 2-4 (e.g. pocket road train, B-Double, and other RAVs with a maximum length of either 25.0 m or 27.5 m);
- Level 2 - RAVs Categories 5-6 (e.g. RAVs with a maximum length of 36.5 m and a maximum mass of 87.5T);
- Level 3 - RAVs Categories 7-8 (e.g. RAVs with a maximum length of 36.5 m and a maximum mass of 107.5T); and
- Level 4 - RAVs Categories 9-10 (e.g. RAVs with a maximum length of 53.5 m).

Note 1: A road approved for one of the base RAV networks listed above, means the road is also approved and added to AMMS level one (1) for the equivalent network.

Note 2: Where a RAV assessment is for operations under a concessional loading scheme such as the Accredited Mass Management Scheme (AMMS), the assessor must take into account the additional mass when requesting a structures assessment as per Section 2.2.1.

The guidelines are intended to assist assessors in ensuring that the major relevant factors have been considered during the route assessment process.

Where quantitative limits are recommended, they are intended as a guide only and are no substitute for common sense and judgement based on experience. In certain cases, routes which do not meet the requirements outlined in this document can be accepted as RAV routes by imposing additional conditions, such as speed restrictions, curfew etc. Should an aspect of a route clearly fail to conform to these guidelines in a manner which cannot be suitably addressed, resulting in a compromise of road safety, the route should be considered unsuitable for RAV access.

The information used in preparation of this document has been obtained from various internal and external sources, such as Austroads reports and years of practical experience, and incorporates the latest reference material available at this time.

1.2 Assessment Requirements

Route assessments should be undertaken by a person who has experience within the heavy transport industry and a substantial knowledge of the following:

- The principles of heavy vehicle operation, including vehicle configurations, maximum dimensions and axle load limits;
- Heavy vehicle dynamic performance characteristics, including limitations on the ability of heavy vehicles to accelerate, brake, ascend grades and negotiate corners;
- Heavy transport issues, legal requirements and permit systems; and
- Road safety concepts and principles.

When considering a potential route, the assessor is advised to initially perform a desktop assessment using all available information. In some cases this initial assessment will identify particular physical constraints, such as posted bridge load limits and road width deficiencies, which may render the route unacceptable without the need for further assessment.

If the applicant is willing to pursue upgrades to the road then a full assessment is required to identify all deficiencies. This is to alleviate any problems with some upgrades being carried out and then the full assessment conducted only to identify additional deficiencies.

Heavy vehicle use on a particular route may have some negative impacts on the environment, community and traffic. Assessors must first determine if the proposed route is the most appropriate route for the particular operations and recommend variations to the initially proposed route to reduce such impacts.

Note 1: As part of any route assessment for a Restricted Access Vehicle (RAV), HVS does not assess any access for driveways adjoining a RAV network road. It remains the responsibility of the property owner to ensure safe ingress and egress to the property.

Note 2: Before making a decision on an application for route access, Main Roads may deem it necessary to do any or all of the following:

- Perform a further assessment of the route;
- Assess the suitability of the road pavement;
- Assess the suitability of all structures on the proposed route to accommodate the specific vehicle;
- Specify conditions of access such as speed limits, hours of operation or accreditation requirements;
- Obtain local government agreement for the proposed route (for all operators);
- Recommend a number of road improvements as conditions of approval; and
- PBS assessment to assess vehicle performance.

Note 3: To ensure network continuity, when assessing a road, all connection points to existing RAV networks must be assessed for suitability and a holistic approach should be taken to ensure overall network connectivity in the area.

1.3 Planning Evaluation

Assessment of a proposed route should be checked against any future planning proposals to evaluate the potential impact of RAVs. The relevant Local Government and Regions should be consulted as part of the process.

1.4 Route Assessment Form

The *RAV Route Assessment Form* for use in assessing RAV routes in accordance with the requirements set out in these Guidelines is available on the Road Access page of the Main Roads website.

1.5 Further Assistance

Additional information and guidance is available from HVS via telephone 138 486 or hvsrouteassessments@mainroads.wa.gov.au

2 ASSESSMENT CRITERIA

2.1 Traffic Data

2.1.1 Traffic Counts

In order to determine the suitability of a road for RAV access, it is essential to obtain current traffic counts for the particular road. The traffic counts must be considered when determining appropriate road widths, potential congestion issues and relevant operating conditions.

2.1.2 Accident Statistics

Appropriate research must be conducted prior to progressing with a route assessment to establish if there is an accident history on the particular road that may be exacerbated by the introduction of RAVs on the road.

Safety is the primary factor for consideration. If crash history data is available, it may be useful to investigate whether certain times of the day cause particular risks, while at other times the risk is significantly lower. In these cases, it may be warranted to recommend that the RAV only use the route during low-risk hours.

2.2 Structures

2.2.1 Load Capacity

All bridges and load restrictive culverts on the requested route will be assessed for the relevant level of RAV Network access by Main Roads Structures Engineering Branch, via HVS. When carrying out an assessment for Network 2, ensure a separate Structures Engineering assessment is carried out for the Short B Triple combination.

Any bridge restrictions for the Short B triple combination must be listed in the Operating Conditions in the relevant vehicle category section and a notation included in the conditions for the relevant road.

Consultation with local governments is required to ensure all culverts on local government roads have been appropriately considered.

2.2.2 Structure Width Requirements

Table 1: Minimum Width between Kerbs/Carriageway on a Structure

AADT	Minimum Width Between Kerbs/carriageway (m)	Quality of Approaches
Less than 75	3.5*	Structures with adequate Approach Sight Distance (ASD)**.
75 to 150	5.3	Structures with adequate ASD, clearly signed and road clearly marked.
	7.0	Structures that have inadequate ASD, inadequate signage or no road markings.
150 to 500	5.8	Structures with adequate ASD, clearly signed and road clearly marked.
	7.2	Structures that have inadequate ASD, inadequate signage or no road markings.
More than 500	7.2	All structures at this traffic volume

*Conditions apply; refer to 2.4.2 and Appendix B;
**RAV ASD should be measured from a truck driver's eye height of 2.4 m. Minimum requirements for ASD refer to Appendix D.

2.3 Overhead Clearance

Although applicable for all vehicles, RAVs with high loads are particularly vulnerable to striking low overhead obstructions. Route assessments must confirm that adequate overhead clearances are available to safely accommodate a load/vehicle height of 4.6m, as follows:

- Overhead obstructions (except power lines) - 300 mm clearance; and
- Power lines - at least the minimum clearance required by telecommunications and electrical transmission cable providers.

Where telecommunications and/or electrical transmission cables cross the route, approval for a load/vehicle height of 4.6m must be obtained from the relevant controller/s listed in the "*Contact Details for Other Agency Approvals*" located on the Oversize Over-mass Permits page of the Main Roads website.

Where the required load/vehicle height of 4.6m is not approved by the cable provider, the cable provider must specify the maximum approved load/vehicle height and the location of the restricting power line. RAV access may still be considered with appropriate height conditions.

2.4 Rural Road Widths

When the hauling unit of a RAV travels along a straight path over an uneven surface, the trailing units do not necessarily follow along the same path as the lead unit. This is defined as "off-tracking" and depends on several factors, including:

- The steering actions of the driver;
- Vehicle configuration and coupling arrangements between units;
- Misalignment of the axles;
- Suspension (geometry, bump and roll steer effects) and tyre characteristics;
- Vehicle length;
- External disturbances that include road roughness, cross-slope and side loading from wind-gusts; and
- Speed of travel.

The maximum deviation in tracking over a straight section of road, when added to the width of the RAV, is termed the 'swept width'. To safely accommodate the swept width of RAVs, adequate road width must be provided.

To assess the widths of rural roads, tables of minimum carriageway widths and sealed widths to accommodate the swept width are listed at Appendix A.

To be suitable for RAV access, a road should be sealed if AADT is over 150 and annual freight tonnage is over 300,000 tonnes per annum. The requirement for the road to be sealed is partly for safety reasons, but more so for road sustainability.

