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WA Performance Based Standards (PBS) Scheme

Access Levels & Principles

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D16#438044
November 2026

CONTENTS

Document Control 3
Amendments 3
Related Documents 4
1 Introduction 6
2 WA PBS Access Levels and Approved Networks 6
3 Approved Axle Group Mass Limits 9
4 Corresponding Base RAV Networks 10
5 WA PBS Access Principles 10
6 Greenmount Hill PBS Access 10
7 Lesmurdie Hill PBS Access 11
8 Roelands Hill PBS Access 12
9 Contacts 12

Document Control

Owner	Director Heavy Vehicle Services
Custodian	Manager Heavy Vehicle Road Network Access
Document Number	D16#438044
Issue Date	14 July 2016
Review Frequency	As Required

AMENDMENTS

Revision Number	Revision Date	Description of Key Changes	Page No.
1	14 June 2021	Added vehicle category table and approved networks. Reformatted document. Included mass table.	Page 4-7
2	1 September 2021	Added Greenmount Hill requirements	Page 8
3	15 June 2022	Added Lesmurdie Hill & Roelands Hill requirements	Page 9-10
4	2 September 2022	Updated Greenmount Hill requirements with condition 6 and removed transition date.	Page 9
5	9 November 2022	Amended Lesmurdie Hill requirements	Page 9
6	23 January 2023	Added PBS Level 1 to the Tandem Drive and Tri Axle Trailer Combinations table.	Page 5
7	12 December 2023	Corrected document title and update References and Related Documents Table.	Page 4
8	21 July 2025	Updated images; clarified maximum mass for tandem drive vehicles subject to gradeability and pavement loading standards; clarified PBS vehicles will not be approved if they cause unacceptable increased road wear.	Pages 6-10
9	28 October 2025	Updated links within the related documents table.	-
10	4 November 2026	Added PBS 2C to Combinations Table.	Page 6

RELATED DOCUMENTS

The following documents are related to the WA Performance Based Standards (PBS) Scheme and should be read in conjunction with this Access Level & Principles. These documents are available on the Performance Based Standards (PBS) page on the Main Roads website.

Document Name	Location
WA PBS Manufacturer's Vehicle Certification Application	https://www.mainroads.wa.gov.au/4a763a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-manufacturers-vehicle-certification-application.pdf
WA PBS Vehicle Certification Application	https://www.mainroads.wa.gov.au/4a75d2/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-scheme-vehicle-certification-application.pdf
PBS Vehicle Dimension Guide	https://www.mainroads.wa.gov.au/4a7995/globalassets/heavy-vehicles/permits-orders-schemes/pbs/pbs-vehicle-dimension-guide.pdf
WA Performance Based Standards (PBS) Scheme – Access Levels and Principles	https://www.mainroads.wa.gov.au/4a1640/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-access-levels-and-principles.pdf?v=4aff42
WA Performance Based Standards (PBS) Scheme – Application and Approval Process	https://www.mainroads.wa.gov.au/4aa436/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-application-and-approval-process.pdf?v=4aff24
WA Performance Based Standards (PBS) Scheme – Assessment Results (Part A)	https://www.mainroads.wa.gov.au/4afff7/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-assessment-results-part-a.docx?v=4afff7
WA Performance Based Standards (PBS) Scheme – Audit Framework	https://www.mainroads.wa.gov.au/4a96c3/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-audit-framework.pdf?v=4928cb
WA Performance Based Standards (PBS) Scheme - Manufacturer's Declaration - Towing Vehicle	https://www.mainroads.wa.gov.au/49df4a/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-towing-vehicle.docx
WA Performance Based Standards (PBS) Scheme - Manufacturer's Declaration – Trailer	https://www.mainroads.wa.gov.au/4adeb5/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-manufacturers-declaration-trailer.docx
WA Performance Based Standards (PBS) Scheme - Road Train TEBS Voltage Test Procedure	https://www.mainroads.wa.gov.au/4a65ab/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-pbs-scheme-road-train-tebs-voltage-test-procedure.pdf?v=4a65ab

Document Name	Location
WA Performance Based Standards (PBS) Scheme – Standards and Vehicle Assessment Rules	https://www.mainroads.wa.gov.au/4a7901/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-standards-and-vehicle-assessment-rules.pdf?v=4affd4
WA Performance Based Standards (PBS) Scheme - Vehicle Certification Guidelines	https://www.mainroads.wa.gov.au/4a750f/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standards-pbs-scheme-vehicle-certification-guidelines.pdf
WA Performance Based Standards (PBS) Scheme – Vehicle Specifications (Part B)	https://www.mainroads.wa.gov.au/4ae8e1/globalassets/heavy-vehicles/permits-orders-schemes/pbs/wa-performance-based-standard-pbs-scheme-vehicle-specifications-part-b.docx?v=4afb7e

1 INTRODUCTION

The WA Performance Based Standards (PBS) Scheme allows access to higher productivity vehicles on routes that would not generally be approved for prescriptive vehicles with the same mass and dimensions, subject to the vehicle being designed to provide increased safety and productivity, without having an adverse impact on the road infrastructure.

