



South Australia Class 1 and Class 3 Road Grader and Combination Operator's Guide

Class 1 and Class 3 Road Grader and Combination
Exemption Notice 2020

South Australian Heavy Vehicle Standards
(Conditionally Registered Special Purpose Vehicle)
Exemption Notice 2019 (No.3)

South Australia Heavy Vehicle Standards (Road
Grader and Combination) Exemption Notice 2020

FEBRUARY 2021





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Introduction

The *South Australia Class 1 and Class 3 Road Grader and Combination Operator's Guide* (the Guide) is intended to support operation of road graders and road grader combinations in South Australia under the *South Australia Class 1 and Class 3 Road Grader and Combination Exemption Notice 2020* (the Notice). The Guide provides further details and information to support movement on roads for operators of road graders and road grader combinations, including mass and dimension exemptions, and the conditions that must be followed when operating under the Notice.

Appendix A to the Guide (published separately on the NHVR website) lists Participating Road Managers,¹ and describes the access available on each Participating Road Manager's road network, as well as any restrictions applied to that access.

Note: The Guide is correct as it appears on the website; however, as the list of Participating Road Managers and the access they provide may periodically change, it is recommended that grader operators regularly check the Guide and Appendix A online to ensure they remain up to date with the latest access and operating conditions.

¹ Council road managers that have provided some access to their roads are referred to in the Guide and the Notice as Participating Road Managers.

Background

The *South Australia Class 1 Road Grader and Trailer Exemption Notice 2019* (the 2019 Notice) brought together several State notices describing the operation of oversize and/or overmass road graders and related road construction equipment on South Australian roads.

Several former State notices covering road grader combinations were transitioned to operate under the Heavy Vehicle National Law (HVNL) when it came into effect on 10 February 2014.

These transitioned notices were used as the basis for the 2019 Notice. They provided broad exemptions from vehicle standards for a road grader and vehicles towed by a grader, but no mass or dimension exemptions. The old notices also gave unrestricted access to rural council roads but only limited access to State roads,² making access between council roads difficult in some areas. Former notices also included several operating conditions that may no longer be practical or cannot be enforced under the HVNL.

Further review of the 2019 Notice – including consultation with the National Heavy Vehicle Regulator (NHVR), several South Australian councils and across areas of the South Australian Department for Infrastructure and Transport (the Department) – has resulted in the development of a new Notice titled *South Australia Class 1 and Class 3 Road Grader and Combination Exemption Notice 2020* (the Notice). This provides mass and width exemptions for graders, and increased combination length on many outback roads, as well as giving council road managers a greater say in what vehicles and combinations can access their networks.

Vehicle standards exemptions granted to road graders are generally unchanged. These are published in the *South Australian Heavy Vehicle Standards (Conditionally Registered Special Purpose Vehicle) Exemption Notice 2019 (No.3)* and *South Australian Heavy Vehicle Standards (Road Grader and Combination) Exemption Notice 2020*. Please note that NHVR practice is to publish mass and dimension exemptions and vehicle standards exemptions in separate notices.

The new notices can be viewed on the NHVR website [here](#).

Eligible vehicles

The following vehicles are eligible to operate under the Notice:

- motor grader
- motor grader towing a roller plant trailer
- motor grader towing up to two trailers and/or vehicles
- motor grader and multiple trailer and/or vehicle combination.

Note: A motor grader is not permitted to tow any other vehicle or trailer when it is towing a roller plant trailer.

Vehicles and trailers that may be towed by a grader in a combination covered by the Notice may include, but are not limited to:

- fuel trailer
- roller plant trailer
- facilities trailer
- accommodation trailer
- vehicle.

Examples of vehicles and combinations eligible to operate under the Notice are provided on page 7.

Exemptions provided under the Notice

Mass limits

Mass limits for a road grader operating under the Notice have been reviewed, with increased axle mass provided on the rear tyres of the grader to reflect the size of road graders and the differing types and areas of operation. The mass limits under the Notice are shown in Table 1 of the Notice and expanded in Table 1 of the Guide.

Note: Maximum axle loads are per axle group. Rear axle group maximum is based on tyres with a minimum section width of at least 365mm.

Table 1: Axle mass limits

Axle group	Axle Load (t)
Front (steer) axle	6
Rear drive axle group (2)	16 (8 + 8)
Mass total (grader only)	22

Dimension limits

Width – Road grader

A width exemption has been provided for road graders, both as a single vehicle, and when towing one or more items as a grader combination. The width exemption applies to access on State roads on the approved networks, and on networks or routes approved by Participating Road Managers (see Appendix A). Access is subject to any conditions applied by Participating Road Managers.

