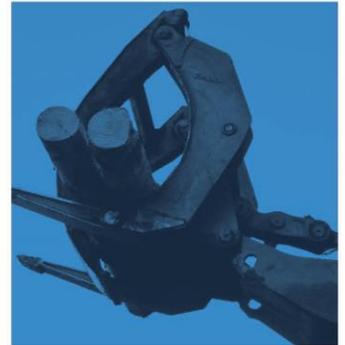
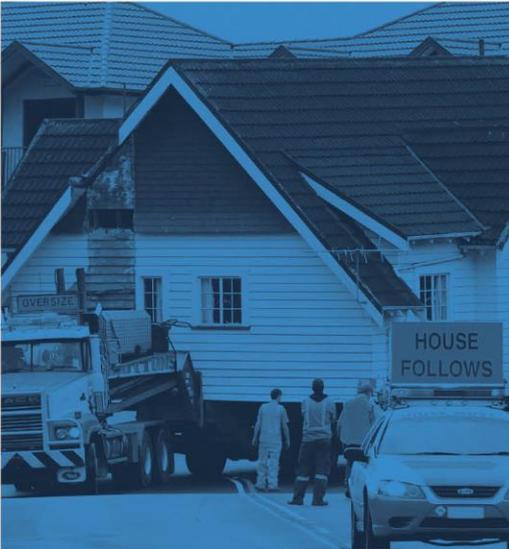

VEHICLE DIMENSIONS AND MASS PERMITTING MANUAL

2nd edition

Volume 1: Applying for and operating under an overweight, overdimension, HPMV or specialist vehicle permit



Vehicle dimensions and mass permitting manual (volume 1)

2nd edition, amendment 5
Current as at 1 May 2021

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Document management plan

1) Purpose

This management plan outlines the updating procedures and contact points for the document.

2) Document information

Document name	<i>Vehicle dimensions and mass permitting manual</i> (volume 1)
Document availability	This document is located in electronic form on the Waka Kotahi NZ Transport Agency's website at www.nzta.govt.nz .
Document owner	Senior Manager Safer Commercial Transport Regulatory Services Waka Kotahi NZ Transport Agency
Document contact person	Manager Permitting Regulatory Services, Safer Commercial Transport Waka Kotahi NZ Transport Agency
Document sponsor	General Manager of Regulatory Services and Director of Land Transport Waka Kotahi NZ Transport Agency

3) Amendments and review strategy

All corrective action/improvement requests (CAIRs) suggesting changes will be acknowledged by the document owner.

Update type	Comments	Frequency
Amendment (minor revisions)	Updates are incorporated as soon as possible.	As required
Review (major revisions)	Amendments fundamentally changing the content or structure of the document will be incorporated as soon as practicable. They may require coordinating with the review team timetable.	At least annually
Notification	All users who have registered their interest by email to info@nzta.govt.nz will be advised by email of amendments and updates.	Immediately

4) Other information (at document owner's discretion)

There will be occasions, depending on the subject matter, when amendments will need to be worked through by the review team before the amendment is actioned. This may cause some variations to the timeframes above.

5) Distribution of this management plan

Copies of this document management plan are to be included in Waka Kotahi's intranet at the next opportunity and sent to: channels@nzta.govt.nz.

Record of amendments to this volume

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to the manual, please also refer to the ‘Record of amendments’ at the start of volume 2.

Second edition, amendment 5

Description of changes	Effective date
<p>Revisions reflect changes from the Land Transport (NZTA) Legislation Amendment Act 2020 and the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2020. Updates also include policy changes as outlined below.</p> <p>Updated parts:</p> <p>Part A: Introduction to VDAM permits</p> <p><i>A1.1 Enabling legislation:</i> Information added about Director of Land Transport role.</p> <p>Part B: Overweight permits</p> <p><i>B1.4 Individual axle mass limits</i> and <i>B1.5 Axle set mass limits:</i> New mass limits for standard-tyred tri-axle sets have been added to the general access mass limit tables in the VDAM Rule and the definition of ‘tri-axle set’ has been amended.</p> <p>Part C: Overdimension permits</p> <ul style="list-style-type: none"> <i>C3.3 Travel time restrictions:</i> Exemptions from travel time restrictions now also apply to overdimension snow ploughs. <i>C4.2 Piloting requirements:</i> The piloting requirements for overheight permits have been revised. A Class 2 load pilot must be used within city limits or anywhere in New Zealand, depending on the height of the vehicle or load. <p>Part D: HPMV higher mass permits</p> <ul style="list-style-type: none"> <i>D1.3 General access mass limits:</i> Mass limits for standard-tyred tri-axle sets added and definition of ‘tri-axle set’ amended. <i>D2.2 Eligible vehicle designs:</i> Diagram and RUC information for a 10-axle B-train (B1243) added to the list of designs eligible for an HPMV permit. <p>Part E: HPMV overlength permits</p> <p><i>E2.3 Entry certification requirements:</i> New and current pro-forma design diagrams may be used for certification of vehicle design limits at entry certification. Previously, a temporary overlength permit issued with vehicle identification numbers (VINs) was required.</p> <p>Part I: Definitions and glossary</p> <p>Definitions updated.</p>	1 May 2021

Second edition, amendment 4

Description of changes	Effective date
<p>Part A, section A2.6 Permit processing times</p> <p>Due to increased volumes and the requirement for more in-depth operator compliance checks, the target times for processing HPMV permits have been extended.</p> <p>The processing times have also been updated in parts D, E and F.</p>	1 February 2021

Second edition, amendment 3

Description of changes	Effective date
<p>Part B: Overweight permits</p> <p>Section <i>B9.4 Calculating the VAI</i>: Tyre size ('specified standard other than single-tired spaced') and cross-reference corrected in procedure.</p>	21 September 2020

Second edition, amendment 2

Description of changes	Effective date
In this amendment	
<p>Revisions reflect the following changes:</p> <ul style="list-style-type: none"> • Amendments to various land transport rules from the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2018, which took effect on 1 June 2019, and • New performance based standards (PBS) introduced by the Transport Agency in May 2019. <p>Updates also include some policy changes and clarifications.</p> <p>The main changes in each part are outlined below.</p>	1 June 2020
Part A: Introduction to VDAM permits	
<ul style="list-style-type: none"> • Operator compliance checks: Assessment criteria clarified and note added that permit processing time could take longer if compliance issues need to be investigated. • New performance based standards (PBS): Information updated about how overlength HPMV designs are assessed for permit eligibility. • Permit conditions: Information on additional permit conditions and permit type specific conditions expanded. Clarification added that HPMV permits cannot specify travel time, speed or bridge crossing restrictions. • Off-route: Information added about the treatment of vehicles that deviate from a permitted route, and enforcement officers' powers to divert vehicles from a permitted route clarified. • Permit revocation: Process and timeframe for reviews of revocation decisions clarified. 	1 June 2020

Second edition, amendment 2 continued

Description of changes	Effective date
Part B: Overweight permits	
<ul style="list-style-type: none"> • Minimum axle requirements for rigid vehicles transporting a load clarified. • Maximum speed limits and maximum tyre pressures updated. • Towing disabled vehicles: Requirement to tow to the nearest safe area clarified. 	1 June 2020
Part C: Overdimension permits	
<ul style="list-style-type: none"> • Category 4B engineering assessment: New load type distinction ('long and low' or 'general') introduced to determine whether a written statement by the operator or an engineer's assessment is needed to satisfy a category 4B engineering assessment requirement. • Notes added that overdimension vehicles or loads may exceed 35m in length (and come within category 3 limits) if they use a manned steering jinker. 	1 June 2020
Part D: HPMV higher mass permits	
<ul style="list-style-type: none"> • Maximum RUC weights and R12T23 diagram added to list of vehicle types eligible for an HPMV higher mass permit. • Mass limits tables reformatted to enable easier comparison of general access and HPMV permit mass limits. • Vehicle attributes checks: Two types of attributes check sheets explained. 	1 June 2020
Part E: HPMV overlength permits	
<ul style="list-style-type: none"> • New performance based standards (PBS): Information updated for new PBS and three types of pro-forma designs explained (new, current and superseded). • Transition arrangement for superseded pro-forma designs explained. • Non pro-forma/one-off designs: Permit eligibility criteria and application process explained. Applications will be assessed on a case-by-case basis. 	1 June 2020
Part F: HPMV 50MAX permits	
<ul style="list-style-type: none"> • Variations from 50MAX pro-forma designs ('non pro-formas'): No longer eligible for 50MAX permits following the introduction of new PBS. 	1 June 2020
Part G: Specialist vehicle permits	
<ul style="list-style-type: none"> • How to apply: Acceptable evidence of load share now includes a letter from the vehicle manufacturer. 	1 June 2020
Part I: Definitions and glossary	
<ul style="list-style-type: none"> • Definitions amended by recent legislation changes have been updated. 	1 June 2020

Second edition, amendment 1

Description of changes	Effective date
<p>Part E: HPMV overlength permits</p> <p>Notes were added that the Transport Agency was unlikely to issue overlength permits for non pro-forma vehicles, or approve new vehicle designs as pro-forma designs, while new performance based standards (PBS) were being developed.</p> <p>These notes were removed and the manual was revised in amendment 2 following the introduction of the new PBS (see <i>Second edition, amendment 2</i> above).</p>	8 February 2018

Second edition, amendment 0

Description of changes in volume 1	Effective date
In this edition	
<p>The 2nd edition of this volume incorporated changes from:</p> <ul style="list-style-type: none"> the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule), which took effect on 1 February 2017, and the Land Transport Amendment Act 2017, which took effect on 11 August 2017. <p>The manual was also updated to reflect policy and process changes since the publication of the 1st edition in 2015.</p> <p>The main changes to volume 1 are outlined below.</p>	11 August 2017
Part A: Introduction to VDAM permits	
<p>Information added about:</p> <ul style="list-style-type: none"> Specialist vehicle permits Restricted higher mass limits (45/46t) without a permit for 7- or 8-axle vehicles Critical conditions for overdimension permits. <p>Enforcement: Overloading offences now include exceeding gross vehicle mass and mass limits on posted bridges.</p>	11 August 2017
Part B: Overweight permits	
<ul style="list-style-type: none"> General access mass limit tables updated. Vehicle axle index (VAI) and pavement loading ratio (PLR) limits increased and standardised across most vehicle types. Area permit type merged with continuous permit: References to area permits deleted. Construction equipment and minor items: 40,000kg gross mass limit for continuous permits removed. Section on towing and transporting disabled vehicles updated. Bridge engineering self supervision (BESS) registration requirements updated. ISO containers: Gross mass limit increased from 44,000kg to 46,000kg. Reference axle weight tables and examples of VAI calculations updated for new mega tyre classification. 	11 August 2017

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Second edition, amendment 0 continued

Description of changes in volume 1	Effective date
Part C: Overdimension permits	
<ul style="list-style-type: none"> Overdimension categories clarified (previous category 5 now codified as category 4B in the VDAM Rule). Operating requirements by category updated. Conditions on overdimension permits now distinguish between critical and additional conditions. Operator responsibilities revised, including the requirement to designate an on-road supervisor and provide an adequate number of pilots. Hazard warning equipment requirements updated. Travel time and zone restrictions updated. Operator compliance check introduced for overdimension permit applications. 	11 August 2017
Part D: HPMV higher mass permits	
<ul style="list-style-type: none"> General access mass limit and HPMV permit mass limit tables updated. Axle weight flexibility (AWF): 'User defined' option abolished. AWF options when applying for a permit are either 'general access' or 'HPMV permit'. AWF examples added. Roll stability control requirements clarified. Section added about renewing an HPMV higher mass permit. 	11 August 2017
Part E: HPMV overlength permits	
<ul style="list-style-type: none"> Engineer's route assessment no longer required with non pro-forma overlength permit applications. Roll stability requirements clarified. 50MAX combination attributes check sheet acceptable with an overlength permit application. 	11 August 2017
Part F: HPMV 50MAX permits	
<ul style="list-style-type: none"> 50MAX permits now issued for country-wide 50MAX network (previously separate permits were issued for the North Island and the South Island). Section added about renewing a 50MAX permit. 	11 August 2017
Part G: Specialist vehicle permits	
New part added: Information about applying for and operating under a specialist vehicle permit (new permit category introduced by the VDAM Rule 2016).	11 August 2017

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About this manual

Purpose, background and audience

Purpose

The purpose of this *Vehicle dimensions and mass permitting manual* is to:

- state Waka Kotahi NZ Transport Agency's current policies, standards, processes and procedures for the permitting of vehicles exceeding standard dimension and mass limits
- give comprehensive guidance to transport operators about the requirements for applying for and operating under a permit for a vehicle exceeding standard dimension and mass limits
- be a transparent body of knowledge of how Waka Kotahi assesses and issues such permits
- share this knowledge with local road controlling authorities and provide a reference tool for issuing overweight, HPMV higher mass or specialist vehicle permits for local roads, and
- give guidance to designers and manufacturers of heavy commercial vehicles.