2 WA PBS ACCESS LEVELS AND APPROVED NETWORKS

The following table shows the different PBS Networks that are available and an example of the vehicle combination and maximum mass used to assess the Approved Networks. PBS vehicles with the same or a lesser axle configuration will be granted access to the corresponding approved network, however the maximum vehicle mass is subject to the vehicle meeting gradeability requirements.

Tandem Drive and Tri Axle Trailer Combinations					
PBS Level	**Vehicle Example**	**Max. Length**	**Max. Gross Mass**	**AMMS Level**	**Approved Network**
Level 1B		≤20.0 m	67.5t	Level 1	PBS 1B.1
			68.5t	Level 2	PBS 1B.2
			70.5t	Level 3	PBS 1B.3
Level 2B		≤30.0 m	93.5t	Level 1	PBS 2B.1
			96.5t	Level 2	PBS 2B.2
			100.0t	Level 3	PBS 2B.3
Level 2C		≤36.5 m	93.5t	Level 1	PBS 2C.1
			96.5t	Level 2	PBS 2C.2
			100.0t	Level 3	PBS 2C.3
Level 3B		≤42.0 m	110.0t	Level 1	PBS 3B.1
			110.0t	Level 2	PBS 3B.2
			110.0t	Level 3	PBS 3B.3
Level 4B		≤60.0 m	150.0t	Level 1	PBS 4B.1
			150.0t	Level 2	PBS 4B.2
			150.0t	Level 3	PBS 4B.3

Tandem Drive and Quad Axle Trailer Combinations					
PBS Level	**Vehicle Example**	**Max. Length**	**Max. Gross Mass**	**AMMS Level**	**Approved Network**
Level 1		≤20.0 m	53.0t	Level 1	PBS Q1.1
			56.0t	Level 2	PBS Q1.2
			58.0t	Level 3	PBS Q1.3
Level 2		≤27.5 m	74.5t	Level 1	PBS Q2.1
			78.5t	Level 2	PBS Q2.2
			81.5t	Level 3	PBS Q2.3
Level 2B		≤30.0 m	85.0t	Level 1	PBS Q2B.1
			85.0t	Level 2	PBS Q2B.2
			85.0t	Level 3	PBS Q2B.3
Level 2C		≤36.5 m	85.0t	Level 1	PBS Q2C.1
			85.0t	Level 2	PBS Q2C.2
			85.0t	Level 3	PBS Q2C.3
Level 3		≤36.5 m	98.5t	Level 1	PBS Q3.1
			105.5t	Level 2	PBS Q3.2
			110.0t	Level 3	PBS Q3.3
Level 3B		≤42.0 m	110.0t	Level 1	PBS Q3B.1
			110.0t	Level 2	PBS Q3B.2
			110.0t	Level 3	PBS Q3B.3
Level 4		≤53.5 m	144.0t	Level 1	PBS Q4.1
			150.0t	Level 2	PBS Q4.2
			150.0t	Level 3	PBS Q4.3
Level 4B		≤60.0 m	150.0t	Level 1	PBS Q4B.1
			150.0t	Level 2	PBS Q4B.2
			150.0t	Level 3	PBS Q4B.3

Tri Drive and Tri Axle Trailer Combinations					
PBS Level	**Vehicle Example**	**Max. Length**	**Max. Gross Mass**	**AMMS Level**	**Approved Network**
Level 2B		≤30.0 m	98.0t	Level 1	PBS TD2B.1
			102.0t	Level 2	PBS TD2B.2
			106.0t	Level 3	PBS TD2B.3
Level 2C		≤36.5 m	98.0t	Level 1	PBS TD2C.1
			102.0t	Level 2	PBS TD2C.2
			106.0t	Level 3	PBS TD2C.3
Level 3B		≤42.0 m	141.0t	Level 1	PBS TD3B.1
			147.0t	Level 2	PBS TD3B.2
			153.0t	Level 3	PBS TD3B.3
Level 4B		≤60.0 m	184.0t	Level 1	PBS TD4B.1
			192.0t	Level 2	PBS TD4B.2
			200.0t	Level 3	PBS TD4B.3
Tri Drive and Quad Axle Trailer Combinations					
PBS Level	**Vehicle Example**	**Max. Length**	**Max. Gross Mass**	**AMMS Level**	**Approved Network**
Level 1		≤20.0 m	57.5t	Level 1	PBS TDQ1.1
			61.5t	Level 2	PBS TDQ1.2
			64.0t	Level 3	PBS TDQ1.3
Level 2		≤27.5 m	79.0t	Level 1	PBS TDQ2.1
			84.0t	Level 2	PBS TDQ2.2
			87.5t	Level 3	PBS TDQ2.3
Level 2B		≤30.0 m	100.5t	Level 1	PBS TDQ2B.1
			106.5t	Level 2	PBS TDQ2B.2
			111.0t	Level 3	PBS TDQ2B.3