Notes:

- The width exemption applies to the grader only. All vehicles, implements, trailers or machines towed behind a road grader must be no more than 2.5m wide.
- While extra width is provided, operators are required to minimise the width of the grader as much as possible when travelling on the road.

² Roads under the care, control and management of the South Australian State Government.

Length – grader combination

The maximum length of road grader combinations on State roads in remote outback areas has also increased – from 42.0m to 53.5m. This follows Department feedback and is consistent with maximum road train lengths in the Pastoral Unincorporated Areas of South Australia, where the longer grader combination is permitted.

Access to State roads by a road grader at greater than 26m in length is subject to pilot and signage conditions (see page 6).

The length limits for a road grader combination on council roads are unchanged. A grader may tow up to two trailers to a maximum length of 19m within the Adelaide Metropolitan Area and the Adelaide Hills Area, and to a maximum length of 26m in other country areas of South Australia.

Vehicle standards exemption

A roller plant trailer being towed behind a road grader is exempt from the requirement to be fitted with brakes.

Notes:

- Where an unbraked roller plant trailer is being towed behind a grader, no other item may be towed at the same time.
- Any other item towed behind a road grader must be fully compliant with the Australian Design Rules (ADRs) and the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation*.

Access and operating conditions

Access to road networks

The access provided under the Notice and described in the Guide is intended to give grader operators as much access as possible, without the size, mass and slower travel of graders impacting too greatly on other road users, or risking impacts on road infrastructure.

Different levels of access described in the Guide reflect the potential impact of road graders and the various grader combinations on other road users and road infrastructure. Access for each type of combination may vary between councils, depending on different needs within council areas, different levels of risk due to existing traffic types and volumes, and bridges, drains etc. that may be impacted by certain types of heavy vehicles.

Access to council and State roads is listed in Appendix A.

Access can vary between councils and may change from time to time, depending on the needs of Participating Road Managers to use graders, or to ensure that bridges, culverts, drains and other infrastructure are protected from the risk of damage from heavier vehicles. Participating Road Managers may also vary their access conditions from time to time.

It is recommended that grader operators regularly check the [South Australia](#) page in the State Notices section of the NHVR website for the latest updates on access and conditions for a road grader.

State roads

Access on State roads is aligned to heavy vehicle networks published on the Department's Restricted Access Vehicle (RAV) Network mapping website [RAVnet](#).

- A road grader operating under the Notice and the Guide that is a single vehicle can operate at up to 2.8m wide on State roads published to the 40t Special Purpose Vehicle (SPV) network, as published on [RAVnet](#).
- A road grader operating under the Notice and the Guide that is towing a roller trailer and no other item, or up to two vehicles or trailers, up to 26m in length can operate on State roads within Participating Road Manager boundaries, as published to the 26m B-double (GML) network and shown on [RAVnet](#).
- A road grader operator working on road construction and maintenance in the Pastoral Unincorporated Areas of South Australia who is operating under the Notice and this Guide, and towing multiple vehicles or trailers to a combination length greater than 26m and up to 53.5m, can operate:
 - on roads in the Pastoral Unincorporated Areas; and
 - on the Barrier, Stuart and Eyre Highways.

Grader and trailer combinations more than 19m in length are not permitted to operate on State roads in the Adelaide Metropolitan Area or Adelaide Hills Area.

Council roads

A road grader operating under the Notice and the Guide that is:

- a single vehicle; or
- towing a roller trailer and no other item; or
- towing up to two vehicles or trailers to a maximum combination length of 19m; or
- towing up to two vehicles or trailers to a combination length greater than 19m and up to 26m in length

can operate on roads or networks under the care, control and management of Participating Road Managers, as described in Appendix A, and subject to the conditions and restrictions described in Appendix A.

Note: If a participating road manager includes a condition allowing a vehicle to be towed, a vehicle may be substituted for a trailer.

Grader and trailer combinations more than 19m in length are not permitted to operate on Council roads in the Adelaide Metropolitan Area or Adelaide Hills Area, unless specifically mentioned for a Council in Appendix A.

Operating conditions

Speed restrictions

A road grader operating under this Notice, whether as a single vehicle or towing one or more items, must not travel at a speed greater than **40km/hr**.

In accordance with the *South Australian Heavy Vehicle Standards (Conditionally Registered Special Purpose Vehicle) Exemption Notice 2019 (No.3)*, a construction road roller without its own motive power may only be towed by a grader if the roller is fitted with brakes.