Background to the first edition

The permitting of heavy commercial vehicles has evolved over time. The Land Transport Rule: Vehicle Dimensions and Mass 2002 (the VDAM Rule), when first introduced, rationalised the existing special permit regimes for overweight and overdimension vehicles carrying indivisible loads and removed anomalies in how such permits were administered.

In 2010, the 2002 VDAM Rule was amended to allow for permits to be granted for high productivity motor vehicles (HPMV) carrying divisible loads to exceed standard dimension and mass limits and operate on specified routes.

The documentation on dimension and mass permits had evolved similarly over time. Anyone needing information about such permits had to consult several different manuals, Waka Kotahi's website or factsheets, or call the customer service centre for help.

Continued on next page

Purpose, background and audience continued

Background to the first edition

(continued)

The first edition of this manual combined the various information sources about vehicle dimension and mass permits for the first time in a single publication. Specifically, the manual brought together Waka Kotahi's:

- Overweight Permit Manual
 - HPMV Manual
 - material from various factsheets from Waka Kotahi's website, and
 - information about overdimension permitting, which had not previously been documented outside of the VDAM Rule.
-

Background to the second edition

The VDAM Rule 2002 was replaced by the Land Transport Rule: Vehicle Dimensions and Mass 2016 with effect from 1 February 2017.

The 2016 VDAM Rule was intended to deliver productivity improvements, greater regulatory efficiency and reduced compliance costs without compromising the road network or the safety of road users.

The legislative reform also provided an opportunity for Waka Kotahi to review its heavy vehicle permitting policies and processes and update or clarify them where necessary.

The manual was extensively updated to reflect the legislative as well as policy and process changes and remains the authoritative source of information about all heavy vehicle permitting.

Audience

The audience for this manual is:

- transport operators
 - Waka Kotahi staff and contractors involved in processing vehicle dimension and mass permit applications
 - local road controlling authorities
 - truck and trailer manufacturers
 - enforcement agents, for example the Commercial Vehicle Safety Team (CVST) of the New Zealand Police, and
 - anyone who wants to gain an understanding of permitting policies and procedures for vehicles exceeding standard dimension and mass limits.
-

How to use this manual

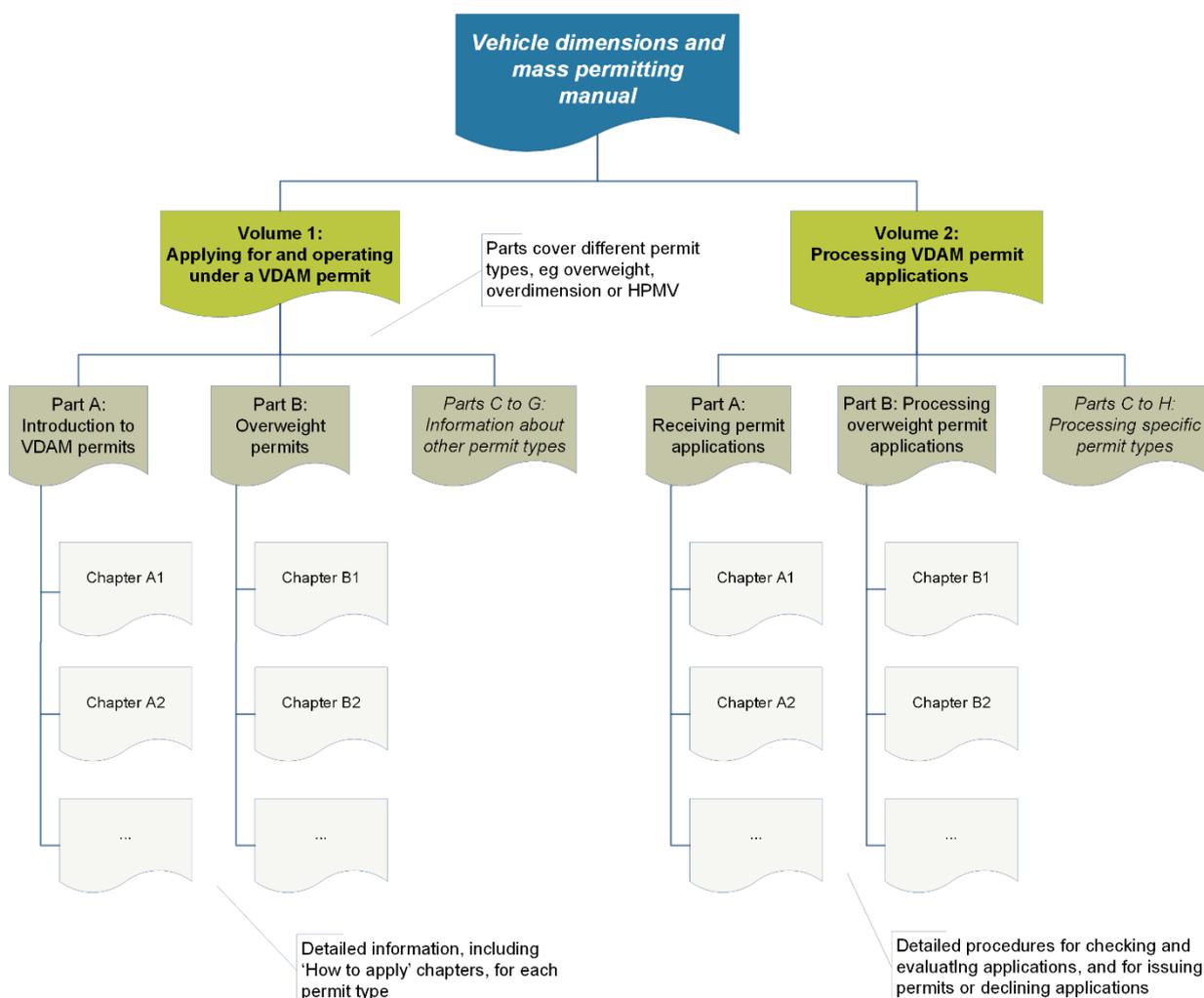
Manual structure

The manual is divided into two volumes:

- Volume 1: Applying for and operating under a vehicle dimension and mass permit, and
- Volume 2: Processing vehicle dimension and mass permit applications.

Each volume consists of separate parts that cover general information or a specific permit type. Parts are further divided into numbered chapters and sections for easy referencing and finding of information.

The diagram below gives a high-level overview of the structure of the manual.



Continued on next page

How to use this manual continued

Electronic access

You can access the manual on Waka Kotahi's website at www.nzta.govt.nz/resources.

You have the option of either viewing a PDF file of a complete volume, or just an individual part of the manual.

If you are interested in a specific permit type, for example HPMV 50MAX permits, you may wish to access or download just the PDF file of the relevant part. The smaller file size means that it will load faster and will be easier to search and navigate.

Finding information

To find information in the manual, refer to the diagram on the previous page to identify the right volume for your search.

If you are a transport operator and your query relates to applying for or operating under a vehicle dimension and mass permit, see volume 1 of the manual.

If you want to find information about how permit applications are evaluated and processed, see volume 2.

Tables of contents

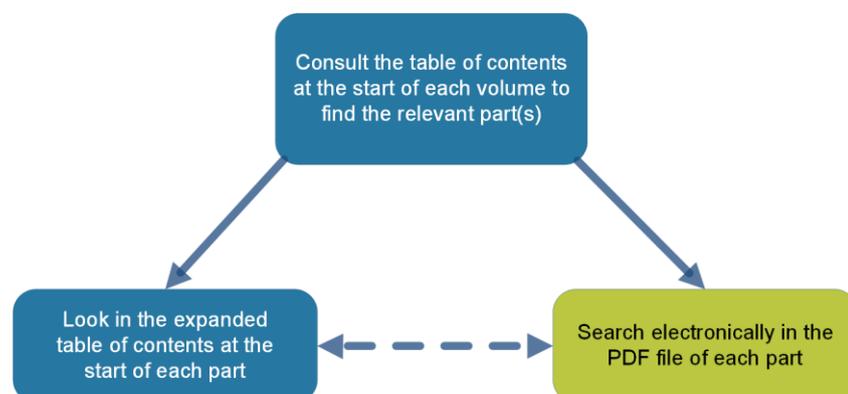
The manual has tables of contents at the start of each volume. The descriptive part, chapter and numbered section titles help you locate the information you are looking for.

Parts and chapters also have detailed tables of contents.

Electronic search

If you are viewing a PDF version of the manual electronically, you may wish to use the search function in your PDF viewer.

The diagram below illustrates the options for finding information in the manual.



Continued on next page

How to use this manual continued

Hyperlinks

In the electronic PDF version of the manual, tables of contents and cross-references are hyperlinked within each part.

To find these hyperlinks, hover your mouse over a cross-reference or table of contents entry until the cursor changes to the hand icon () and then click to activate the link.

Definitions and glossary

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, refer to *Part 1: Definitions and glossary* in volume 1 of the manual.

Help

If you need further help or cannot find the information you are looking for, please call Waka Kotahi's contact centre on 0800 699 000, or email info@nzta.govt.nz.

Vehicle dimensions and mass permitting manual (volume 1)

Part A

Introduction to vehicle dimensions and mass permits

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to the manual, please refer to the 'Record of amendments' at the start of both volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Director of Land Transport: The Director role was established by the Land Transport (NZTA) Legislation Amendment Act 2020. Information added about the role, delegations of authority, and the terminology used in the manual.</p> <p>Amended section: <i>A1.1 Enabling legislation</i>.</p>	1 May 2021
Amendment 4	<p>Permit processing times extended: Due to increased volumes and the requirement for more in-depth operator compliance checks, the target times for processing HPMV permits have been extended.</p> <p>Amended section: A2.6.</p> <p>Outdated references to historical route restrictions removed for vehicles carrying 45/46t without a permit. Amended section: A1.4.</p>	1 February 2021
Amendment 2	<p>This part of the manual has been revised to reflect the following changes:</p> <ul style="list-style-type: none"> • Amendments to various land transport rules from the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2018, which took effect on 1 June 2019, and • New performance based standards (PBS) introduced by the Transport Agency in May 2019. <p>Updates also include minor clarifications and additional information. The main amendments are as follows.</p> <p>45/46t limits: References to route restrictions for mass limits of 45,000 or 46,000kg removed. Restrictions ceased to apply from 1 December 2017.</p> <p>Amended sections: A1.3, A1.4 and A2.1.</p> <p>Operator compliance checks: Assessment criteria clarified and note added that permit processing time could take longer if compliance issues need to be investigated.</p> <p>Amended sections: A2.4 and A2.6.</p> <p>New performance based standards (PBS): Information updated about how overlength HPMV designs are assessed for permit eligibility.</p> <p>Amended sections: A1.5, A2.1, A2.3 and A2.6.</p>	1 June 2020

Continued on next page

Record of amendments in this part continued

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 2 (continued)	<p>Permit conditions: Information on additional permit conditions and permit type specific conditions included. Clarification added that HPMV permits cannot specify travel time, speed or bridge crossing restrictions.</p> <p>Amended sections: A3.2 and A3.3</p> <p>Off-route: Information added about the treatment of vehicles that deviate from a permitted route, and enforcement officers' powers to divert vehicles from a permitted route clarified.</p> <p>Amended sections: A3.2, A4.1 and A4.2.</p> <p>Permit revocation: Process and timeframe for reviews of revocation decisions clarified.</p> <p>Amended section: A3.5.</p>	1 February 2021

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Part A: Introduction to vehicle dimensions and mass permits

Introduction

About this part

This part of the manual provides background and overview information about vehicle dimensions and mass (VDAM) permits. It covers:

- the legislative background
 - an overview of the different VDAM permit types
 - which permit type to apply for and where to apply
 - the general requirements when operating under a VDAM permit, and
 - enforcement of VDAM permits.
-

Purpose

The purpose of this part is to give a high-level overview of the different VDAM permit types and to help applicants determine which permit type they may need to operate their heavy vehicles and loads.