In the absence of any traffic data, the following parameters may enable a judgement as to whether a road needs to be sealed:

- If the road is unlikely to be used by more than 10 RAVs per day; or
- If the road is unlikely to be used by more than 60 RAVs per day over a seasonal two month period.

When considering whether a road has adequate width, an assessment should also be made in relation to any potential risks posed by:

- Crests;
- Pronounced cambers;
- Poor shoulder condition;
- Surface roughness; and
- Reduced sight distances.

Despite a road's width being above the specified minimum in Appendix A, these factors may require additional width, application of additional RAV operating conditions, or in extreme cases, mean the route is unsuitable for RAV access.

Minor width deficiencies are acceptable, particularly if it is only for a small portion of the road. If width requirements are relaxed, a risk assessment should be undertaken to consider other factors to ensure safe operation.

Off-tracking of a vehicle combination is more severe at high speeds; therefore minimum seal width may be reduced where speeds are controlled to 60 or 70 km/h.

Minimum seal widths may also be reduced on roads where all other users are familiar with the operator of multi combination vehicles, e.g. farm access roads and mine access roads.

2.4.1 Sight Distance Considerations at Curves and Tight Bends

When the hauling unit of a RAV travels around a curve or tight bend, the trailing units may take up considerable additional road with. This is defined as "swept width" and depends on several factors, including:

- Radius of the curve or tight bend;
- Length of vehicle combination;
- Number and type of articulation points; and
- Road surface and geometry.

In instances where it is identified the RAV would be required to utilise additional road width and potentially encroach onto the opposite side of the road, the assessor must ensure on approach to the curve or tight bend, there is sufficient visibility to observe oncoming vehicles, and react or stop if necessary. The table in Appendix D shows the required sight distance for RAVs, given the speed and the gradient of the road.

It will be necessary for the assessor to conduct swept path assessments on curves to determine if the RAV is likes to encroach onto the opposite side of the road.

Note: Access should be declined if the RAV crosses a solid white line.

2.4.2 Low Volume Road Width

When assessing road width for Network 2 to 7 or 9 to 10 RAV access, where traffic volume is less than 75 vehicles per day, the width of the road may be assessed in accordance with the width requirement in Appendix B. Appendix E conditions must be applied. If the road width meets the requirements in Appendix A, the conditions as per Appendix E are not necessary.

2.4.3 Traffic Volume Consideration

It is important to use the most appropriate measure of traffic volume when applying Appendix A and Appendix B.

For medium to high traffic roads, where AADT is more than 500, AADT will usually be a suitable measure of traffic volume. For low to medium traffic roads, where AADT is from 150 to 500, higher seasonal traffic volume may be a more appropriate measure of traffic volume. For these roads, the widths in Appendix A are the relevant guidelines.
For low traffic volume roads, where AADT is less than 75, with higher seasonal variations, obtaining a best estimate of such higher daily volumes (VPD) is recommended. Appendix B only applies if AADT and any higher seasonal traffic volumes (VPD) are both less than 75. Otherwise, road width must be assessed using Appendix A.

2.4.4 Assessing a Road in Sections

The road may be composed of a number of sections that vary in their standard and that would fall into different categories of RAV suitability, or require different operating conditions (e.g. for low volume roads). Width variation is a typical example of this principle. Where differing sections are reasonably long, it can be beneficial to separately assess each section as to its category of RAV access and any applicable operating conditions. Assessors should only consider applying this method of assessment where there is a likely benefit and a practical start and finish point.

2.4.5 Short Sections of Reduced Width

There may be short narrow sections along the road due to narrow structures**,** roadside vegetation or short narrow sections of pavement. Provided narrow sections meet certain criteria, the minimum road width does not need to be considered the actual width of the entire road for assessment purposes. In the absence of any clearly identified other risk factors, clauses (a) and (b) below can be applied to assess the width deficiencies of narrow sections.

(a) Traffic Volume Less than 75 Vehicles per Day

This clause only applies to low volume rural roads that do not meet the width requirement in Appendix A, and for which the operating conditions in Appendix E will apply to RAVs.

Where all narrow sections of the low volume rural road meet the following criteria, the minimum width of the road can be considered to be the width of the road, excluding the narrow sections, when assessing suitability in accordance with Appendix B:

- Narrow sections must not be less than 3.5 m wide;
- Each narrow section must not be more than 100 m long;
- A combination of narrow points that are all within a single 100 m length of road can be considered to be one single narrow section;
- Two adjacent narrow sections must not be within 150 m of each other;
- Continuous unbroken sight distance must extend from a point at least 150 m from each end of any narrow section through the narrow section to a point at least 150 m beyond the section, in both directions; and
- Combined length of narrow sections is no more than 10% of total road length. All narrow sections shorter than 50 m shall be considered to have an effective length of 50 m.

If any narrow section fails to meet the 3.5 m minimum width criteria, the route shall be considered unsuitable for RAV access.

Where all narrow sections meet the 3.5 m minimum width criteria, but do not meet all the remaining criteria, the route shall be considered unsuitable for RAV access on a two-way RAV traffic basis. However, the route may still be suitable for one-way RAV traffic only, provided

operating conditions as per Appendix B for a Type B road are applied. Type B roads suitability is also subject to traffic volume and road length requirements outlined in Table 2.

Table 2: Maximum allowable road length for Type B suitability

Daily Traffic Volume	0 to15 VPD	16 to 30 VPD	31 to 50 VPD	51 to 75 VPD
Max Road Length	5.0 km	2.0 km	1.5 km	1.0 km

(b) Traffic Volume from 75 to 500 Vehicles per Day

This clause only applies to medium volume roads that generally meet the width requirements in Appendix A.

Where all narrow sections of a medium volume road meet the following criteria, the minimum width of the road can be considered to be the width of the road, excluding the narrow sections, when assessing suitability in accordance with Appendix A:

- Narrow sections should not have carriageway width more than 1.3 m below Appendix A values;
- For sealed road, narrow sections should not have sealed width more than 0.2 m below Appendix A values;
- Each narrow section should not be more than 2 km long; and
- The combined length of narrow sections should not be more than 15% of total road length.

Similar principles may logically carry over to assessment of higher traffic volume roads; however the width deficiencies will need to be assessed on a case-by-case basis.

2.5 Urban and Town Site Road Widths

There are a number of width requirements to be considered for RAVs travelling in urban and town site areas. As well as accommodating the additional swept width of RAVs, the width requirements for activities such as cycling and kerbside parking also need to be taken into account. The minimum road width requirements in town site areas are listed in Appendix C.

2.6 Provision for Overtaking

RAVs tend to operate at lower average speeds than light vehicles. If the road does not have sufficient overtaking opportunities, drivers of light vehicles may experience delays behind slower moving RAVs and in some cases may form “queues” of vehicles waiting to overtake. This may cause driver frustration and thereby increase the risk of drivers attempting to overtake when it is not safe. Therefore it is essential, from a road safety perspective, to have adequate overtaking opportunities on a RAV route.

It is recommended that AADT figures are used to assess overtaking opportunities, however the assessor should consider the impact of seasonal traffic during the assessment, as the AADT could be less than seasonal peak traffic volume.

The volume of traffic and percentage of RAVs on the route affects the requirement for overtaking opportunities. To assess suitability of overtaking, an AADT derived using the Passenger Car Equivalence (PCE) factors (Table 3) shall be used. The derived AADT is calculated by multiplying the AADT for each of the Austroads vehicle Class by the PCE factor based on the road’s terrain as per Table 3. This derived ADDT is the AADT figure to use in Table 4 below.

An example of calculating the derived AADT is listed below:

	Sum of AVG AADT	PCE Flat Terrain	AADT Flat Terrain
Austroads 1 & 2	3,180	1	3,180
Austroads 3, 4 & 5	1,893	2	3,786
Austroads 6, 7 8 & 9	285	2.5	713
Austroads 10 (RAV 2 - 4)	120	4	480
Austroads 11 (RAV 5 - 8)	117	4	468
Austroads 12 (RAV 9 -10)	2	9	14
		AADT derived	**8,640**

PCE factors represent the equivalent number of light vehicles for a particular type of RAV or general access heavy vehicle. The use of PCE factors provides a derived AADT value that can then be used to better assess overtaking opportunities.