Level 2C		≤36.5 m	100.5t	Level 1	PBS TDQ2C.1
			106.5t	Level 2	PBS TDQ2C.2
			111.0t	Level 3	PBS TDQ2C.3
Level 3		≤36.5 m	103.0t	Level 1	PBS TDQ3.1
			111.0t	Level 2	PBS TDQ3.2
			116.0t	Level 3	PBS TDQ3.3
Level 3B		≤42.0 m	124.5t	Level 1	PBS TDQ3B.1
			133.5t	Level 2	PBS TDQ3B.2
			139.5t	Level 3	PBS TDQ3B.3
Level 4		≤53.5 m	148.5t	Level 1	PBS TDQ4.1
			160.5t	Level 2	PBS TDQ4.2
			168.0t	Level 3	PBS TDQ4.3
Level 4B		≤60.0 m	194.0t	Level 1	PBS TDQ4B.1
			210.0t	Level 2	PBS TDQ4B.2
			220.0t	Level 3	PBS TDQ4B.3

3 APPROVED AXLE GROUP MASS LIMITS

1) The approved axle group mass limits are as follows:

AMMS Level	Tandem Axle Groups	Tri-Axle Groups	Quad-Axle Groups
1	17t	21.5t	24t
2	17t	22.5t	27t
3	17.5t	23.5t	28.5t

2) The approved steer axle mass limits are as follows:

Axle Group	Mass Limits
Single Steer Axle with tyres <375mm	6.5t
Single Steer Axle with tyres ≥375mm	7t
Twin Steer Axle Group with non-load sharing suspension	10t
Twin Steer Axle Group with load sharing suspension and tyres <375mm	11t
Twin Steer Axle Group with load sharing suspension and tyres ≥375mm	12t

4 CORRESPONDING BASE RAV NETWORKS

The four (4) base PBS access levels correspond to the standard Restricted Access Vehicle (RAV) Networks, as follows:

- PBS Level 1 is equivalent to Tandem Drive Network 1
- PBS Level 2 is equivalent to Tandem Drive Networks 2 to 4, or Tri Drive Network 3
- PBS Level 3 is equivalent to Tandem Drive Networks 5 to 8, or Tri Drive Network 4
- PBS Level 4 is equivalent to Tandem Drive Network 9 & 10, or Tri Drive Network 5

5 WA PBS ACCESS PRINCIPLES

1) Vehicles that pass the PBS Scheme will be granted access to the corresponding RAV Networks, provided the vehicle passes all the standards for the relevant base PBS access Level, as outlined in Section 4.
2) Concessional loaded PBS vehicles will be granted access to corresponding Concessional Networks if the vehicle passes all the standards for the relevant base PBS access Level.
3) Principles 1 and 2 are subject to the PBS vehicle aligning to the approved axle configuration of the standard vehicles approved for the relevant RAV Networks / Concessional Networks. If the PBS vehicle has a greater number of axles or a different axle configuration, individual route assessments must be conducted and the conditions outlined in the following principles apply.
4) Despite meeting all relevant PBS standards, a vehicle will only be approved access if there is a safety benefit and/or productivity benefit, and the vehicle does not result in an unacceptable increased impact on the road infrastructure.
5) Vehicles that pass the PBS Scheme, however only meet the standards for one of the secondary “B” or “C” levels, may be granted access to the appropriate PBS Network.
6) Where a road is not already approved on the appropriate PBS Network:
    (a) The road should already be approved on the equivalent standard RAV Network before being assessed for a PBS Network;
    (b) Additional assessments may need to be conducted, including assessment of gradients, swept paths, stacking distances and bridges, to ensure the route can safety accommodate the PBS vehicle;
    (c) The proposed route must not be contestable with rail. If there is any concern with regard to rail contestability, Main Roads will consult with the Department of Transport for further assessment.
7) Where there is any question of the route suitability, the PBS Assessor may be required to conducted specific route assessments, as requested by Main Roads, at the cost of the applicant.
8) The vehicle must be fitted with an in-vehicle telematics device that is monitored by a Service Provider who is certified by Transport Certification Australia (TCA).