This part is not intended as a full set of relevant policies for each permit type. Detailed information on the specific permit types can be found in subsequent parts of this volume of the manual.

Audience

The audience for this part is anyone who wants to gain a general understanding of VDAM permits and applying for permits. This may include:

- operators of heavy vehicles, buses, concrete mixers, ground spreaders or rubbish trucks
 - Waka Kotahi NZ Transport Agency permitting staff and contractors
 - local road controlling authorities, and
 - enforcement agents, for example the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.
-

Terminology and abbreviations

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, see *Part I: Definitions and glossary*.

Continued on next page

Introduction continued

In this part

This part contains the following chapters:

Chapter	See page
Chapter A1: Overview of vehicle dimensions and mass permits	A1-1
Chapter A2: Applying for a VDAM permit	A2-1
Chapter A3: Operating under a VDAM permit	A3-1
Chapter A4: Enforcement of VDAM permits	A4-1

Chapter A1: Overview of vehicle dimensions and mass permits

Overview

About this chapter

This chapter describes the legislation that governs vehicle dimensions and mass (VDAM) permits and the different permit categories and types.

In this chapter

This chapter contains the following sections:

Chapter	See page
A1.1 Enabling legislation	A1-2
A1.2 Overview of VDAM permit types	A1-3
A1.3 Permits for exceeding prescribed mass limits	A1-7
A1.4 Higher mass limits without a permit (45,000 or 46,000kg)	A1-10
A1.5 Permits for exceeding dimension limits	A1-11

A1.1 Enabling legislation

VDAM Rule

The enabling legislation for VDAM permits is the Land Transport Rule: Vehicle Dimensions and Mass 2016 (referred to in this manual as ‘the VDAM Rule’).

The VDAM Rule 2016 came into effect on 1 February 2017, repealing and replacing the Land Transport Rule: Vehicle Dimensions and Mass 2002.

Purpose of the VDAM Rule

The purpose of the VDAM Rule is to ensure that heavy motor vehicles are operated efficiently and safely on New Zealand roads. It does this by setting limits to the standard configurations, dimensions and mass of vehicles so that they can be safely operated within the constraints of the road network.

At the same time, the rule enables road controlling authorities to issue permits that allow heavy motor vehicles to exceed standard dimension and mass limits. The rule sets the requirements for issuing, and operating under, such permits.

Role of the Director of Land Transport

Under the VDAM Rule, Waka Kotahi’s Director of Land Transport is responsible for issuing permits in accordance with the requirements of the rule.

The Director has delegated the authority to issue permits to Waka Kotahi’s permitting staff and their contractors. References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be interpreted as references to the Director if the reference relates to a Director function under the VDAM Rule.

Other legislation applies

The VDAM Rule works in conjunction with and addition to other transport-related legislation, and does not set aside responsibilities or restrictions imposed by other legislation. For example, operators and drivers must be aware of the general responsibilities related to vehicle and load safety or driver behaviour under the Land Transport Act 1998.

This also applies to local bylaws such as posted mass limits on bridges, which override the mass limits prescribed under the VDAM Rule and may prohibit a vehicle exceeding the posted limit from crossing, even if the vehicle operates under a permit.

Permits issued before 1 February 2017

VDAM permits issued before 1 February 2017 under the 2002 VDAM Rule continue to be valid for the duration of the permit period, unless revoked or replaced.

A1.2 Overview of VDAM permit types

Guiding principles

There are two main categories of VDAM permit:

1. permits to exceed general access mass limits, and
2. permits to exceed dimension limits.

These two main categories are further divided into different permit types, depending on:

- whether the load is divisible or indivisible, and/or
 - vehicle type, eg high productivity motor vehicle (HPMV) or specialist vehicle.
-

Specific permits for indivisible loads

Two VDAM permit types are specifically for indivisible loads:

- overweight permits, and
 - overdimension permits.
-

Definition of 'indivisible' load

A load is considered indivisible if it cannot reasonably, without disproportionate effort, cost or risk of damage, be reduced in size or be divided into smaller sections for transport. This includes certain divisible loads specified in the VDAM Rule that may be transported together with an indivisible load, such as transformer oil, construction equipment or ballast.

Customs-sealed import/export ISO containers are also eligible for overweight permits.

Definition of 'divisible' load

A divisible load is a load that can be separated into smaller units without disproportionate effort. It is either fluid or has separate components, even though these components may be temporarily connected for handling, storage or transport. Examples are milk, gravel, logs, animals and bundles of steel or timber.

Continued on next page

A1.2 Overview of VDAM permit types continued

Permits for specific vehicle types

There are specific VDAM permit types for eligible vehicles that are either high productivity motor vehicles (HPMVs) or 'specialist' vehicles, as follows:

If your vehicle is...	Then you should apply for a...
an HPMV (see <i>What is an HPMV?</i> below)	<ul style="list-style-type: none"> • higher mass HPMV permit, or • 50MAX HPMV permit, AND • overlength HPMV permit if your vehicle exceeds standard length limits.
a specialist vehicle (see <i>What is a specialist vehicle?</i> below)	specialist vehicle permit.

What is an HPMV?

A high productivity motor vehicle is a class of heavy vehicle that is used for regular freight movements and is no wider or higher than standard vehicles but operates under a permit to exceed:

- a gross mass of 44,000kg and general access mass limits specified in the VDAM Rule, and/or
- standard vehicle length limits.

What is a specialist vehicle?

The VDAM Rule identifies the following vehicle types as 'specialist' vehicles that are eligible for a permit:

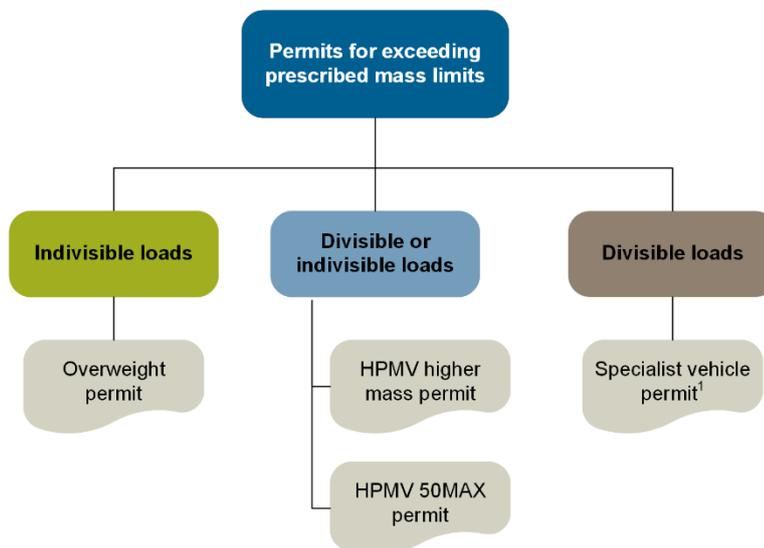
- passenger service vehicle
- concrete mixer
- ground-spreader truck, or
- rubbish truck (with a compactor).

Continued on next page

A1.2 Overview of VDAM permit types continued

Overview of permits for exceeding prescribed mass limits

This diagram shows the different permit types for exceeding general access mass limits, ie the mass limits prescribed in the VDAM Rule schedule 3, parts 1 and 2.



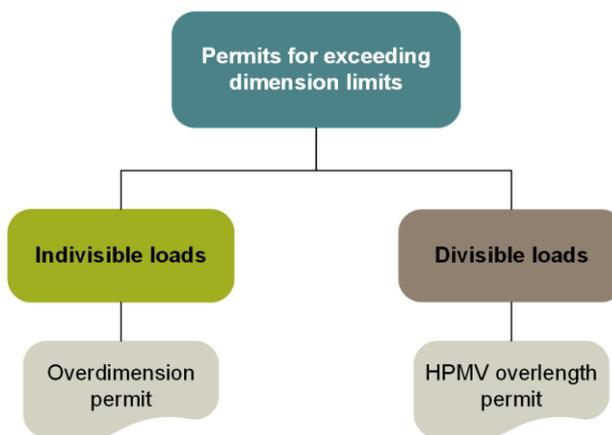
Note:

1. Specialist vehicle permits are for exceeding general access **axle** mass limits only. Standard gross mass limits apply.

For more details see the next section *A1.3 Permits for exceeding prescribed mass limits*.

Overview of permits for exceeding dimension limits

This diagram shows the different permit types for exceeding dimension limits.



For more details see section *A1.5 Permits for exceeding dimension limits*.

Continued on next page

A1.2 Overview of VDAM permit types continued

Several permits per vehicle

Vehicles that exceed both mass and dimension limits need separate permits. For example, a vehicle that carries a large indivisible load such as plant or machinery and exceeds both mass and dimension limits needs an overweight as well as an overdimension permit.

Separate permits for local roads and state highways

Depending on the permit type, your route and the region you are travelling in, you may also need separate permits for local roads and for state highways.

For details see section *A2.2 Where to apply for a VDAM permit*.

Carrying multiple permits

Multiple permits must be carried together in the vehicle.

A1.3 Permits for exceeding prescribed mass limits

Four types of permit to exceed mass limits

There are four different types of permit for exceeding prescribed mass limits:

1. overweight permits
2. HPMV higher mass permits
3. HPMV 50MAX permits, and
4. specialist vehicle permits.

This section describes the different types of legal mass limit and the different permit types for exceeding them.

Different legal mass limits

The VDAM Rule prescribes three types of mass limits:

- general access mass limits
- restricted access mass limits up to a maximum gross mass of 45,000 or 46,000kg without a permit for vehicles with at least seven axles and a minimum wheelbase, and
- permit mass limits.

Sets of mass limits

The VDAM Rule prescribes general access and permit mass limits for:

- individual axles
- axle sets, and
- groups of axles depending on the distance from the first axle to the last (gross mass limits).

However, restricted access mass limits apply to total gross mass only.

Rationale for mass limits

Axle mass limits are designed to manage the impact of heavy vehicles on pavements.

Axle set and gross mass limits are designed to manage the impact of heavy vehicles on bridges and other road infrastructure.

Continued on next page

A1.3 Permits for exceeding prescribed mass limits

continued

General access mass limits

The general access mass limits prescribed in the VDAM Rule represent the maximum mass that can be sustained under normal conditions without undue deterioration of the road network's pavement and bridges.

Subject to any specific, temporary or posted route or bridge restrictions, vehicles carrying loads within the general access mass limits can travel without a permit anywhere on the road network.

Legislation reference: VDAM Rule schedule 3, parts 1 and 2.

Restricted access mass limits

Heavy vehicle combinations with at least seven axles and a minimum wheelbase may carry increased gross mass up to specified limits without a permit. For details see the next section *A1.4 Higher mass limits without a permit (45,000 or 46,000kg)*.

Permit mass limits

The VDAM Rule specifies higher mass limits than general or restricted access limits that are available only under a permit (so-called 'permit mass limits'). However, the mass allowed on a permit is limited to the lowest of:

- the maximum permit mass limits set out in the VDAM Rule
- any of the vehicle's design or load limits, or
- the maximum limit that the lowest capacity structure on the route can safely support.

Legislation reference: VDAM Rule schedule 3, parts 3 and 4.

Note: In determining the maximum mass a vehicle can carry, operators should also refer to the VDAM Rule section 4.4: Axle mass limits.

Rationale for permit mass limits

Although there is no established right to exceed general access mass limits, it is not feasible to reduce some loads. Permit mass limits help to manage heavy loads using the network and thereby limit the consequent damage and help mitigate safety risks.

Higher mass loads carried on high productivity motor vehicles (HPMVs) also increase freight efficiency by increasing the amount of freight that can be safely carried on New Zealand roads while at the same time reducing the number of vehicles and trips needed for carrying that freight.

Continued on next page

A1.3 Permits for exceeding prescribed mass limits

continued

Restrictions apply

Depending on the permit type, permits for exceeding prescribed mass limits may specify restrictions to:

- the routes on which the vehicle may operate
- the number of trips the vehicle is allowed to make
- the time of day when the vehicle is allowed to travel
- the vehicle's speed, or
- any other conditions under which the vehicle may be operated that the road controlling authority considers necessary to ensure the safety of road users, the protection of infrastructure or to provide for permit compliance.