Where the construction road roller has laden mass not exceeding:

- 6t, the maximum towing speed is 25km/h
- 12t, the maximum towing speed is 10km/h.

Vehicle standards

With the exception of a roller plant trailer, all vehicles, trailers etc. in a road grader combination must:

- be fitted with brakes
- be otherwise fully compliant with Vehicle Standards and Mass, Dimension and Loading Regulations.

Attachments and detachable parts and equipment

Tow couplings

All tow couplings used to tow a trailer or vehicle in the grader combination must be rated as sufficient for use in that combination.

Detachable parts and equipment

An eligible vehicle that is a road grader may travel on roads with the following parts attached:

- front blade; or
- ripper attachment; and
- spare wheel mount.

Other conditions

A number of conditions have been applied where dimensions are increased, to provide a safe working environment for grader operators, and maintain safe and efficient movement by other vehicles operating in the vicinity of road grader activities.

On any of the Eyre Highway, Barrier Highway or Stuart Highway, for a road grader combination greater than 26m in length:

- worksite traffic management is required in accordance with South Australian standards when crossing the abovenamed highways; and
- a pilot vehicle is required to travel at the rear of the combination when travelling along these highways. The pilot vehicle must operate in accordance with the *Escorting*

guidelines for oversize and overmass vehicles and loads in South Australia (the Escort Guidelines) but is exempted from mass limits applied to general pilot vehicles. Refer to pilot vehicle requirements on page 6 for more information.

A link to the current Traffic Management Standards (dated October 2020) is provided [here](#).

These requirements are due to the size and slow speed of a road grader combination in comparison with other road users, and are in place to provide advance notice to other road users.

Where a road grader combination is required to travel on major State roads, it is highly advisable to keep such travel to a minimum. Where travel is necessary, operators are reminded that it is a requirement under the Australian Road Rules for slow vehicles and combinations to regularly pull over and make way for faster vehicles.

A number of conditions, requirements and recommendations in the Guide are included because, although they are not and cannot be required under the HVNL, they have long been applied to operations undertaken by the Department's road gangs and add an extra layer of safety.

Areas of operation described in the Notice

1. The Adelaide Metropolitan Area map is published on the Approved Areas or Routes section on the Heavy Vehicle pages of the South Australian Government website www.sa.gov.au/heavyvehicles.
2. The Adelaide Hills Area map is published on the 'Approved Areas or Routes' section on the Heavy Vehicle pages of the South Australian Government website www.sa.gov.au/heavyvehicles.
3. Pastoral Unincorporated Areas are not within a local or district council boundary. These areas are generally in the far north and far west of South Australia, excluding The District Council of Coober Pedy, Municipal Council of Roxby Downs, Maralinga Tjarutja Aboriginal lands and Anangu-Pitjanjatjara-Yankunytjatjara (APY) Aboriginal lands. The Pastoral Unincorporated Areas can be seen on the South Australia Restricted Access Vehicle Network website RAVnet, on the South Australian Outback Communities Association website at <https://oca.sa.gov.au/communitieshome> and shown in green in Figure 1.



Figure 1: Pastoral Unincorporated Areas

Participating Road Managers

Graders and grader combinations operating under the Notice and in accordance with the Guide may only operate on State roads and council roads managed by Participating Road Managers, and subject to any conditions or restrictions listed in the Guide (see Appendix A).

Participating Road Managers' access provisions and restrictions are also provided by a link to the Guide on the South Australia Government website at www.sa.gov.au/topics/driving-and-transport/heavy-vehicles/operating-a-heavy-vehicle/approved-areas-and-routes-maps.

Road closures

The operator of a road grader and trailer combination is advised to access the Traffic SA website www.traffic.sa.gov.au and, where relevant to its operations, the Outback Roads website www.dit.sa.gov.au/outbackroads for the latest information on open, restricted and closed roads prior to moving, to ensure clear and safe passage of the vehicle combination.

Pilot vehicle requirements and recommendations

A pilot vehicle is required to follow behind a road grader combination that exceeds 26m in length when operating on the Barrier, Stuart or Eyre Highways.