6 GREENMOUNT HILL PBS ACCESS

PBS Level 2B and 2C vehicles, operating up to AMMS Level 3 concessional mass limits may be approved to operate on the section of Great Eastern Highway between Northam and Midvale, subject to the following additional conditions:

1) The prime mover must be fitted with an engine that meets the emission standards specified in the Vehicle Standard (Australian Design Rule 80/3 – Emission Control for Heavy Vehicles) 2006 (equivalent to Euro 5 Standards).
2) The prime mover must be fitted with a driver fatigue and distraction monitoring system, with appropriate governance in place to ensure events are managed effectively.
3) The prime mover must be enrolled under the application of Hill Descent Monitoring (HDM) with a Transport Certification Australia (TCA) Certified Service Provider to ensure all vehicles stop in the mandatory stopping bay at the top of Greenmount Hill to check brakes, then descend in the appropriate low gear at a speed of no more than 40km/h.
4) The prime mover must be fitted with and utilise an auxiliary braking system when descending Greenmount Hill. Drivers must be familiar with the operation of the particular auxiliary braking system, with training records provided to HVS.
5) At least one forward-facing camera and one rear-facing camera must be mounted on the prime mover and must operate in accordance with the *Restricted Access Vehicle Video Recording Requirements*, available on the Specific Access Permits page on the Main Roads website. The rear-facing camera must be positioned on the driver's side of the prime mover.
6) RAVs must travel in the left-hand lane at all times, unless;
   (a) avoiding an obstruction;
   (b) obeying a traffic-control signal; or
   (c) intending to turn off the carriageway, and in order to do so safely it is necessary to position the vehicle in another lane before starting the turn.

7 LESMURDIE HILL PBS ACCESS

PBS Level 2B and 2C vehicles, operating in excess of AMMS Level 1 concessional mass limits may be approved to operate on the section of Welshpool Road East between Canning Road and Tonkin Highway, subject to the following additional conditions:

1) The vehicle combination must be fitted with disc brakes on all axles.
2) The prime mover must be fitted with an engine that meets the emission standards specified in the Vehicle Standard (Australian Design Rule 80/3 – Emission Control for Heavy Vehicles) 2006 (equivalent to Euro 5 Standards).
3) The prime mover must be enrolled under the application of Hill Descent Monitoring (HDM) with a Transport Certification Australia (TCA) Certified Service Provider to ensure all vehicles stop in the mandatory stopping bay at the top of Lesmurdie Hill to check brakes, then descend in the appropriate low gear at a speed of no more than 40km/h.
4) The prime mover must be fitted with and utilise an auxiliary braking system when descending Lesmurdie Hill. Drivers must be familiar with the operation of the particular auxiliary braking system, with training records provided to HVS.
5) At least one forward-facing camera and one rear-facing camera must be mounted on the prime mover and must operate in accordance with the *Restricted Access Vehicle Video Recording Requirements*, available on the Specific Access Permits page on the Main Roads website. The rear-facing camera must be positioned on the driver's side of the prime mover.

8 ROELANDS HILL PBS ACCESS

PBS Level 3 vehicles, not exceeding 36.5 metres in length, operating up to AMMS Level 3 concessional mass limits may be approved to operate on the section of Coalfields Highway between the Rest Area at SLK 13.47km and South Western Highway intersection, subject to the following additional conditions:

1) The prime mover must be enrolled under the application of Hill Descent Monitoring (HDM) with a Transport Certification Australia (TCA) Certified Service Provider to ensure all vehicles stop in the mandatory stopping bay at the top of Roelands Hill to check brakes, then descend in the appropriate low gear at a speed of no more than 40km/h.
2) The prime mover must be fitted with and utilise an auxiliary braking system when descending Roelands Hill. Drivers must be familiar with the operation of the particular auxiliary braking system, with training records provided to HVS.
3) At least one forward-facing camera and one rear-facing camera must be mounted on the prime mover and must operate in accordance with the *Restricted Access Vehicle Video Recording Requirements*, available on the Specific Access Permits page on the Main Roads website. The rear-facing camera must be positioned on the driver's side of the prime mover.

9 CONTACTS

For further information about the WA PBS Scheme please visit the Performance Based Standards (PBS) page on the Main Roads Website or contact Main Roads Heavy Vehicle Access Improvement and Policy Section via:

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