For details see section *A3.2 Permit conditions*.

Which permit to apply for?

See section *A2.1 Which VDAM permit do you need?* for more guidance on which permit to apply for, or refer to the part on a specific permit type in this volume.

A1.4 Higher mass limits without a permit (45,000 or 46,000kg)

Restricted access mass limits

Heavy motor vehicle combinations with at least seven axles are allowed to carry increased gross mass without a permit, up to the following limits:

Vehicle requirements	Maximum mass (kg)
7-axle combination with a minimum wheelbase of 16.8m	45,000
8-axle combination with a minimum wheelbase of 17.4m	46,000

Legislation reference: VDAM Rule schedule 3, table 2.2.

General access

Eligible vehicles operating at the above limits have general access on all local roads and state highways, except where route or bridge restrictions are posted.

More information can be found at www.nzta.govt.nz/commercial-driving/trucks-and-tow-trucks/45-46-tonne-general-access-changes/.

A1.5 Permits for exceeding dimension limits

What are dimension limits?

The VDAM Rule specifies the maximum dimension limits for vehicles to operate on New Zealand roads. The dimension limits are designed to ensure that vehicles:

- fit safely on a road, and
- interact safely with other road users.

The VDAM Rule specifies maximum limits for the following dimensions:

- width
- height
- overall length
- forward distance
- front and rear overhang
- ground clearance, and
- inter-vehicle spacing.

The rule also specifies performance standards related to dimensions, such as maximum turning circle and minimum static roll threshold (SRT).

Standard vehicle dimensions

Only two dimension limits, width and height, are standard for all vehicles (except two-wheelers), ie:

- **maximum width is 2.55 metres**, and
- **maximum height is 4.3 metres**.

All other dimension limits depend on the vehicle type. For full details see:

- Factsheet 13, available on Waka Kotahi's website at www.nzta.govt.nz/resources/factsheets/13/, or
 - VDAM Rule schedule 2.
-

Two types of permit to exceed dimension limits

There are two types of permit to exceed dimension limits:

1. overdimension permits, and
2. HPMV overlength permits.

These are described in more detail below.

Continued on next page

A1.5 Permits for exceeding dimension limits continued

What is 'over-dimension'?

'Overdimension' refers to an **indivisible** vehicle or load that exceeds one or more of the standard dimension limits.

See *Definition of 'indivisible' load* in section A1.2 above.

Overdimension categories

The VDAM Rule classifies overdimension vehicles and loads into four categories according to their width and forward distance combination, length, and front and rear overhang.

Overdimension categories 1 and 2 may operate without a permit provided they comply with the special overdimension operating requirements in the VDAM Rule.

Specific operating requirements also apply for vehicles higher than 4.3 metres.

Overdimension permits

An overdimension vehicle or load requires a permit from Waka Kotahi if:

- its width and forward distance fall within categories 3 and 4
 - its front or rear overhang exceeds 7 metres
 - it is higher than 5 metres
 - it is longer than 25 metres, or
 - it is unable to comply with any operating requirement for its category.
-

Overdimension permit restrictions

Overdimension vehicles or loads operating under a permit must comply with the operating requirements in the VDAM Rule as well as any permit conditions. Generally, the larger the vehicle or load, the more restrictions apply.

Restrictions may include, but are not limited to:

- route restrictions
- speed restrictions
- use of pilot vehicles
- travel time restrictions
- use of hazard warning equipment and special lighting requirements, and
- special permissions and notification requirements.

For details see *Part C: Overdimension permits* in this volume, or the VDAM Rule section 6.

Continued on next page

A1.5 Permits for exceeding dimension limits continued

HPMV overlength permits

High productivity motor vehicles (HPMV) may exceed standard length limits (see table below) under an overlength permit (an 'approval' under the VDAM Rule) provided they:

- have the equivalent safety performance of a standard vehicle, and
- meet Waka Kotahi's performance standards.

For example, a vehicle may need an overlength permit if it is longer overall to increase deck space, or a vehicle combination may have longer inter-vehicle spacing within standard overall length.

HPMV overlength permits are available for pro-forma vehicles, ie vehicles that conform to one of the pre-approved designs published on Waka Kotahi's website.

In exceptional circumstances, Waka Kotahi may grant an overlength permit to a one-off non pro-forma vehicle, for example a customised design intended for a specific freight task on a short, restricted route. Such applications are assessed on a case-by-case basis.

For details see *Part E: HPMV overlength permits* in this volume.

Standard vehicle lengths

This table shows the maximum lengths for standard vehicles and vehicle combinations. You need an overlength permit if your HPMV exceeds **any** of these standard length limits.

Vehicle		Maximum length (m)
Rigid vehicle	towing	11.5
	not towing	12.6
Towing vehicle and semi-trailer with:		
– a quad axle set with two steering axles (trailer must be first registered before 1 February 2017)		18
– any other axle set		19
Towing vehicle and full trailer:		
– excluding load		20
– including load if load overhanging the rear of the trailer does not exceed 2.3m in width or 1.15m from the longitudinal centre line of the vehicle		22
Towing vehicle and simple trailer		22
Any other combination		20

Chapter A2: Applying for a VDAM permit

Overview

About this chapter

This chapter gives guidance on which type of VDAM permit an operator may need, and where to apply for the different VDAM permit types. It also includes information on permit fees and processing times.

In this chapter

This chapter contains the following sections:

Section	See page
A2.1 Which VDAM permit do you need?	A2-2
A2.2 Where to apply for a VDAM permit	A2-5
A2.3 Criteria for issuing a permit	A2-7
A2.4 Operator compliance checks	A2-8
A2.5 Permit fees	A2-10
A2.6 Permit processing times	A2-12

A2.1 Which VDAM permit do you need?

Permits to exceed prescribed mass limits

If you need a permit to exceed prescribed mass limits, refer to the table below to determine which permit type to apply for.

Permit type	Apply if...
Overweight	<ul style="list-style-type: none"> your vehicle carries an indivisible load¹ and exceeds the prescribed mass limits for any: <ul style="list-style-type: none"> individual axle axle set, or the combined axle set limits, which depend on the distance from the first axle in any set to the last axle in any other set, OR the mass on any axle of your vehicle exceeds a temporary limit specified by a road controlling authority to protect weak road pavements. <p>For full details see <i>Part B: Overweight permits</i>.</p>
HPMV higher mass	<ul style="list-style-type: none"> your vehicle carries a load of more than 44,000kg (in limited situations, this can be extended²) it is an eligible vehicle design³, and you require route flexibility. <p>For full details see <i>Part D: HPMV higher mass permits</i>.</p>
HPMV 50MAX	<ul style="list-style-type: none"> your vehicle carries more than 44,000kg² but not more than 50,000kg the vehicle design conforms to a 50MAX-ready pro-forma design⁴ all units in your vehicle combination are registered, and your route is entirely on the 50MAX network⁵. <p>For full details see <i>Part F: HPMV 50MAX permits</i>.</p>

Continued on next page

A2.1 Which VDAM permit do you need? continued

Permits to exceed prescribed mass limits (continued)

Permit type	Apply if...
Specialist vehicle	<ul style="list-style-type: none"> • your vehicle is either a: <ul style="list-style-type: none"> – passenger service vehicle – concrete mixer – ground-spreader truck, or – rubbish truck with compactor, AND • has no more than two axles in any axle set. <p>For full details see <i>Part G: Specialist vehicle permits</i>.</p>

Notes:

1. The definition of 'indivisible' includes ancillary items associated with an indivisible load identified in the VDAM Rule, eg transformer oil, certain construction equipment, ballast or slurry. For details, see *Chapter B3: Payload requirements* in part B of this volume.
2. Vehicles with at least seven axles and a minimum wheelbase are allowed to carry increased gross mass without a permit – see section *A1.4 Higher mass limits without a permit (45,000 or 46,000kg)*.
3. For eligible vehicle designs, see *Chapter D2: Vehicle requirements for HPMV higher mass permits* in part D of this volume.
4. 50MAX-ready pro-forma vehicle designs can be found on Waka Kotahi's website at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/50max-proforma-designs/.
5. For details see section *F1.2 50MAX route requirements*.

Continued on next page

A2.1 Which VDAM permit do you need? continued

Permits to exceed dimension limits

If you need a permit to exceed standard dimension limits, refer to the table below to determine which permit type to apply for.

Permit type	Apply if your vehicle...
Overdimension	<ul style="list-style-type: none"> carries an indivisible load, and exceeds one or more of the following dimensions: <ul style="list-style-type: none"> width and forward distance combination within over-dimension categories 3 and 4¹ height of 5m front or rear overhang of 7m overall length of 25m. <p>For full details see <i>Part C: Overdimension permits</i>.</p>
Overlength HPMV permit	<ul style="list-style-type: none"> carries a divisible or indivisible load exceeds any of the standard vehicle length limits² (but otherwise has standard dimensions), and is an eligible pro-forma design³, or is a one-off non pro-forma design for a specialised freight task on a highly constrained route⁴. <p>For full details see <i>Part E: HPMV overlength permits</i>.</p>

Notes:

- See section *C1.2 Overdimension categories*, or the VDAM Rule schedule 6, parts 1 and 2.
- See *Standard vehicle lengths* in section A1.5 above.
- Pro-forma overlength HPMV designs are vehicle designs that Waka Kotahi has tested against performance based standards (PBS) and found to achieve satisfactory performance. More information can be found in *Part E: HPMV overlength permits* in this volume of the manual, or at www.nzta.govt.nz/commercial-driving/high-productivity/performance-based-standards/.
- Waka Kotahi assesses non pro-forma designs for permit eligibility on a case-by-case basis. For details see *Chapter E3: How to apply for a non pro-forma (one-off) HPMV overlength permit* in part E of this volume.

Continued on next page

A2.2 Where to apply for a VDAM permit

Issuing authorities

This table shows who can issue VDAM permits:

Permit type	Who can issue the permit?
Permits to exceed prescribed mass limits	<ul style="list-style-type: none"> • Waka Kotahi for state highways • local road controlling authorities (RCAs) for local roads • Waka Kotahi for local roads under delegation from local RCA, or • local RCA for state highways under delegation from Waka Kotahi (see <i>Delegation of issuing authority</i> below)
Permits to exceed dimension limits	Waka Kotahi

Delegation of issuing authority

Some local RCAs have delegated authority to issue permits on their behalf to Waka Kotahi. Waka Kotahi may also delegate authority to issue permits for state highways to a local RCA.

Such arrangements vary from region to region and also depend on the permit type. See *Which authority to apply to for a permit* on the next page.

Routes involving multiple RCAs

An RCA may issue a permit to exceed mass limits that includes roads under the control of another RCA provided the RCA that issues the permit (the 'issuing authority') first obtains written approval for the use of roads under the control of the other RCA.

However, as with delegations of issuing authority (see above), in practice this depends on regional arrangements and permit type.

For permits to exceed dimension limits, Waka Kotahi is the issuing authority for both state highways and local roads. It is not required to obtain approval for the use of local roads. However, it must not issue a permit for a local road if the local RCA has notified Waka Kotahi that it objects to a permit being issued for that road.

Continued on next page

A2.2 Where to apply for a VDAM permit continued

Which authority to apply to for a permit

The table below shows where you should apply depending on the permit type you need.

If your route involves roads in multiple RCAs, you should apply to the RCA where the journey starts.

Permit type	Where to apply
Overweight	<ul style="list-style-type: none"> • Waka Kotahi for state highways • Local road controlling authorities (RCAs) for local roads <p>In some regions, local RCAs have delegated authority to Waka Kotahi to issue permits on their behalf. Check with the permit issuing officer in your region¹.</p>
Specialist vehicle	<ul style="list-style-type: none"> • Local RCA if your route is mainly on local roads • Waka Kotahi if your route is mainly on state highways
HPMV higher mass	Waka Kotahi ²
HPMV 50MAX	Waka Kotahi ³
HPMV overlength	Waka Kotahi
Overdimension	

Notes:

1. Contact details for permit issuing officers can be found at www.nzta.govt.nz/resources/hpmv-permit-application/permit-information/.
2. If the route includes local roads, Waka Kotahi will in most cases liaise with local RCAs involved, obtain their approval for the use of local roads and issue permits for both state highways and local roads.
3. Most local RCAs have delegated 50MAX permit issuing authority to Waka Kotahi. For the few exceptions see the 50MAX book of maps, available at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/map-of-50max-routes/.