Table 3: Passenger Car Equivalence Factors for RAVs

Vehicle Types		PCE Factors on Flat Terrain	PCE Factors on Rolling Terrain
Austroads Class 1		1	1.3
Austroads Class 2		1	1.3
Austroads Class 3 to 5		2	3.5
Austroads Class 6 to 9		2.5	5
Austroads Class 10	RAVs Categories 2-4	4	10
Austroads Class 11	RAVs Categories 5-8	4	10
Austroads Class 12	RAVs Categories 9-10	9	22

The maximum distances between overtaking opportunities are shown in Table 4. In all cases, the assessment of steep ascending grades in Section 2.7.1 must be performed separately.

Table 4: Maximum Distances between Overtaking Opportunities

AADT (Derived using PCE Factors)	**Maximum AVERAGE distance between overtaking opportunities**	**Maximum distance between any two overtaking opportunities**	**Notes**
500 or below	N/A	N/A	Provision of additional opportunities is usually not justified.
501 to 1000	15 km	30 km	
1001 to 1800	8 km	15 km	
1801 and above	5 km	10 km	At AADT > 2700, additional opportunities that exceed the criteria may be necessary.

For each overtaking opportunity, the portion of road available to complete the overtaking opportunity should meet the minimum length shown in Table 5.

Table 5: Minimum Length for Overtaking Opportunities

Road Section Operating Speed (km/h)	Assumed Truck Speed (km/h)	Length (m)		
		RAVs Categories 2-4	RAVs Categories 5-8	RAVs Categories 9-10
70	60	600	640	690
80	69	740	790	860
90	77	890	950	1040
100	86	1070	1130	1240
110	94	1290	1310	1440

Note: The above lengths are generally determined by measuring the length of the divided line where overtaking is permitted for the particular lane.

2.7 Steep Ascending Grades

2.7.1 RAVs Losing Speed on Grades

The speed of RAVs ascending long and steep grades can be reduced to the extent that the speed differential is hazardous for vehicles approaching from behind. If possible, steep ascending grades should have overtaking lanes.

In some cases where an overtaking lane is not provided, the drivers of faster following vehicles may become frustrated and attempt an overtaking manoeuvre when unsafe to do so. A RAV speed reduction to 40 km/h is considered the threshold point at which drivers will seek to overtake a slower vehicle, regardless of whether or not adequate sight distance is available.

Table 6 outlines the maximum distance required for a laden RAV travelling up a grade to slow down to 40 km/h. For grades or consecutive combinations of varying grades exceeding these distances, it is recommended that the grade should have an additional climbing lane for RAVs to mitigate the risk of other road users overtaking without appropriate sight distances.

Table 6: Maximum distances (m) of uphill travel before RAV speeds are reduced to 40 km/h

Grade %	RAVs Categories 2-6		RAVs Categories 7-8		RAVs Categories 9-10	
	80 km/h Approach Speed	100 km/h Approach Speed	80 km/h Approach Speed	100 km/h Approach Speed	80 km/h Approach Speed	100 km/h Approach Speed
3	*	*	*	*	1080	1650
4	950	1410	900	1350	690	1110
5	640	980	610	960	520	840
6	480	760	470	750	410	680
7	390	630	380	620	340	570
8	330	530	320	530	290	490

* RAV can maintain a higher speed than 40 km/h on these grades.

2.7.2 Maximum Grades Requirements for RAVs

For a route to be suitable for RAV access there must be no steep grades that are in excess of the limits in Table 7.

Table 7: Grades Limits for RAVs

	Sealed Roads	Gravel Roads
RAVs Categories 2-6	8%	5%
RAVs Categories 7-8	6%	4%
RAVs Categories 9-10	5%	3%

2.8 Turning at Intersections

It is essential that intersections can be safely negotiated, with minimal or no interference to other traffic.

2.8.1 Vehicle Speed While Negotiating the Turn

The vehicle turning radius is directly related to the maximum turning speed of the vehicle:

- For intersections where the vehicle must always stop before turning (e.g.: at a Stop sign), a turning speed of 5-15 km/h is generally sufficient;
- For intersections where the vehicle rarely or never needs to stop before turning, a speed of 20 km/h or 30 km/h could be assumed; and
- Where following traffic is likely to be slowed as a result of the RAV turning off a high traffic road, a high turning speed (30 km/h or greater) is desirable, to minimise disturbance to traffic.

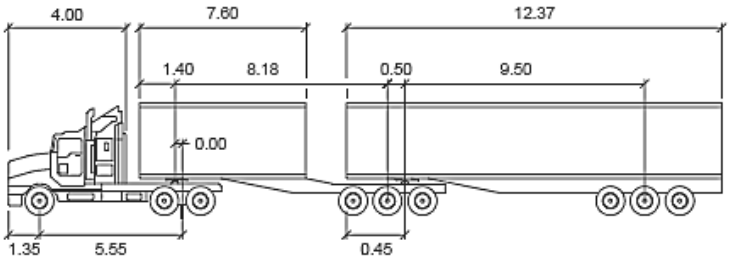
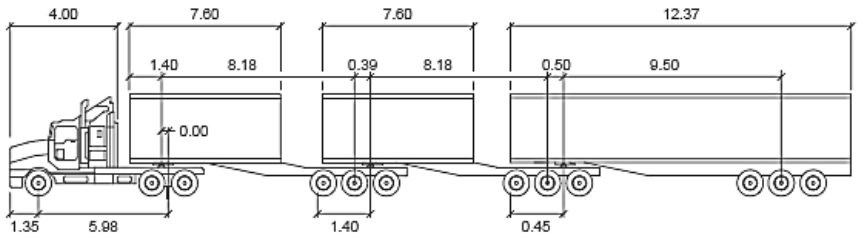
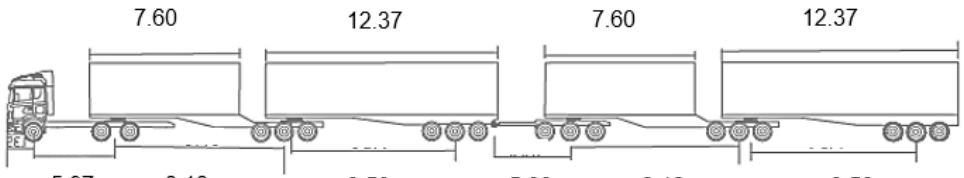
2.8.2 Turning Clearances

Where there is any possibility that the RAV may have insufficient clearance from kerbs or other nearby objects, standard turning templates shall be used to accurately check the swept path of the RAV.

Using AutoTurn, the appropriate vehicle combination must be used to check all turning movements at all required intersections and any clearance problems should be noted on the *RAV Route Assessment Form*. As a rule:

- The wheel paths of the rear trailer of the RAV must not come any closer than 200 mm from the face of any kerb, unless the kerb is designed to be mounted, in which case the 200 mm clearance is not applied.
- If there is no kerb (such as a gravel road), the edge of the road formation can be taken as the kerb.
- The overhang path must not come any closer than 200 mm to a nearby object.
- For a left or right turn, the wheel paths must not cross over the centreline of the road, unless the sight distances in all directions of the intersection are adequate according to Appendix D.