The pilot vehicle is required to operate in accordance with requirements as described in the [Escorting Guidelines](#) published at www.sa.gov.au; however, certain variations from the standard pilot requirements are permitted, as follows:

- A pilot vehicle for a road grader combination is exempted from the 6.5t tonne Gross Vehicle Mass (GVM) mass limit for pilot vehicles described in Schedule 8 of the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation* (MDL). This exemption provides for more of the vehicle that may be part of the road gang's fleet to undertake the pilot role, rather than require a specific vehicle that may rarely be required to accompany the gang.
- A pilot vehicle that would otherwise form part of the road gang's fleet may undertake the role of a pilot vehicle if:
 - its mass does not exceed 12 tonnes
 - it complies in all other respects with the [Escorting Guidelines](#).

The warning sign on the pilot vehicle can be a static or electronic version. Both faces of a warning sign on a pilot vehicle must show the word 'SLOW VEHICLE AHEAD', in black capital letters at least 200mm high, and complying with AS 1744 'Forms of Letters and Numerals for Road Signs', in typeface Series C(N).

Note: The Pilot Vehicle is exempt from schedule 8 (MDL), section 46(1) to show the word "OVERSIZE LOAD AHEAD" and is replaced with the word 'SLOW VEHICLE AHEAD'.

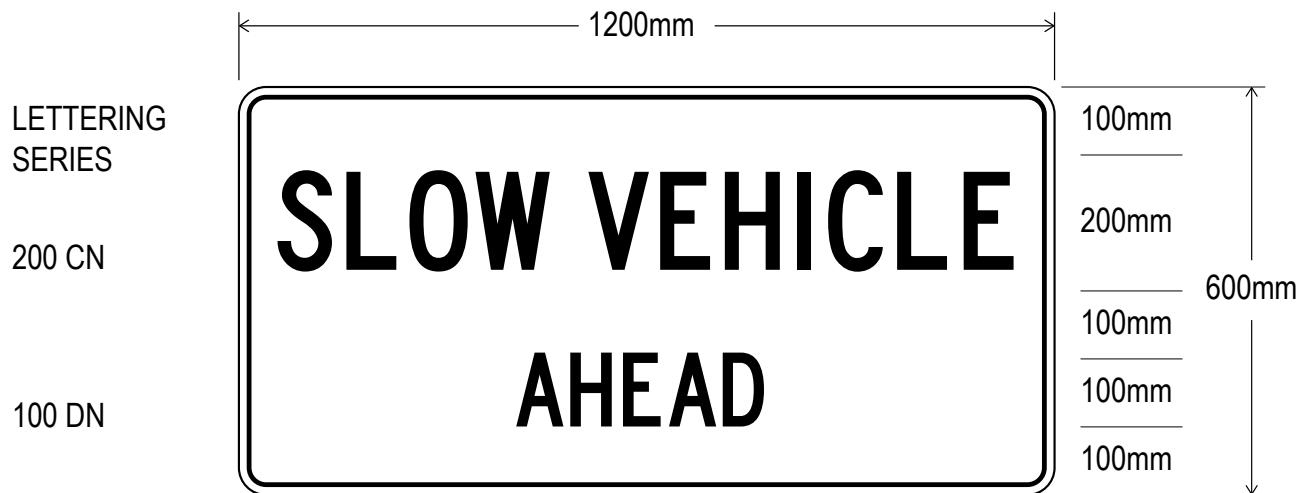


Figure 2: Example of a warning sign for a pilot vehicle

Examples of eligible vehicles and combinations

The following are examples of vehicles and combinations eligible to operate under the Notice.



Figure 3: Motor grader (maximum vehicle length 12.5m)



Figures 4 and 5: Motor grader towing one trailer or vehicle (maximum combination length 19m)

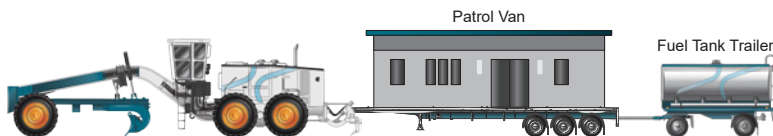


Figure 6: Motor grader towing two trailers or vehicles (maximum combination length 26m)



Figure 7: Motor grader towing multiple trailers or vehicles (maximum combination length 53.5m)

Operator compliance responsibility

While the Notice is not required to be carried under the HVNL, operators are encouraged to read and become familiar with the document, as it is a legal requirement to comply with the conditions when operating under the Notice.

Contact the Department for Infrastructure and Transport

For clarification on any of the information outlined above, the Department's Heavy Vehicle Policy and Strategy team can be contacted by:

Email: DIT.RoadAuthority@sa.gov.au

Phone: 1300 334 640

National Heavy Vehicle Regulator

www.nhvr.gov.au

E info@nhvr.gov.au

P 1300 MYNHVR (1300 696 487)

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