A2.3 Criteria for issuing a permit

Introduction

This section describes the criteria that road controlling authorities must apply when issuing permits under the VDAM Rule. These criteria are addressed during the permitting process.

Criteria for permits to exceed mass limits

Before issuing a permit to exceed prescribed mass limits, a road controlling authority (RCA) must consider:

- the safety of the vehicle
- the safety of road users, and
- the durability of roads and bridges on the route the vehicle may travel on.

As part of assessing the safety aspects of a permit application, an RCA may check an operator's safety and traffic offending history – see section *A2.4 Operator compliance checks*.

Criteria for HPMV overlength permits

When issuing HPMV overlength permits, Waka Kotahi must apply the same criteria as above. In addition, it must be satisfied that the vehicle has the equivalent safety performance of a standard motor vehicle. A vehicle is considered to meet this requirement if it is a pro-forma design approved by Waka Kotahi.

An overlength vehicle that is not an approved pro-forma design will only be considered for an overlength permit in specific circumstances.

For details see *Part E: HPMV overlength permits* in this volume of the manual.

Criteria for overdimension permits

When issuing an overdimension permit, Waka Kotahi considers:

- potential effects on other traffic, such as congestion or safety risks
 - whether risk management measures proposed by the operator are adequate, and
 - the safety record of the operator (see section *A2.4 Operator compliance checks*).
-

A2.4 Operator compliance checks

Purpose of the operator compliance check

Before issuing a permit to exceed general access mass limits, a road controlling authority must assess three factors:

- the safety of the vehicle
- the safety of road users, and
- the durability of roads and bridges on which the vehicle may operate.

Legislation reference: VDAM Rule section 5.2(1).

When processing a permit application, Waka Kotahi conducts technical checks to assess the safety of the vehicle and its impact on pavement and structures along the route. Any potential risk by a permit applicant to other road users is assessed by reviewing information on the applicant's compliance with safety related legislation.

For overdimension permitting, Waka Kotahi similarly assesses any potential operator risk by reference to breaches of conditions of previously issued permits and the operator's traffic offending history.

What information is assessed?

When conducting an operator compliance check, Waka Kotahi must determine any perceived increase in the risk to safety if a permit is granted.

This is done by examining the operator's activity and available compliance information in the preceding 12 months, including any:

- recent traffic offences (eg speeding infringements)
- weight-based offending
- driver fatigue or distraction concerns
- road user charges (RUC) evasion, or
- roadside inspection data (RID).

Waka Kotahi assesses all factors for trends in compliance with conditions on previously issued permits as well as safety related transport legislation.

Continued on next page

A2.4 Operator compliance checks continued

Operator compliance check outcomes

This table shows the possible outcomes of an operator compliance check:

If an operator has a record of...	Then...
high compliance with safety related transport legislation	a permit can be granted (provided vehicle safety and route requirements are met).
inconsistent compliance with safety related transport legislation in the 12 months before applying for a permit	<ul style="list-style-type: none"> • a permit may be granted for a reduced period, or • the application may be referred to the appropriate regional Road Compliance Manager for advice.
serious and/or repeated permit breaches and non-compliance with safety related legislation in the 12 months before applying for a permit	the permit may be declined.

Review of decisions

An operator who is subject to a reduced permit period or has an application declined may request Waka Kotahi to review that decision.

The review will be carried out by a review panel and look at all information considered during the initial processing of the permit application.

Waka Kotahi must respond to the applicant within 10 working days of the review request being received.

Appeal to District Court

Under the Land Transport Act 1998, any person who is dissatisfied with a decision made by Waka Kotahi under the Act may appeal to a District Court against that decision.

This applies to decisions to grant, issue, revoke or suspend a land transport document (including a VDAM permit) sought or held by that person.

An appeal must be lodged within 28 days from the date of notification of the decision appealed against.

Legislation reference: Land Transport Act 1998 section 106.

A2.5 Permit fees

Legal basis The fees for VDAM permits are specified in the Land Transport (Certification and Other Fees) Regulations 2014.

Fees This table shows the standard fees payable for VDAM permits if three or more working days are available for processing.

If you need a...	Then the fee (GST exclusive) for a permit being issued is...
continuous overweight permit	\$54.55
renewal of a continuous overweight permit	\$9.09
single or multiple trip overweight permit	\$18.18
overdimension permit	\$28.00
HPMV permit	\$54.55
specialist vehicle permit	

Additional fee for urgent applications

There is an additional fee of \$9.09 for overweight, HPMV or specialist vehicle permit applications if there are fewer than three working days available for processing.

Additional fees may also apply for special investigations – see *Additional costs for investigations* below.

Permit amendment If an application is subsequently modified to satisfy the requirements of the processing office, or an issued permit is amended, then only one permit processing fee is payable.

Account for fees Fees are payable into the operating account of the road controlling authority that processes the permit application.

Continued on next page

A2.5 Permit fees continued

Additional costs for investigations

In addition to the permit fee, applicants may also be charged for an investigation into the feasibility of their proposed route(s).

Such an investigation involves technical work by bridge and pavement engineers at the applicant's cost.

Waka Kotahi will advise applicants of appropriate consultants to carry out such work.

Other additional costs

Any work to facilitate movement of an overdimension vehicle, eg the removal of overhead signs, will be a charge to the user to whom the permit is issued.

For overweight permits, fees for bridge engineering supervision and for bridge engineering self-supervision (BESS) registration may also apply. For details see chapters B6 and B7 in *Part B: Overweight permits* in this volume of the manual.

A2.6 Permit processing times

How long does it take to get a permit?

For standard permit applications with no operator compliance issues, Waka Kotahi endeavours to issue permits within the following timeframes:

VDAM permit type	Processing time (working days) ^{1,2}
Overweight	5
Overdimension	3
HPMV:	
Higher mass (if no investigation is required)	20
50MAX	10
Overlength pro-forma vehicle design	10
Overlength non pro-forma vehicle design ³	20
Specialist vehicle	20

Notes:

1. Processing times are operational targets and actual times may be less. However, see *Potential delays* below.
2. In an emergency, Waka Kotahi will process a permit application as quickly as possible.
3. Waka Kotahi may issue a permit for a non pro-forma vehicle design on a one-off basis for specialist loads or purpose-designed combinations. For details see *Part E: HPMV overlength permits* in this volume.

Potential delays

Waka Kotahi cannot guarantee that it will be able to meet the above timeframes. Reasons for potential delays include:

- aspects of the permitting process that are outside the control of Waka Kotahi, for example, if approvals from multiple road controlling authorities are needed
- operator compliance issues that need further investigation
- complex applications requiring specialist input (eg from a bridge engineer), or
- the requirement to arrange external bridge engineering supervision before travel (which must be arranged with at least 24 hours' notice).

Applicants should take such possible delays into account when applying for a permit.

Chapter A3: Operating under a VDAM permit

Overview

About this chapter

This chapter gives an overview of the requirements for operating under a VDAM permit.

In this chapter

This chapter contains the following sections:

Section	See page
A3.1 Permit validity requirements	A3-2
A3.2 Permit conditions	A3-3
A3.3 Railway level crossings permission	A3-7
A3.4 'H' sign display requirements	A3-8
A3.5 Permit revocation	A3-9

A3.1 Permit validity requirements

Permit must not be altered

A VDAM permit that has been tampered with, or altered without authority from Waka Kotahi or road controlling authority that issued it, is invalid.

Linked to vehicle or load

HPMV and other permits for exceeding prescribed mass limits are valid only for the vehicle (or vehicle combination) identified in the permit. The vehicle(s) may be identified either individually or by type on the permit.

Overdimension permits apply only to the overdimension vehicle or load described in the permit.

Linked to operator

Permits are also operator-specific and may be used only by the operator identified in the permit.

Carrying the permit in the vehicle

Permits must be carried in a readable format in the vehicle during travel for the period covered by the permit. They must be shown to an enforcement officer or authorised agent of a road controlling authority on request, either as printed or electronic copies.

Overdimension permits must also be shown to a load pilot on request.

A3.2 Permit conditions

Compliance with permit conditions

When operating a vehicle under a VDAM permit, all conditions in the permit must be complied with at all times.

Legislation reference: VDAM Rule sections 2.1(2) and 2.1(5).

Consequences of breaches of conditions

Breaches of permit conditions can incur significant fines. Breaches may also result in future permit applications being declined or permits being revoked – see section *A2.4 Operator compliance checks* and section *A3.5 Permit revocation*.

Two types of permit condition

The VDAM Rule distinguishes between **critical** conditions and **additional** conditions on permits.

Operators must comply with all permit conditions, but breaches of critical conditions attract higher penalties. For details see *Chapter A4: Enforcement of VDAM permits*.

Critical conditions for permits to exceed mass limits

A vehicle operating under an overweight, HPMV or specialist vehicle permit must comply with the following critical conditions:

- the gross mass must not exceed the maximum gross mass specified on the permit
- the gross vehicle mass must not exceed any of the design limits of the vehicle (eg gross vehicle mass, gross combination mass or maximum towed mass), and
- the vehicle must not breach a travel restriction or requirement for a specified bridge or culvert.

Legislation reference: VDAM Rule section 5.5(1).

Critical conditions for overdimension permits

A vehicle or load operating under an overdimension permit must comply with the following critical conditions:

- the vehicle or load must not exceed the lesser of:
 - the dimension limits for its category stated in the permit, or
 - the maximum width stated in the permit plus 0.5 metres, and
- any piloting requirements specified in the permit or as required under the VDAM Rule.

Legislation reference: VDAM Rule section 6.53.

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A3.2 Permit conditions continued

Additional conditions for permits to exceed mass limits

For permits to exceed general access mass limits, road controlling authorities may impose any additional conditions they believe are necessary to ensure the safety of road users, protect infrastructure or provide for compliance with the permit.

For example, additional conditions may include:

- restrictions on the type and amount of the load transported
- tracking systems for monitoring compliance with route restrictions and mass limits, and
- vehicle signage and lighting requirements.

Additional conditions on overweight permits

Overweight permits may also include:

- restrictions on the number of trips allowed
- speed limits
- travel time restrictions
- piloting and bridge supervision requirements, and
- restrictions related to weather conditions.

Additional conditions on HPMV permits

HPMV permits may include additional conditions related to vehicle safety requirements such as stability control systems, higher SRT limits and EBS brake systems.

Note: Unlike overweight permits, HPMV permits issued by Waka Kotahi do not specify travel time or speed restrictions, or special bridge crossing requirements. This is because HPMVs are intended for regular freight movements and are meant to operate largely as standard vehicles.

Additional conditions for overdimension vehicles

Additional conditions on overdimension permits may include:

- speed restrictions
- the route to be followed
- piloting requirements in addition to those specified in the VDAM Rule
- vehicle configuration details, and
- notification requirements if the vehicle or load is wider than 5 metres.

Continued on next page

A3.2 Permit conditions continued

Off route

Overlength permits

Vehicles operating under a route-specific overlength permit would be considered in breach of a permit condition if they deviated from the specified route.

Permits to exceed mass limits

If a vehicle that operates under a route-specific permit to exceed mass limits fails to remain on the specified route, it will be treated as having no permit for enforcement purposes and general access mass limits will apply.

Infringement fees for any overloading offences detected would be based on general access mass limits and not the mass limits specified in the permit.

This applies to:

- overweight permits
- HPMV higher mass permits
- HPMV 50MAX permits, and
- specialist vehicle permits.

Diversions for weighing

Enforcement officers are authorised to divert a vehicle from its permitted route, but only for weighing. For details see *Diverting vehicles for weighing* in section A4.2.

Road closures and detours

Enforcement officers and road controlling authorities may close roads and put detours in place in response to events like crashes, flooding or slips.

In such cases, vehicles operating under a permit to exceed mass limits, irrespective of permit type, are not allowed to detour from the route specified on the permit. Vehicles must be parked up until:

- the operator has obtained a new permit covering travel over the detour route
 - the vehicle is offloaded so that it can operate within all general access mass limits, or
 - the road on the permitted route opens again.
-

A3.2 Permit conditions continued

Additional local requirements

A local road controlling authority may place additional requirements on a permit to allow travel on local roads. For permits to exceed mass limits, a local road controlling authority may, for example, require:

- company mass compliance systems (eg weighing each load on departure)
- driver training accreditation
- approval of drivers following history check, or
- fatigue management system.