Table 8: Vehicle combinations for completing swept path assessments

RAV Categories	Assessment Vehicle	Maximum Length (m)
2-4	**B-double**  B-Double HVS meters Tractor Width : 2.50 Trailer Width : 2.50 Tractor Track : 2.50 Trailer Track : 2.50 Lock to Lock Time : 6.0 Steering Angle : 35.0 Articulating Angle : 70.0	27.5
5-7	**B-triple**  B-Triple HVS meters Tractor Width : 2.50 Trailer Width : 2.50 Tractor Track : 2.50 Trailer Track : 2.50 Lock to Lock Time : 6.0 Steering Angle : 35.0 Articulating Angle : 70.0	36.5
9-10	**Double B Double**  Double B-Double HVS Track Width 2.50m Trailer Width 2.50m Tractor Width 2.50m Trailer Track 2.50m Lock to Lock Time 6.0 Steering Angle 35.0 Articulating Angle 70.0	53.5

2.8.3 Intersection Layout

To assist in ensuring network performance levels are maintained, the assessor needs to identify if acceleration lanes and turn pockets are present at intersections and the length of these treatments.

Capturing this information in the assessment will assist in determining if network improvements are necessary, in consultation with the road manager.

2.8.4 Approach Sight Distance (ASD)

The route shall be rejected if the driver of a RAV, approaching the intersection has insufficient visibility to observe the intersection, or advance intersection warning, and react or stop if necessary. The table in Appendix D shows the required sight distances for RAVs, given the vehicle type, speed and the gradient of the road. When measuring the available approach sight distance, the measurement must be taken from a truck driver's eye height of 2.4 m.

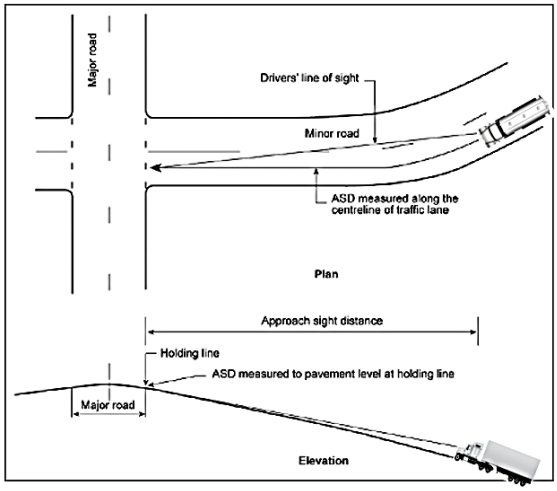


Figure 1: Example of Approach Sight Distance

2.8.5 Entering Sight Distance

The route shall be rejected if the driver of a RAV, entering a through road, does not have appropriate sight distance to see a sufficient gap in oncoming traffic that will allow a RAV, with greater length and lower acceleration capacity, to clear the intersection safely. The table in Appendix D shows the required sight distances for RAVs, given the vehicle type, speed and the gradient of the road. When measuring the available entering sight distance, the measurement must be taken from a truck driver's eye height of 2.4 m to a height that considers all traffic.

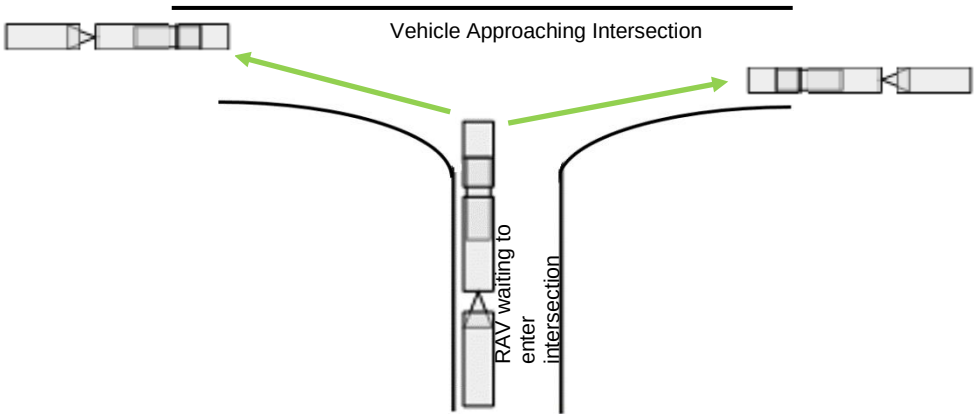


Figure 2: Example of Entering Sight Distance

The angle and gradient of the intersection should also be considered to determine if additional time is required for a RAV to manoeuvre the intersection, for instance a steep upgrade in the direction of travel will adversely affect the RAV's start up and acceleration when entering the through road.

Note: The entering sight distance requirement is only required for intersections that are not controlled by traffic signals, with the exception of a right turning movement with no right turn arrow.

2.9 Railway Level Crossings

The various operational requirements at railway crossings are described in Main Roads *'Railway Crossing Control in Western Australia Policy and Guidelines'* found on the Railway Crossing page of the Main Roads website.

The following points highlight the main considerations for RAVs at railway crossings for the various levels of protection.

2.9.1 Inadequate Approach Stacking Distance

Inadequate approach stacking distance occurs where the distance between the railway and a nearby intersection is insufficient to enable a vehicle to stop at the crossing without impeding the traffic flow at the intersection.

Approach stacking distance is measured from the vehicle stopping line at the railway crossing to the nearest shoulder edge of the crossroad. The vehicle stopping line at a railway crossing is normally indicated by a painted line or, in the absence of a marked line, assumed to be 3.5 m back from the nearest rail.

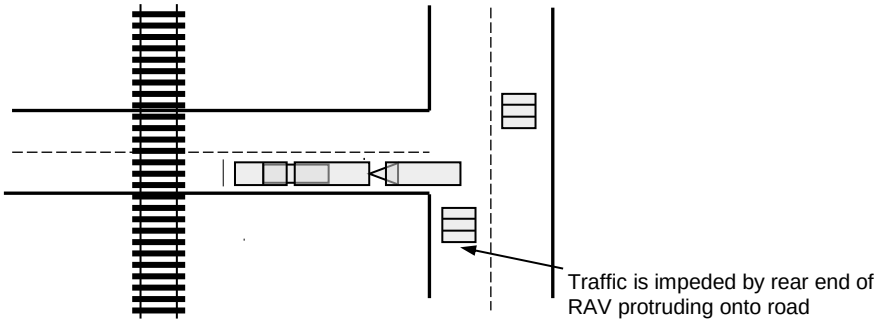


Figure 3: Examples of Inadequate Approach Stacking Distance

2.9.2 Inadequate Departure Stacking Distance

Inadequate departure stacking distance occurs when part of a vehicle would encroach within 3.5 m of the railway track while stopped to give way to traffic on the priority road of an intersection located beyond the crossing. A possible exception is in cases where the intersection is controlled by traffic signals that are coordinated with the operation of the railway crossing signals.

Departure Stacking Distance is measured from the vehicle stopping line at the intersection to within 3.5 m of the nearest railway track. In the absence of marked lines, the measurement is to be taken from the edge of the through lane (if there are edge lines) or the edge of the seal.

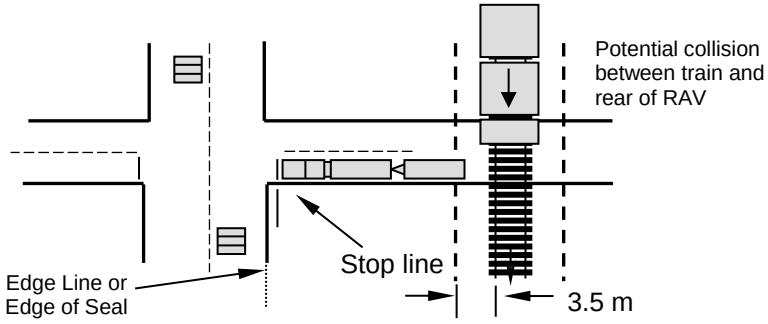


Figure 4: Examples of Inadequate Departure Stacking Distance

2.9.3 Criterion for Assessing Whether Stacking Distance is Adequate

Figure 5 shows the methodology for measuring approach (2.9.1) and departure (2.9.2) stacking distance. Ideally, a clearance of 3.5 m should be applied when assessing the available approach stacking distance. However, if the approach stacking distance is at least the length of the RAV and there is sufficient ESD for other vehicles departing the intersection while there is a RAV stopped at the rail, a lesser clearance is acceptable.