Such requirements, if applicable, are detailed as additional conditions on the permit.

A3.3 Railway level crossings permission

Overweight and overdimension vehicles

Heavy and long vehicles can be slow in clearing railway level crossings, which may increase collision potential.

Operators of overweight and overdimension vehicles or loads must therefore obtain permission from the rail access provider to travel over railway level crossings and/or under overhead electrification if:

- the vehicle exceeds specified level crossing tolerances (mass and dimension limits), or
- the vehicle length exceeds the safe stacking distance to an adjacent road intersection for the rail crossing to be driven over.

Details about level crossing tolerances can be found at www.kiwirail.co.nz.

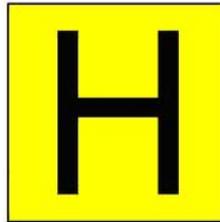
Where to obtain permission

Operators can obtain permission to travel over level crossings by contacting KiwiRail at crossingpermits@kiwirail.co.nz.

A3.4 'H' sign display requirements

When an 'H' sign must be displayed

While operating under an HPMV permit that specifies particular roads on which the vehicle may operate, the vehicle must display the high productivity motor vehicle sign (the 'H' sign) on the front and rear of the vehicle:



A vehicle that does not have an HPMV permit must not display the 'H' sign. For more details see section *D1.4 'H' sign requirements and specifications* in this volume.

Signage when load is reduced

If an HPMV with a higher mass permit carries a load within standard mass limits, then the 'H' sign may be removed but does not have to be.

However, if the vehicle is a non pro-forma overlength vehicle and operates on a route-specific permit, the sign must remain in place at all times.

Not required to display 'H' sign

Overlength HPMVs on a general access permit are not required to display the 'H' sign unless they are also operating on a higher mass permit.

For the avoidance of doubt, passenger service vehicle (buses) or any other specialist vehicles are not required to display an 'H' sign.

A3.5 Permit revocation

When can a permit be revoked?

Waka Kotahi may revoke any VDAM permit if, in its view, there is a significant risk to public safety.

A permit to exceed mass limits may also be revoked by the road controlling authority that has issued it if it considers that:

- any of the permit conditions have been breached, or
- the vehicle operating under the permit may cause extraordinary damage to the road.

Revocation process

Waka Kotahi or road controlling authority that has issued a permit must advise an operator as soon as practicable that it has revoked the operator's permit. The notice must include reasons for the revocation.

Note: A notice of revocation is not required to be in writing.

When does a revocation take effect?

A revocation of a permit takes effect immediately when it is advised to the operator, or to an on-road supervisor if it is an overdimension permit. If the notice specifies a later time, then the revocation takes effect from the time specified.

Review of revocation decision

If Waka Kotahi revokes a permit, the permit holder may request Waka Kotahi to review its decision.

A review request should be made within seven days of the permit holder being notified of revocation. It must be accompanied by any supporting information that the permit holder wishes to have considered.

The review will be carried out by a review panel and look at all information considered for the revocation, including any information submitted by the permit holder.

Waka Kotahi must respond to the permit holder within 10 working days of the review request being received.

Note: Reviews should be treated with urgency by all parties so that they can be completed before the 28-day deadline for lodging a court appeal expires (see below).

Appeal to District Court

Under section 106 of the Land Transport Act 1998, a permit holder may appeal to a District Court against the revocation of a permit by Waka Kotahi.

An appeal must be lodged within 28 days from the date of notification of the revocation appealed against.

Continued on next page

A3.5 Permit revocation continued

**Revoked
permit invalid
during review
or appeal**

A permit revocation remains effective from the time of notification and the permit cannot be used during a review of the revocation decision or appeal to a District Court.

Chapter A4: Enforcement of VDAM permits

Overview

About this chapter This chapter describes how the Commercial Vehicle Safety Team (CVST) of the New Zealand Police enforces vehicle dimensions and mass (VDAM) permits (ie overweight, overdimension, HPMV and specialist vehicle permits).

Audience The audience for this chapter is operators of vehicles operating under a VDAM permit.

BESS breaches Breaches of the Bridge Engineering Self Supervision (BESS) conditions are dealt with in detail in *Chapter B6: Bridge Engineering Self Supervision (BESS)* in part B of this volume.

In this chapter

This chapter contains the following sections:

Section	See page
A4.1 General guidelines for VDAM permit enforcement	A4-2
A4.2 Enforcement of permits for exceeding mass limits	A4-5
A4.3 Weighing procedure for permits with mass limits	A4-8
A4.4 Example of payload distribution calculation	A4-11
A4.5 Mobile plant and mobile crane certified weights	A4-13
A4.6 Enforcement of overdimension permits	A4-14

A4.1 General guidelines for VDAM permit enforcement

Stopping vehicles

Enforcement officers may, at any time, stop and weigh or measure a vehicle travelling under a permit.

Permit validity

A permit is valid only for the vehicle (or vehicle combination) identified in the permit.

Permits are also operator-specific and may be used only by the operator identified in the permit.

Permits tampered with or altered without authority are invalid.

Carrying the permit

The permit(s) applying to the vehicle must be carried in the vehicle in a readable format for the period of travel covered by the permit. They must be shown on request to an enforcement officer, or an authorised agent of Waka Kotahi or a road controlling agency.

Operators must ensure that the permit carried applies to the exact vehicle or vehicle combination described in the permit, either individually or by type.

Conditions

The permit lists conditions under which the vehicle is allowed to operate. Enforcement officers will check your vehicle (its load, length, location and other characteristics) against the conditions on the permit, as well as any other conditions, for example route restrictions.

Permits have two categories of conditions: critical conditions and additional conditions. For the enforcement implications of breaching different permit conditions, see sections *A4.2 Enforcement of permits for exceeding mass limits* and *A4.6 Enforcement of overdimension permits*.

Continued on next page

A4.1 General guidelines for VDAM permit enforcement

continued

Weighing as a permit condition

For a permit to exceed prescribed mass limits, Waka Kotahi or any of the local road controlling authorities (RCAs) involved in a movement may require the vehicle to be weighed at a specific locality as a condition of the permit. This requires either that:

- confirmation of axle weights from a certified weighing facility be sent to the permit issuing officer, clearly indicating the permit serial number, or
- the weighing be done under the control of a person nominated by the permit issuing officer.

Waka Kotahi or a local RCA may also require evidence of satisfactory load sharing of vehicles that have non-compliant suspension systems.

What is a breach?

A breach occurs when any of the provisions of the VDAM Rule or any conditions of the permit are not complied with. Breaches include (but are not limited to):

- operating without a permit
- using an incorrect route
- operating an incorrect vehicle (ie the permit does not apply to the vehicle or combination used, whether individually or by type)
- carrying a different load, unless load is unspecified (overweight permits)
- exceeding permitted speed
- breaching bridge supervision requirements (where applicable)
- overloading, ie exceeding:
 - the permitted or prescribed mass limit on an individual axle, axle set or axle group
 - permitted gross mass
 - gross vehicle mass, or
 - the weight limit stated on the certificate of loading, or
 - a posted mass limit on a bridge, or
- breaching any prescribed dimension requirements.

Note: Breaches vary by permit type. For example, HPMV permits do not specify speed restrictions.

Continued on next page

A4.1 General guidelines for VDAM permit enforcement continued

Deviations from permitted route

If a route is specified on a permit, then it is a breach of a permit condition to deviate from the specified route unless directed to do so by NZ Police or the road controlling authority. If you are travelling on an HPMV higher mass permit, it is your responsibility to advise NZ Police or the road controlling authority of this to ensure you are not inadvertently directed over a weak bridge or structure.

If a road that is specified on the permit is temporarily blocked, for example, as a result of an accident or unforeseen event, then your vehicle needs to be parked on the roadside for the duration of the blockage.

If a road specified on your permit is affected by a longer term closure, for example due to road works, then you need to apply for a permit for an alternative route.

Read your permit

Read your permit carefully. Anything listed as a condition on the permit may give rise to a breach.

Cautious approach recommended

Given that the penalties for exceeding the limits specified by the permit may be severe, you should take care to ensure that your vehicle does not exceed specified mass or dimension limits.

Legislative basis for fees and penalties

Infringement offences, fees and penalties are listed in schedules 1, 1A and 1B of the Land Transport (Offences and Penalties) Regulations 1999.

Revocation

If you breach your permit, you may have it revoked or not renewed.

A4.2 Enforcement of permits for exceeding mass limits

Introduction

This section deals with specific enforcement conditions applicable to permits for exceeding prescribed mass limits, ie:

- overweight permits
 - HPMV permits (higher mass and 50MAX), and
 - specialist vehicle permits.
-

Diverting vehicles for weighing

Enforcement officers may, at any time, stop and weigh a vehicle travelling under a permit for exceeding mass limits.

Enforcement officers are authorised to divert such vehicles up to a total of five kilometres from the approved route in order to weigh the vehicle, provided under-strength bridges are not included on the diversion. Before directing such a diversion, the enforcement officer must consider avoiding structures that could pose a potential risk, such as bridges, culverts and rail crossings.

If the site for weighing is unsuitable, for example because it is uneven or would pose a safety risk, then enforcement officers may divert a vehicle for up to 10 kilometres.

Note: Enforcement officers cannot divert vehicles operating under a route-specific permit for any other reason than for weighing.

Two types of permit condition

The VDAM Rule distinguishes between critical conditions and additional conditions on permits for exceeding mass limits. Different penalties apply depending on whether a critical or an additional condition has been breached.

Critical conditions for permits exceeding mass limits are defined as follows in the VDAM Rule:

- the gross mass of the vehicle must not exceed the maximum gross mass specified in the permit
- the gross mass of the vehicle must not exceed the gross vehicle mass, gross combination mass, maximum towed mass or brake code mass if any of these limits apply to the vehicle, and
- the vehicle must comply with all bridge restrictions specified in the permit.

Additional conditions are any other conditions specified on the permit.

An axle overload is a breach of an additional condition. Infringement fees depend on the amount of overloading – see *Incremental fees for exceeding mass limits* below.

Continued on next page

A4.2 Enforcement of permits for exceeding mass limits continued

Breaches of critical conditions

Breaches of a critical condition incur an infringement fee of \$2000.
The police may also issue overloading notices for any other mass limit offences detected.

Breaches of additional conditions

Breaches of additional permit conditions incur an infringement fee of \$370.

Incremental fees for exceeding mass limits

In addition to the infringement fee for a breach of a critical or additional condition, incremental infringement fees apply to exceeding any of the mass limits specified on a permit, ie for:

- individual axles
- axle sets
- groups of consecutive axles
- gross mass, and
- gross vehicle mass.

Infringement fees range from \$350 to \$10,000 depending on the amount of overloading.

Legislation reference: Land Transport (Offences and Penalties) Regulations 1999 schedule 1B.

Weighing tolerances

The weight assessed for an infringement notice is reduced by the amount of the weighing tolerance. Weighing tolerances are as follows:

Permitted mass	Tolerance
Gross mass	500kg
Individual axle	
Twin-steer set	
Axle set other than twin-steer set	1000kg
Axle group ¹	

¹ Any two or more axles that together do not constitute a single tandem axle set, single tri-axle set or single quad-axle set.

Legislation reference: Land Transport (Offences and Penalties) Regulations 1999 schedule 1B, clause 5.

Continued on next page

A4.2 Enforcement of permits for exceeding mass limits continued

Reference weight for overloading infringements

The weight assessed for an infringement notice is reduced by the amount of the applicable weighing tolerance.

Valid permit

If a valid permit exists, overloading infringement notices are based on the amount by which the mass limits recorded on the permit have been exceeded (minus the weighing tolerances).

Off route

If a vehicle has deviated from a permitted route, the police treat the vehicle as operating without a permit and issue an infringement notice for exceeding the general access mass limits prescribed in the VDAM Rule schedule 3, parts 1 and 2.

This means that the overloading amount will be calculated on the basis of the general mass limits (minus the weighing tolerances), not based on the limits specified in the permit.

Continuation of travel/offloading requirements

If an infringement notice for overloading has been issued, the vehicle is allowed to continue its travel unless a mass limit on the permit has been exceeded by more than 10% or 2000kg, whichever is the lesser. This applies to all specified mass limits, ie gross mass, individual axle, axle set or axle group limits or the gross vehicle mass limit.