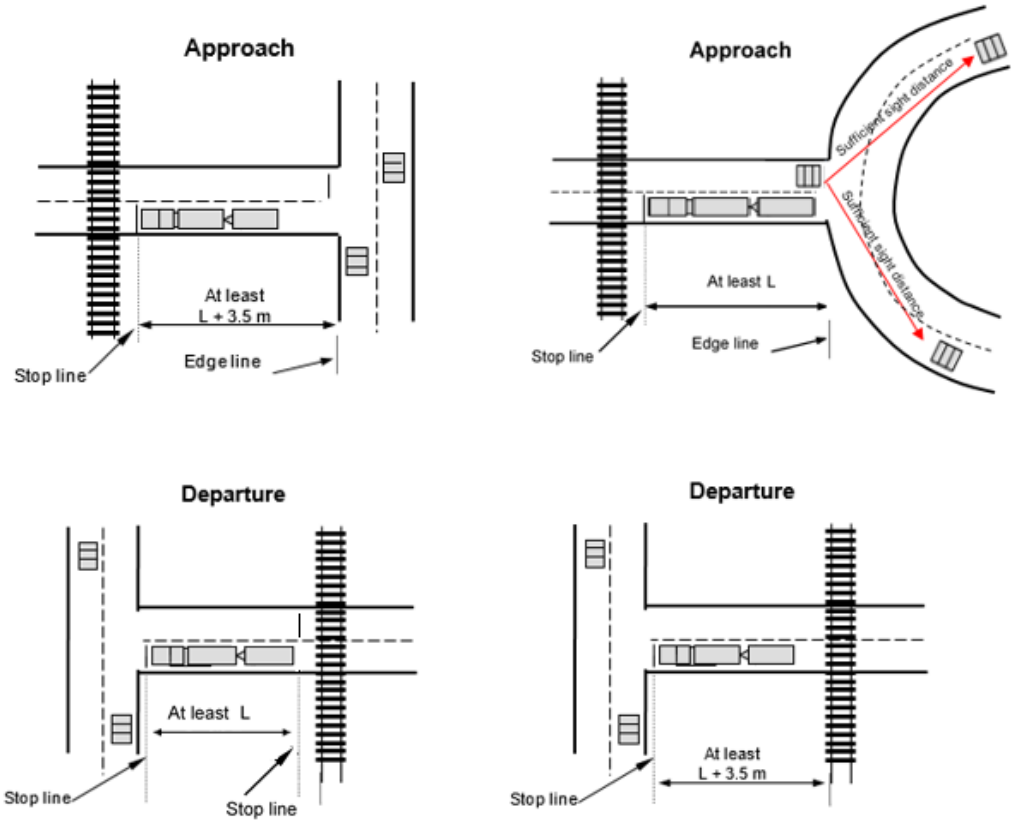


Figure 5: Examples of Adequate Stacking Distances

2.9.4 RAVs at Crossings Protected by Give Way or Stop Signs

The driver of a RAV approaching a railway crossing protected by a GIVE WAY or a STOP sign needs to be able to see the crossing from a sufficient distance to allow enough time to stop the RAV if required. The ASD to a railway crossing must meet Appendix D.

There also needs to be sufficient sight distance for the driver of a RAV, after having stopped at a railway crossing with a GIVE WAY or STOP sign, to see an oncoming train and allow adequate time to safely cross. The required sight distances for RAVs at railway crossings must meet:

- The S3 formula for STOP signs of the Australian Standards AS1742.7-2016 – Manual of Uniform Traffic Control Devices – part 7: Railway Crossings.

The S3 formula determines the minimum distance required for the driver of a vehicle stopped at the railway crossing to be able to see an oncoming train in order to safely cross.

When measuring the available sight distance to all directions at rail crossings, a truck driver's eye height of 2.4 m is recommended.

Where railway crossings with STOP signs are located along the proposed route, the assessor must record the information shown below in Figure 6 on the *RAV Route Assessment Form*. This information is then used to calculate the S3 formula.

Note: A Track Access Permit must be obtained from the relevant rail provider to access the rail corridor (outside the 3 metre zone).

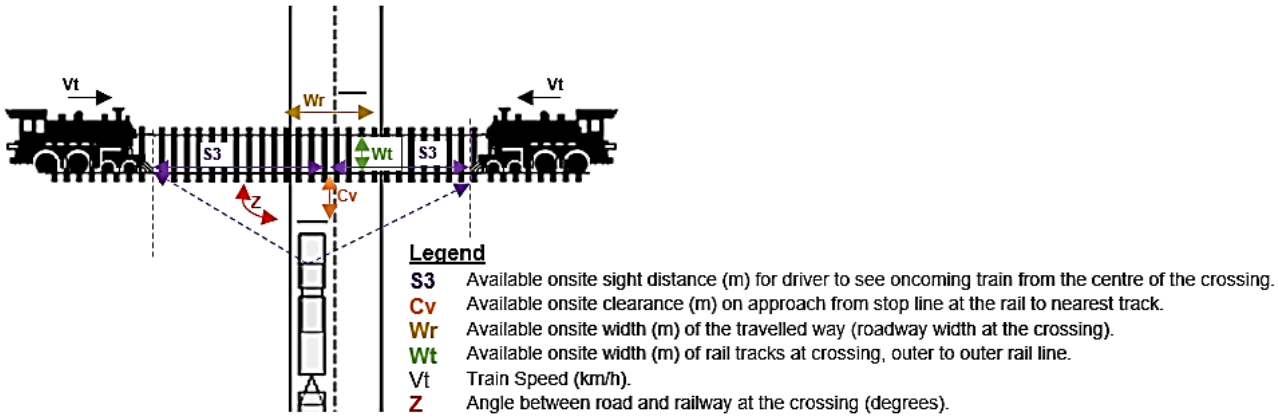


Figure 6: Required Information from Onsite Assessment for S3 Calculation

2.9.5 RAVs at Railway Crossings Protected by Flashing Lights

The visibility of the primary flashing lights and advance flashing yellow warning signs displays on the approach to crossings must be assessed so that the driver can safely stop if required. The sight distance to the flashing lights, or alternatively the advance flashing yellow warning signs must meet the minimum requirements in Appendix D.

When measuring the available sight distance to all directions at rail crossings, a truck driver's eye height of 2.4 m is recommended.

2.10 Off-road Parking

In rural and remote areas, the route should have adequate off-road truck parking facilities at sufficient spacing along the route.

In any one direction of travel, the maximum spacing for off-road parking facilities is:

- Rural Area roads 80 km
- Remote Area roads 120 km

Adequate off-road parking facility is defined as any:

- Service station or roadhouse, (or other commercial establishment), with provision for public truck parking;
- Signed parking bay, truck bay, rest area; or
- Designated road train assembly area;

Which meets the following criteria:

- Minimum approach sight distance (measured from a truck driver's eye height of 2.4 m) to the entry/exit point for traffic travelling on the through road are in accordance with Appendix D; and
- Minimum entering sight distance (measure from a truck driver's eye height of 2.4 m to a height that considers all traffic.) from the entry/exit point in accordance with Appendix D; and
- The full length of the RAV can be parked without encroachment onto the carriageway. Minimum safe clearance distance of the RAV parked parallel to the road are shown in Table 9.

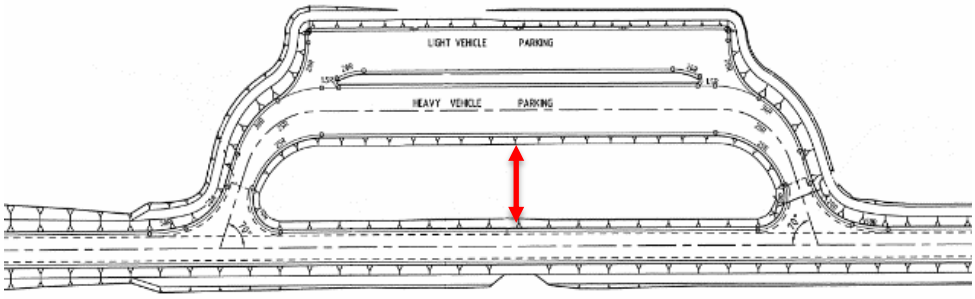


Figure 7: Minimum clearance between road pavement and parking bay

Table 9: Minimum safe clearance distance of parked RAV from road

Speed Limit (km/h)	Minimum Clearance from edge of pavement * (m)
60	5
70	5.7
80	6.2
90	7.6
100	8.8
110	11

* For parking facilities located on the outside of a curve, add a further 1.6 m to the normal minimum clearance.

Depending on the frequency of trucks using the truck parking bays or road train assembly areas, the requirement of other facilities such as rubbish bins, tables and chairs and toilets needs to be considered. The assessor should also consider the likelihood of more than one RAV using the parking facility at any given time. This will depend on the volume of heavy vehicles on the proposed route. More information about off-road parking facilities can be obtained from Rest Areas page on the Main Roads website.

2.11 Other Road Users

The key issues here are whether RAV operation will be highly incompatible with, or pose new risks to other road users that may not be familiar with or could be more vulnerable to RAVs. Road users that should be considered when assessing suitability include:

- Pedestrians (especially where there are school crossings);
- Cyclists;
- Tourists and recreational users (who may be unfamiliar with the conditions);
- School buses (where the frequent stopping and turning by buses and the presence of children on or adjacent to the road can pose potential hazards); and
- Farmers moving farm machinery and implements.

Safety is the primary factor for consideration. If crash history data is available, it may be useful to investigate whether certain times of the day engender particular risks, while at other times the risk is significantly lower. In these cases, it may be warranted to recommend that the RAV only use the route during the low-risk hours.

RAVs can affect the flow of other traffic and contribute to congestion issues. Numbers of RAVs can reduce the speed of other traffic and in worst cases frustrate other motorists. Assessors should examine the traffic flow on the route and recommend solutions to reduce risks resulting from traffic disruption.

Vehicles towing caravans or trailers are a significant issue in that they can find it difficult to pass RAVs. This situation is more prevalent during school holidays. Therefore the assessor should consider the impact of seasonal traffic changes during the assessment.

If safety issues for other road users, which would result from RAV operation, are identified as major and cannot be suitably addressed, the route should be considered unsuitable for RAV access.

2.12 Slowing and Stopping

The ability of vehicles to safely pull off the carriageway, e.g. to allow following vehicles to pass or to make repairs, should be examined. Continuous sections of the route with narrow shoulders and/or deep drains should be noted and comments made on any safety implications.

3 COMMUNITY CONSIDERATIONS

Assessors need to consider potential community impacts as part of assessing route suitability.

3.1 Noise

The assessor shall consider whether the introduction of the RAVs onto the route has potential to cause a significant noise impact by considering the following:

- Areas sensitive to road traffic noise, including residences, schools and hospitals;
- The likely number of RAVs in comparison to existing number of large trucks (3 or more axles);
- Factors contributing to noise generated by RAVs such as gradients (higher speeds or use of engine braking systems), acceleration/deceleration areas (higher engine speeds, gear changing or use of engine braking systems), and road pavement irregularities (body rattle); and
- Factors mitigating the impact of noise from RAVs such as distance to residences and any screening of residences by hills, cuttings or walls.

The main criterion for noise impact assessment is the change in the numbers of large trucks (3 or more axles) on the route. Doubling RAV numbers can be considered as the start of a significant noise change while quadrupling can be considered as very significant change.

On very low volume roads, introducing RAVs may significantly increase numbers of large trucks, but overall truck numbers may still remain low enough so as not to cause a significant noise impact.

Conversely, if the road is an existing heavy vehicle route, introducing RAVs or larger RAVs may reduce the number of trips required for a given freight task and improve noise issues.

Consideration should also be given to potential noise impacts near a truck parking area. In particular, the noise generated by refrigerated trailers should be taken into account as these trucks are required to keep their cooling compressors running all night.

Where noise impacts are expected to be significant the assessor shall consider options for mitigating noise impact, such as:

- Approved noise reduction request signs;
- A curfew for RAVs during night time hours;
- Consideration of alternative routes;
- Noise certification of RAVs as a condition of access; and

- Speed restrictions.

Where noise impacts are expected to remain significant and mitigation actions have been implemented, Main Roads will consult with the relevant Local Government and may undertake a noise impact study of the route.

3.2 Vibration

Where the RAV route passes close to abutting development there may be adverse impacts upon people and property due to vibration. The assessor shall consider whether the introduction of the RAVs onto the route has potential to cause significant vibration impact by considering:

- Distance to buildings and their use and condition;
- Road roughness; and
- Uneven drainage gullies and manhole covers.

Where vibration impacts are expected to be significant the assessor shall consider options to mitigate the impacts, such as road surface improvements and alternative routes.

3.3 Dust and dirt

Where the RAV route passes close to abutting development there may be adverse impacts upon people and property due to dust, especially where a route is unsealed. The assessor shall consider whether the introduction of the RAVs onto the route has potential to cause significant dust impact by considering:

- Distance to buildings and their use;
- Likely numbers of RAVs using the route; and
- Likelihood of significant amounts of dust being produced by RAVs.

RAVs entering onto a seal road from a dirt road will potentially carry the dirt onto the sealed road, particularly in wetter conditions. This results in dirt building up and spreading on the road, which impacts on other motorists.
Where dust and dirt impacts are expected to be significant the assessor shall consider options to mitigate the impacts, such as alternative routes, speed restrictions and possibly sealing road sections, particularly on the approach to a sealed road.

3.4 Community Consultation

In line with Government policy, Main Roads may require a route that has been given a favourable assessment using these guidelines to undergo a community consultation phase. Main Roads, with input from the relevant local government, will determine the need for community consultation on a case-by-case basis.

3.5 Alternative Transport Modes

Alternative transport modes need to be considered to ensure RAV road transport is the most effective form of transport available for the particular operation.

4 APPENDICES

Appendix	Title
A	RURAL ROAD MINIMUM WIDTHS
B	LOW VOLUME RURAL ROAD MINIMUM WIDTHS
C	TOWNSITE ROAD MINIMUM WIDTHS
D	REQUIRED SIGHT DISTANCE
E	OPERATING CONDITIONS

Appendix A: Rural Road Minimum Width

	60 to 70 km/h		80 to 100 km/h	
	Carriageway Width* (m)	**Sealed Width** (m)**	**Carriageway Width* (m)**	**Sealed Width** (m)**
0 to 150 AADT / VPD* **				
RAVs Categories 2-4	7.6	3.3	7.9	3.4
RAVs Categories 5-7	7.7	3.4	8.0	3.5
RAVs Categories 8-10	8.2	3.8	8.6	3.9
150 to 500 AADT / VPD				
RAVs Categories 2-4	7.6	5.6	7.9	5.9
RAVs Categories 5-7	7.7	5.7	8.0	6.0
RAVs Categories 8-10	8.2	6.1	8.6	6.4
500 to 1 000 AADT				
RAVs Categories 2-4	7.9	6.1	8.2	6.4
RAVs Categories 5-7	8.0	6.2	8.3	6.5
RAVs Categories 8-10	8.6	6.6	9.0	6.9
More than 1 000 AADT				
RAVs Categories 2-4	9.6	6.8	9.9	7.1
RAVs Categories 5-7	9.7	6.9	10.0	7.2
RAVs Categories 8-10	10.6	7.6	11.0	8.0

* The carriageway widths given in the above table should be used for assessing usable width on gravel roads.

** A road should be sealed if AADT over 150 and annual freight tonnage over 300,000 TPA.
In the absence of any data, the following parameters may be a guide:

- uniform annual loaded RAV traffic volume more than 10 vehicles per day; or
- loaded RAV traffic volume more than 60 vehicles per day over a seasonal two month period.