If a specified mass limit has been exceeded by more than 10% or 2000kg, part of the load must be removed or rearranged to comply with the maximum permitted mass limits for the vehicle.

Offloading of buses

If a passenger service vehicle has been found to be overloaded, then the passengers must be transferred to an alternative vehicle if one is available within a reasonable time.

If another vehicle is not available within a reasonable time, the passenger service vehicle must be escorted at a slow speed by an enforcement officer to a safe location suitable for handling the passengers.

Continued on next page

A4.2 Enforcement of permits for exceeding mass limits continued

Documentary evidence and ISO containers

When a vehicle carrying an ISO container under an overweight permit is stopped by an enforcement officer, the driver must immediately when requested give documentary evidence to the officer that the container has been loaded or packed for the sole purpose of export or import.

A permit may be revoked if it is shown that an operator has deliberately misrepresented the fact that a container was loaded or packed for the sole purpose of export or import.

See also *Chapter B3: Payload requirements* in part B of this volume.

A4.3 Weighing procedure for permits with mass limits

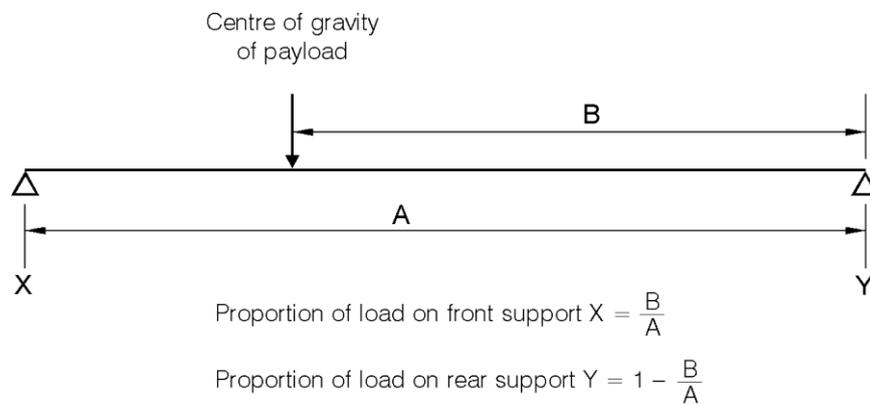
Introduction	<p>Individual axle masses on multi-axled vehicles can be determined by calculation. This section describes the procedures for doing this.</p> <p>Operators are advised to calculate the individual axle masses before applying for a permit, and to ensure they are complying with a VDAM permit once issued.</p>
Legal basis	<p>All weighing is to be done according to the Transport (Measurement of Weight) Notice 1997.</p>
Supervision	<p>If an applicant for a VDAM permit is to provide a weighbridge certificate, the police or a consultant approved by Waka Kotahi supervise all weighing involved.</p>
Weighing records	<p>The weighing record must include a concise description of the vehicle and its loading condition, including the extent of operating gear carried and the description and position of the payload.</p> <p>In general, enforcement officers accept these weighing records.</p>
Information required	<p>Calculations require the following information:</p> <ul style="list-style-type: none">• vehicle dimensions and axle tare weights, and• payload position and weight.
Obtaining the information	<p>Payload weights can be obtained from plant handbooks, manufacturers' assessments or previous weighings. Previous weighings are preferable.</p>
Principles	<p>The payload is distributed to the axles and added to the tare axle masses. The method of distribution involves considering each rigid section of the vehicle in turn and proportioning the load on that section to the supporting sections.</p> <p>Some allowance should be made for the possibility that the payload centre of gravity may vary from the assumed position.</p>

Continued on next page

A4.3 Weighing procedure for permits with mass limits continued

Formulas for calculating payload distribution

The formulas for calculating payload distribution are shown below:



Example

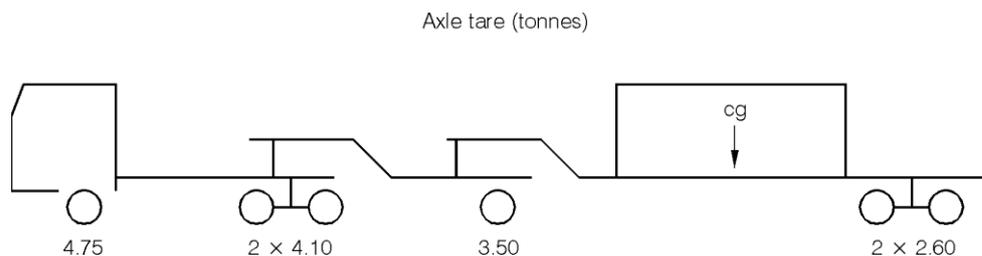
For an example of how to calculate the distribution of payload, see section *A4.4 Example of payload distribution calculation* on the next page.

A4.4 Example of payload distribution calculation

Introduction

The transporter in the diagram below consists of three units: tractor, dolly and trailer. The tractor and trailer have rear tandem axles with walking beam suspensions.

This example calculates the axle weights for a 40,000kg payload.



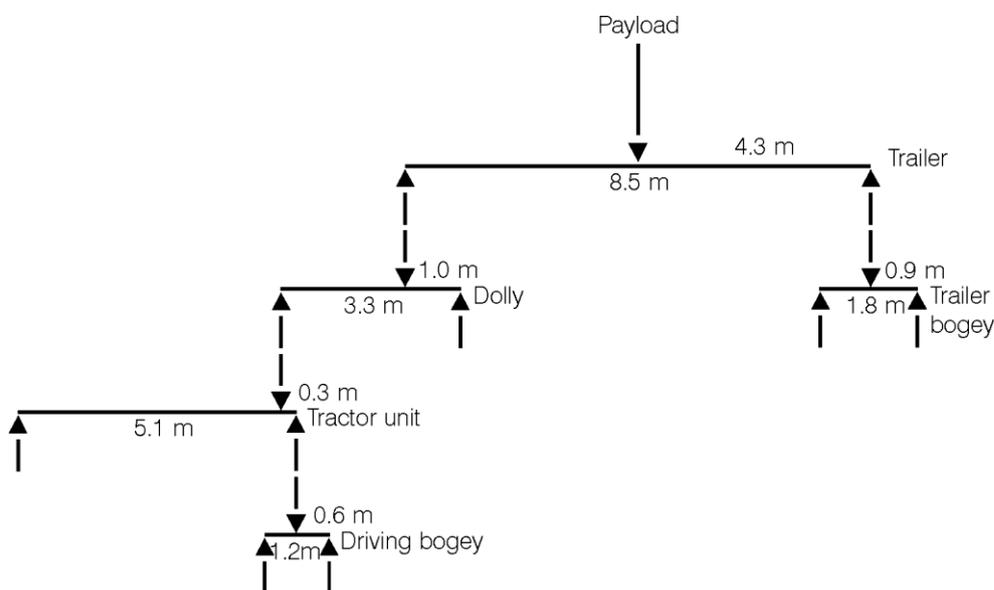
Distribution

The payload is carried by the trailer and is distributed to the dolly and the rear bogey.

The load on the dolly is distributed to the dolly axle and to the tractor.

Diagram of distribution

Distribution of the payload to the axles can be represented diagrammatically as follows:



Continued on next page

A4.4 Example of payload distribution calculation continued

Proportions of distribution

Applying the formulas shown on page A4-10 and the dimensions shown in the diagram of distribution on the previous page, the proportion of the load on each axle is calculated as shown below:

Part of vehicle	Proportion of payload	Percentage of load (%)
Trailer	1.00	100
Trailer bogey	0.49	49
Trailer axles	$0.50 \times 0.49 = 0.245$ each	24.5
Dolly	0.51	51
Dolly axle	$0.70 \times 0.51 = 0.36$	36
Tractor	$0.30 \times 0.51 = 0.15$	15
Steering axle	$0.06 \times 0.15 = 0.01$	1
Driving bogey	$0.94 \times 0.15 = 0.14$	14
Driving axles	$0.50 \times 0.14 = 0.07$ each	7

Note: Figures in the table are rounded.

Axle masses

Applying the proportions (or percentages) from the table above to a 40,000kg payload, the axle masses are as follows:

Part of vehicle	Axle masses (in tonnes)					
	Steering	Driving		Dolly	Trailer	
Payload	0.40	2.80	2.80	14.40	9.80	9.80
Tare	4.75	4.10	4.10	3.50	2.60	2.60
Gross	5.15	6.90	6.90	17.90	12.40	12.40

A4.5 Mobile plant and mobile crane certified weights

Mobile plant

Fixed mass mobile plant that has constant axle masses and dimensions (eg motor scrapers, forklifts and mobile cranes) may have their overweight permit endorsed with their certified masses obtained from a supervised weighing site. Mobile cranes may also have a Mobile Crane Weight Certificate (see below).

Enforcement officers recognise such certification as an alternative to roadside weighing, providing:

- the weighing and dimension checks for the certification are conducted under police supervision
- approved and certified weighing equipment is used for the certification
- the endorsement applies only to the journeys listed on the permit and ceases to have effect when the permit expires
- no modifications that affect the certified weights have been made to the vehicle or load
- the vehicle has a current certificate of fitness or warrant of fitness
- the vehicle complies with the mass limits imposed by the certificate of loading, and
- the vehicle complies with all the provisions of the Road User Charges Act 2012.

In addition, police may weigh any mobile plant, including any cranes with a Mobile Crane Weight Certificate, if they consider there is good reason to do so. This may be the case, for example, if they have reason to believe that changes have been made that would cause a significant increase in the masses listed on any endorsement or certificate.

Mobile Crane Weight Certificates

To avoid repeated enforcement weighing of a fixed weight mobile crane, operators may obtain a Mobile Crane Weight Certificate from the Crane Association of New Zealand.

The certificate includes a detailed description of major accessories likely to significantly affect the mass along with photographs. See *Chapter B4: Weight determination in Part B: Overweight permits* in this volume of the manual.

A4.6 Enforcement of overdimension permits

Overdimension permit breaches

Breaches of an overdimension permit include but are not limited to:

- no permit held
 - incorrect route used if the route is described on the permit
 - incorrect vehicle or load (ie the vehicle or load used is not the vehicle, combination or load described in the permit)
 - permit dimensions exceeded
 - pilot requirements not fulfilled
 - hazard warning requirements not fulfilled
 - travel time requirements not fulfilled, or
 - any other operating requirements not complied with.
-

Two types of permit condition

As for permits for exceeding mass limits, the VDAM Rule distinguishes between critical and additional conditions on overdimension permits. Breaches of critical conditions attract higher infringement fees than breaches of additional conditions.

Critical conditions on overdimension permits are defined in the VDAM Rule as follows:

- the vehicle or its load must not exceed the lesser of –
 - the dimension limits for its category as stated in the permit, or
 - the maximum width if stated in the permit, plus 0.5 metres, and
- the operator must ensure that pilots as specified in the permit are provided or, if not specified in the permit, as required by the VDAM Rule.

Additional conditions are any other conditions specified in the permit.

If a breach occurs

If the vehicle is found to be in breach of any condition set by the permit, then enforcement officers:

- issue an infringement notice for the permit in every instance in which an overdimension permit is breached (see below for infringement fees for critical and additional permit conditions)
 - may also issue notices for any other offences detected
 - may allow the operator to continue the journey if the load can be adjusted to comply with the permit, and/or
 - may escort the vehicle to a place of safety.
-

Continued on next page

A4.6 Enforcement of overdimension permits continued

If a breach occurs
(continued)

If the load dimension breaches a lower dimension category, the operator can choose to comply with the conditions of a higher category in order to continue the journey, or apply to Waka Kotahi for a new permit to cover the actual dimensions.

For details on overdimension operating requirements by category, refer to the VDAM Rule schedule 6, or to *Part C: Overdimension permits* in this volume of the manual.

Penalty for breaches of critical conditions

Breaches of a critical condition incur an infringement fee of \$2000.

Penalty for breaches of additional conditions

Breaches of additional permit conditions incur an infringement fee of \$370.

Powers of enforcement officers

Enforcement officers may prohibit the use of a road by an overdimension vehicle at any time on reasonable grounds of safety or traffic management.