*** When the road width is below the above values and traffic volume is no more than 75 VPD, the route may be suitable for RAVs Categories 2-10 (excluding 8) access as a low volume road. Refer to Appendix B on the following page.

Appendix B: Low Volume Rural Road Minimum Widths

NB: This section is not to be used for assessing routes for RAV Category 8.

Type A Road (suitable for two-way RAV traffic)

	40 km/h	**60 km/h**
	Carriageway Width (m)	**Carriageway Width (m)**
RAVs Categories 2-7	5.8	6.1*
RAVs Categories 9-10	5.9	6.3*

For Type A low volume roads, Appendix E operating conditions 1, 2, 3, 4, 5, 7 and 8 may be applied as a condition;

*If a road is at least 1.0 m wider than these widths, an 80km/h speed restriction should be considered. A speed restriction above 80km/h should only be considered if the road is sealed, has good sight distance and presents no significant safety concern.

Type B Road (unsuitable for two-way RAV traffic)

	40 km/h
	Carriageway Width (m)
RAVs Categories 2-7	3.5*
RAVs Categories 9-10	3.5*

For type B low volume roads, Appendix E operating conditions 1, 2, 3, 4, 5, 6, 7 and 8 may be applied as a condition.

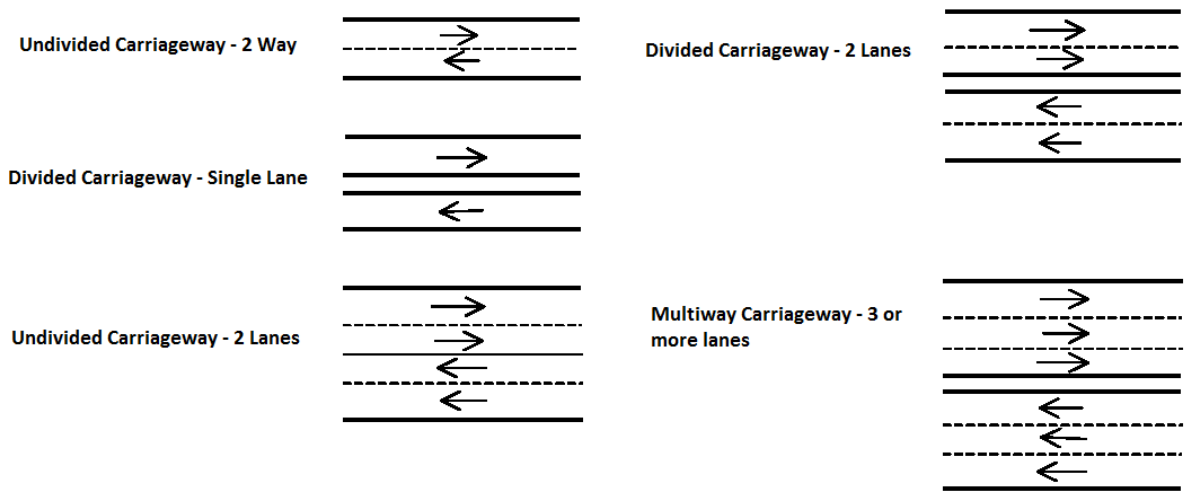
*Maximum road length limits apply, refer to Table 2 in Section 2.4.

Appendix C: Town Site Road Minimum Widths

Feature	RAVs Categories 2-4		RAVs Categories 5-8		RAVs Categories 9-10	
	60 - 70 km/h	80-100 km/h	60 - 70 km/h	80-100 km/h	60 - 70 km/h	80-100 km/h
(Undivided carriageway – 2 Way) Width between sealed edge and road centre (m)						
Basic / unmarked	**3.2**	**3.5**	**3.3**	**3.7**	**3.6**	**4.1**
with marked separation line	**3.5**	**3.8**	**3.6**	**4.0**	**3.9**	**4.4**
with dedicated cycle lane	**4.7**	**5.5**	**4.8**	**5.7**	**5.1**	**6.1**
with dedicated or regular parallel parking	**5.7**	**NA**	**5.8**	**NA**	**6.1**	**NA**
with dedicated angle (45º) parking	**9.2**	**NA**	**9.3**	**NA**	**9.6**	**NA**
(Divided carriageway – single lane) Width between sealed edge and edge of median or traffic island (m)						
Basic / unmarked	**3.5**	**3.8**	**3.6**	**4.0**	**3.9**	**4.4**
with dedicated cycle lane	**5.0**	**5.8**	**5.1**	**6.0**	**5.4**	**6.4**
with dedicated or regular parallel parking	**6.0**	**NA**	**6.1**	**NA**	**6.4**	**NA**
with dedicated angle (45º) parking	**9.5**	**NA**	**9.6**	**NA**	**9.9**	**NA**
(Undivided carriageway – 2 lanes) Width between sealed edge and road centre (m)						
Basic / unmarked	**6.6**	**7.0**	**6.7**	**7.1**	**7.0**	**7.5**
with dedicated cycle lane	**8.1**	**9.0**	**8.2**	**9.1**	**8.5**	**9.5**
with dedicated or regular parallel parking	**9.1**	**NA**	**9.2**	**NA**	**9.5**	**NA**
(Divided carriageway – 2 lanes) Width between sealed edge and edge of median or traffic island (m)						
Basic / unmarked	**6.6**	**7.0**	**6.7**	**7.1**	**7.0**	**7.5**
with dedicated cycle lane	**8.1**	**9.0**	**8.2**	**9.1**	**8.5**	**9.5**
with dedicated or regular parallel parking	**9.1**	**NA**	**9.2**	**NA**	**9.5**	**NA**
(Multiple Lane Carriageways – 3 or more lanes) Width of additional through lane (m)						
basic	**3.2**	**3.4**	**3.3**	**3.5**	**3.4**	**3.6**

Notes:

1) Speed refers to the prevailing speed limit for the road
2) An explanation of road type descriptors follows:



Appendix D: Required Sight Distances

Posted Speed km/h	Downhill				Level	Uphill			
	-8%	***-6%***	***-4%***	***-2%***		***2%***	***4%***	***6%***	***8%***
40	74	72	70	68	66	65	64	62	61
50	102	98	95	92	89	87	85	84	82
60	134	128	123	119	116	112	110	107	105
70	170	162	155	149	144	140	136	133	130
80	209	198	190	182	176	170	165	161	157
90	252	239	228	218	210	203	197	191	186
100	308	290	275	263	252	242	234	227	220

The above values have been derived using the formula given in Austroads Guidelines with following factors:

Reaction Time	4.0 s

(Deceleration rate of 0.29g up to 90 km/h, 0.28g at 100 km/h.)

Appendix E: Operating Conditions

Main Roads will apply the operating conditions below, as a condition of permit, to very low traffic volume roads when the road's width does not meet the minimum requirements in Appendix A.

These and other similar operating conditions may be applied to the assessment of other roads.

1. When travelling at night, the RAV must travel at a maximum speed of 40km/h and display an amber flashing warning light on the prime mover.
2. No operation on unsealed road segment when visibly wet, without road owner's approval.
3. Headlights must be switched on at all times.
4. Speed restrictions. *
5. Direct radio contact must be maintained with other RAVs to establish their position on or near the road (suggested UHF Ch 40).
6. For a single lane road, the road must not be entered until the driver has established via radio contact that there is no other RAV on the road travelling in the oncoming direction.
7. Operation is not permitted while the school bus is operating on the road. Operators must contact the relevant schools directly and obtain school bus timetables; or where direct contact can be made with the school bus driver, operation is permitted once the school bus driver confirms all school drop-offs/ pick-ups have been completed on the road.
8. Current written support from the road asset owner, endorsing use of the road, must be obtained, carried in the vehicle and produced upon request.

These conditions are applied in the Prime Mover, Trailer Combinations and Truck, Trailer Combinations Operating Conditions. The applicable roads must be clearly identified as either a "Type A" Low Volume Road or a "Type B" Low Volume Road or appropriate conditions listed separately as a road condition.

*40 km/h or 60 km/h as determined from Appendix B.

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Approved RAV Rating Amendments-November 2019

Road Name	From Location (SLK)	To Location (SLK)	Current Network	New Network	*RAV Speed Limit*
Batchelor North Rd	0.00	5.01	Nil	7	60
Batchelor Rd	0.00	3.05	Nil	7	60
Carr Rd	0.00	6.88	Nil	4	60
Chillicup Rd	0.00	8.41	Nil	4	60
Clinic Rd	0.00	7.58	Nil	4	60
Collins Rd	0.00	8.19	Nil	7	60
Etna Rd	0.00	20.07	Nil	4	60
Grahams Well Rd	0.00	2.88	Nil	4	40
Hamilla Rd	0.00	1.61	Nil	4	60
Hodgson Rd	0.00	1.77	Nil	4	60
Holly East Road	0.00	2.09	Nil	4	60
Holly Siding Road	3.46	5.30	Nil	4	60
Janus St	0.00	0.34	Nil	4	50
Kimberly Rd	0.00	0.46	7	RAV N7.3, Tri Drive 4 & Tri Drive N4.3	50
Moore Rd	0.00	0.95	Nil	4	60
Morgan Rd	0.00	0.37	Nil	4	40
Nazzari Rd	0.00	4.63	Nil	7	40
Nardlah Rd	4.07	4.53	4	RAV N7.3, Tri Drive 4 & Tri Drive N4.3	80
North Stirling Rd	0.00	2.00	6	7	80
Old Nardlah Rd	0.00	1.33	7	RAV N7.3, Tri Drive 4 & Tri Drive N4.3	80
Pallinup Sth Rd	0.00	13.30	6	7	80
Poonawariup Rd	0.00	7.63	Nil	4	40
Rae Rd	0.00	3.41	Nil	4	40
South Batchelor Rd	0.00	2.48	Nil	7	60
Sprigg Simpson Rd	0.00	3.14	Nil	7	40
Stockroute Rd	0.00	3.52	Nil	4	60
Tambellup West Rd	0.00	29.45	7	RAV N7.3, Tri Drive 4 & Tri Drive N4.3	100
Tieline Rd	0.00	0.77	7	RAV N7.3, Tri Drive 4 & Tri Drive N4.3	80
Toolbrunup Rd	11.60	38.50	6	7	80
Wray Rd	0.00	2.86	Nil	4	40

Plant Maintenance Report November 2019

Reg No.	Description	Current Kms/Hrs	Next Service	Year of Manufacture	Year of Purchase	Changeover	Comments
0TA	Ford Ranger Ute	16,000	30,000	2019	2019	1 yr / 15,000km	
1TA	Ford Ranger Ute	19811	30,000	20019	2019	1 yr / 30,000 kms	Serviced @ 15000km
BH00	Ford Ranger D-Cab	18,645	30,000	2019	2019	1 yr / 30,000 kms	
BH000	Ford Everest Trend		15000	2019	2019	1yr / 25,000 km	
BH001	CAT vibe Roller	1,056	1,500	2019	2019	8 yrs / 8000 hrs	
BH002	ISUZU Flatbed Truck	29,256	35,000	2016	2016	7 yrs / 250,000km	
BH003	Ford Ranger D-Cab	21,009	30,000	2019	2019	1 yr / 30,000 km	
BH004	CAT 12M Grader	1,067	1,500	2017	2018	8 yrs / 8,000 hrs	Replaced RH transmission side cover
BH005	Cat multi tyre Roller	509	500	2018	2018	8 yrs / 8000 hrs	Due for service
BH006	CAT 12M	7,601	8,000	2012	2012	8 yrs / 8,000 hrs	Serviced @7500hrs
BH007	Toro mower	918	1000	2016	2016	5 yrs / 5,000 hrs	Refurbished cutting deck (Elite Steel), replaced tyre
BH009	Izusu 150 truck	26,833	30,000	2017	2017	1 yr / 30,000 km	
BH012	Isuzu Fire Truck		Jan-41				
BH013	Cat 444F Backhoe	2,569	3,000	2013	2013	10 yrs / 8,000 hrs	
BH014	Ford Ranger Space Cab	27,929	30,000	2018	2018	1 yr / 30,000 km	
BHT0	Kenworth Truck	81,385	85,000	2016	2017	5 yrs / 250,000 km	
BHT84	Toro Groundmaster 3500D mower	1,086	1,200	2013	2013		Serviced @1000
BHT92	CAT Skid Steer 299D2XHP	991	1,000	2017	2017	8 yrs / 8,000hrs	Due for service, checked doorlock
BHT125	Mack Curser 8 Wheel Tipper	166,911	180,000	2013	2013	5 yrs / 250,000 km	Replaced tyre, purchase new rim, adjusted brake, fixed door latch, checked turbo charger
BHT1624	Fuel trailer			2015	2016		
BHT1633	Tandem Axle Dolly	51720		2015	2015		
TA001	Ford Ranger Ute	25,400	30,000	2018	2018	1 yr / 30,000 kms	
TA005	Ford Ranger Ute	10,595	15,000	2019	2019	1 yr / 30,000 kms	
TA017	Isuzu Tipper	9,916	10,000	2014	2014	5 yrs / 200,000 km	
TA052	Ford Ranger D-Cab	8,780	15,000	2019	2019	1 yr 30,000 km	
TA06	Jet Patcher Isuzu	154,019	170,000	2007	2010	8 yrs / 8,000 hrs	
TA18	12M Grader	3,221	3,500	2016	2016	7 yrs / 8,000 hrs	Set up Shark blade cutting edges
TA281	930K Loader	4,521	5,000	2014	2014	8 yrs / 8,000 hrs	Serviced @4500hrs, replaced bucket wear plates, checked park brakes
TA386	Isuzu Tipper	3,191	10,000	2012	2012	5 yrs / 200,000 km	Fitted auxillary wiring for water tank
TA2251	3 axle Float Trailer				2009		Checked brakes, replaced tyre, bought 2 new tyres
TA417	John Deere Gator		250	2019	2019		
1 TIU 961	Papas Tandem Fuel Trailer			2008			
1TMR361	Rockwheeler Side Tipper Trailer			2012	2012		Adjusted brake, checked wheel bearings

Reg No.	Description	Current Kms/Hrs	Next Service	Year of Manufacture	Year of Purchase	Changeover	Comments
1TMR367	Tandem Axle Dolly						
BKTBR	Skid steer Bucket Broom			2013			
1TLT850	Loadstar 8x5 Trailer			2011			
BH2085	Trailer for Pump at Town dam						
BH2098	Boxtop Trailer						
BH2134	Trailer for Mobile Standpipe						
TA2129	Fuel Tanker						
BHT 1626	Papas Tandem Fuel Trailer						
1TCY093	Papas Tandem Trailer						Replaced trailer light with multi volt system
1TIU961	8 x 5 Papas Fuel Trailer						
1TFH594	Loadstar Boxtop Trailer						
1TFC580	Gardeners Boxtop trailer						
1TFD241	Boxtop Trailer for firefighting						
1TJX516	Plant Trailer for Mowers						
BHT1624	Fuel Trailer				2016		
1TOI298	Sign Trailer				2015		
Fogger	Fogger						
TSAW	Tree Saw						
STAB	Stabiliser attachment				2014		
CATBR 30	Caterpillar Broom						
	Cement Mixer						
	Tree Grab						Welded bottom plate
	Wacker Packer						
	Tambellup Fogger						
	Broomehill Fogger						
	Pressure Washer						
	Polesaw						
	Honda Pump						
	Chainsaw						
	Stihl concrete saw						
	Skid Steer Roller						
	Borer						
1TOI 298	Sign Trailer			2015			
BHT1636	Side Tip trailer	31309		2016	2016		Fixed hydraulic valve in side door
TORO 590	BH Golf Club Mower			2016	2017		
	BH Honda Push Mower			2017	2017		
PFL	FORK LIFT						
GENSET							
STIHL	BLOWER						