In an emergency or unforeseen circumstance, enforcement officers may also:

- approve the immediate use of an overdimension vehicle on a road, and
 - impose any special conditions to ensure that the vehicle is operated safely.
-

Vehicle dimensions and mass permitting manual (volume 1)

Part B

Overweight permits

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to this manual, please refer to the 'Record of amendments' at the start of both volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Revisions reflect legislation changes from the Land Transport (NZTA) Legislation Amendment Act 2020 the Land Transport Rule: Omnibus Amendments 2020.</p> <p>Updated sections:</p> <p>Introduction: Information added about the Director of Land Transport role, delegations of authority, and the terminology used in the manual.</p> <p>B1.4 and B1.5: New mass limits for standard-tyred tri-axle sets added to the general access mass limit tables from the VDAM Rule.</p>	1 May 2021
Amendment 3	<p>B9.4 Calculating the VAI: Tyre size ('specified standard other than single-tyred spaced') and cross-reference corrected in procedure.</p>	21 September 2020
Amendment 2	<p>Updates reflect amendments to various land transport rules from the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2018, which took effect on 1 June 2019.</p> <p>In addition, outdated information was removed and the information on towing of disabled vehicles was clarified.</p> <p>Updated sections:</p> <p>B1.3.and B1.7: 45/46t without a permit. Outdated warnings about route restrictions removed.</p> <p>B2.1 Minimum axle requirements for rigid vehicles transporting a load clarified.</p> <p>B2.2 Maximum speeds. Speed limit for vehicles with unsprung axles changed to 45km/h (previously 30km/h).</p> <p>B2.3 Maximum tyre pressure for radial-ply tyres updated.</p> <p>B3.6 Towing disabled vehicles: Criteria for determining 'nearest safe area' clarified.</p> <p>B8.10 Declaration on permit application form: Clarification added that false statements may incur penalties.</p>	1 June 2020

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Part B: Overweight permits

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* (volume 1) describes Waka Kotahi NZ Transport Agency's policy for issuing overweight permits under section 5.8 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (referred to as the 'VDAM Rule' in this manual).

Policy purpose

The purpose of the overweight permitting policy is to:

- protect road network facilities from loadings that may lead to premature structural deterioration
 - provide guidance to the transport industry on road network limitations to enable development of better vehicles for the transport of heavy loads
 - provide guidance to the designers and manufacturers of heavy items requiring transport by road
 - ensure the safety of overweight vehicle operations
 - give guidance to transport operators on how to apply for an overweight permit, and
 - enable permitting staff to process applications consistently and with a minimum of administrative and technical effort.
-

Role of the Director of Land Transport

Waka Kotahi's Director of Land Transport is responsible for issuing overweight permits in accordance with the requirements of the VDAM Rule. The Director has delegated the authority to issue permits to Waka Kotahi's permitting staff and their contractors. References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be interpreted as references to the Director if the reference relates to a Director function under the VDAM Rule.

Continued on next page

Introduction continued

Audience

The audience for this part is:

- operators who need to apply for an overweight permit
- Waka Kotahi staff and contractors involved in the processing of overweight permit applications
- local road controlling authorities (RCAs)
- designers and manufacturers of heavy items requiring road transport
- designers and manufacturers of vehicles that might operate under an overweight permit, and
- enforcement agents such as the Commercial Vehicle Safety Team (CVST) of New Zealand Police.

Terminology and abbreviations

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, see *Part I: Definitions and glossary* in this volume of the manual.

In this part

This part contains the following chapters:

Chapter	See page
Chapter B1: Legal mass limits and when an overweight permit is required	B1-1
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Chapter B1: Legal mass limits and when an overweight permit is required

Overview

About this chapter

This chapter explains when an overweight permit is required. The general access mass limits from the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule) can also be found in this chapter.

In this chapter

This chapter contains the following sections:

Section	See page
B1.1 Definitions and general principles for overweight permits	B1-2
B1.2 Other permits that may be required	B1-5
B1.3 Specific legal mass limits	B1-6
B1.4 Individual axle mass limits	B1-7
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B1.1 Definitions and general principles for overweight permits

What is an overweight vehicle?

A vehicle is considered overweight if it exceeds any of the legal mass limits referred to as 'general access' limits in the VDAM Rule.

The different types of mass limit are described in detail in section *B1.3 Specific legal mass limits* below.

Rationale for general access mass limits

The general access mass limits represent the maximum weights that can be sustained under normal conditions without undue deterioration of the road network's pavement and bridges.

Legal basis

The general access mass limits that are legal for an unpermitted vehicle on New Zealand roads are specified in the VDAM Rule schedule 3, parts 1 and 2.

Temporary mass limits for the protection of a road from excessive damage are covered by regulation 10(4) of the Heavy Motor Vehicle Regulations 1974 or section 16A of the Land Transport Act 1998.

Mass limits for weak bridges are covered by regulation 11 of the Heavy Motor Vehicle Regulations 1974.

Law is paramount

Overweight permits do not override the requirements of the VDAM Rule or any other act or regulation, or the vehicle's certificate of loading (CoL). Overweight permits include a disclaimer to this effect.

When is an overweight permit required?

An overweight permit is required for a vehicle that:

- exceeds the general access mass limits, and
- transports an **indivisible** load.

Although there is no established right to exceed the general access mass limits, it is impractical to reduce some loads. Permits help to manage the number of heavy loads using the network and thereby limit the consequent damage.

Permits may impose limitations on gross weights to protect bridges, and on axle weights to protect pavements. Permits may also specify structures and bridges with restricted weight loadings, and conditions that allow vehicles to cross bridges safely, such as 'crawl central'.

Continued on next page

B1.1 Definitions and general principles for overweight permits continued

What is an 'indivisible load'?

Only vehicles that carry indivisible loads are eligible for overweight permits.

A load is considered to be indivisible if it cannot, without disproportionate effort, expense or risk of damage, be divided for transport. This includes customs-sealed ISO containers and certain loads specified in the VDAM Rule as indivisible.

For more details see section *B3.1 Divisible loads eligible for overweight permits*.

'Overweight' versus 'higher mass' permits

Overweight permits are distinguished from 'higher mass' permits, which are either for high productivity motor vehicles (HPMVs) or specialist vehicles such as buses that exceed general access mass limits.

Higher mass permits are available for both divisible and indivisible loads. For details see in this volume:

- *Part D: HPMV higher mass permits*
- *Part F: HPMV 50MAX permits, or*
- *Part G: Specialist vehicle permits.*

Change of ownership

Permits are not transferable. On change of ownership, the new owner (or registered person) must apply for a new permit.

Any dispensations applicable to the permit in question may be transferred to the new owner (or registered person) provided that the pavement loading ratio (PLR) and the deck loading ratio (DLR) are acceptable.

Enforcement

The police enforce overweight permits. They may stop vehicles travelling under permits at any time, which may involve enforcement weighing.

For more information, see *Chapter A4: Enforcement* in part A of this volume.

Continued on next page

B1.1 Definitions and general principles for overweight permits continued

Revocation

Waka Kotahi may revoke an overweight permit if, in its opinion:

- the operator has breached permit conditions
- there is a significant risk to public safety, or
- the operation of the vehicle under the permit may cause extraordinary damage to the road or structures.

Waka Kotahi must advise the operator of the vehicle as soon as practicable that the permit has been revoked. The notice does not need to be in writing but must include the reasons for revocation.

The revocation takes effect immediately on notice, or when specified.

B1.2 Other permits that may be required

Multiple permits

This section describes other permits that may be required in addition to an overweight permit.

Multiple permits must be carried together in the vehicle and shown to enforcement officers on request.

Overdimension permit

If your vehicle or load exceeds the standard dimension limits specified in the VDAM Rule, you may require an overdimension permit in addition to an overweight permit.

For details see *Part C: Overdimension permits* in this volume of the manual.

Railway crossings and overbridges

When processing overweight permit applications, Waka Kotahi permitting staff do not check the ability of an overweight vehicle to safely cross railway level crossings.

Permission from the rail operator is required for certain overweight and overdimension vehicles and loads to travel over railway crossings and/or under overhead electrification.

More information can be found on KiwiRail's website at www.kiwirail.co.nz.

Permits for local roads

If your route includes local roads, you need a separate permit from the local road controlling authority (RCA), unless the local RCA has delegated authority to Waka Kotahi to include its roads on a permit issued by Waka Kotahi.

If a local RCA has not delegated permitting authority to Waka Kotahi, the RCA is responsible for issuing permits for the movement of overweight vehicles on local roads (ie excluding state highways) within its boundaries.

B1.3 Specific legal mass limits

Different categories of mass limits

A vehicle carrying an indivisible load and exceeding the general access mass limits specified in the VDAM Rule requires an overweight permit. More specifically, an overweight permit is required if any of the following apply:

- The mass on any **individual axle** exceeds the limits in the table in section B1.4 below.
 - The mass on any **axle set** (tandem, tri- or quad-axle) exceeds the limits in the tables in section B1.5 below.
 - The combined axle set limit, which depends on the distance from the first axle in any set to the last axle in any other set, exceeds the mass limits in the table in section B1.6 below.
 - The mass on any axle exceeds a temporary limit specified by the road controlling authority for part of the intended route of the vehicle.
-

45/46t without a permit

The maximum total mass for general access specified in the VDAM Rule is 44,000kg, but vehicles with seven or more axles and a minimum wheelbase may carry up to 46,000kg without a permit, as follows:

- 45,000kg (45 tonnes) for 7-axle combinations with a minimum wheelbase of 16.8m, and
- 46,000kg (46 tonnes) for 8-axle combinations with a minimum wheelbase of 17.4m.

Eligible vehicles operating at these limits have general access on all local roads and state highways, except where restrictions are posted.

Legislation reference: VDAM Rule section 4.3(11) and schedule 3, part 2, table 2.2.

Diagrams

Diagrams of the various axle types and axle sets referred to in the tables in the following sections are illustrated in section *B9.3 Types of axle*.

B1.4 Individual axle mass limits

Individual axle limits

This table shows the maximum general access mass limits on individual axles according to tyre type.

A set of two axles less than 1 metre from the centre of the first to the centre of the last axle is counted as a single axle.

Legislation reference: VDAM Rule schedule 3, part 1, tables 1.1A and 1.1B.

Type of axle	Mass limit (kg)
<i>Single standard tyres</i>	
In a twin-steer or in a tandem axle set with a single large-tyred axle	5500
In a tandem axle set with a twin-tyred axle:	
• in a passenger service vehicle	5800
• in any other vehicle	5500
In a tri-axle set	3000
In any other axle set	6000
<i>Single large-tyred</i>	
In a twin-steer axle set or a quad-axle set	5500
In a tandem set with a single large-tyred axle or a single standard-tyred axle or in a tri-axle set	6600
In any other axle set	7200
<i>Single mega-tyred</i>	
In a twin-steer axle set	5500
In a single-steer axle set	7200
In a quad-axle set	6000
In a tri-axle set	7000
In any other axle set	7600

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B1.4 Individual axle mass limits continued

Individual axle limits (continued)

Type of axle	Mass limit (kg)
<i>Twin-tyred</i>	
In a quad-axle set	6000
In a tri-axle set	7000
In a tandem axle set with a single standard-tyred axle:	
• in a passenger service vehicle	8700
• in any other vehicle	8200
In any other axle set:	
• in a public transport service bus	9000
• in any other vehicle	8200
<i>Oscillating axle</i>	
In any axle set	9500

B1.5 Axle set mass limits

Tandem axle set limits

This table shows the maximum general access sum of axle mass on two axles in a tandem axle set.

A tandem axle set consists of two axles that are at least 1 metre but no more than 2 metres from the centre of the first to the centre of the last axle.

The 2-metre maximum does not apply to twin-steer axle sets.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.2.

Type of axle	Mass limit (kg)
<i>Two single standard-tyred axles</i>	
In a twin-steer set or not in a twin-steer axle set	11,000
<i>Two single large-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	13,000
<i>Two single mega-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	14,000
<i>Two twin-tyred axles</i>	
Spaced less than 1.3m from first axle to last	14,500
Spaced 1.3m or more but less than 1.8m from first axle to last	15,000
Spaced 1.8m or more from first axle to last	15,500
<i>Twin-tyred axle</i>	
For a passenger service vehicle: <ul style="list-style-type: none"> with a single standard-tyred axle and load share of 60/40, or with a single large-tyred axle or single mega-tyred axle and load share between 60/40 and 55/45 	14,500
For any other vehicle: <ul style="list-style-type: none"> with a single large-tyred axle or single mega-tyred axle and load share of 60/40 with a single large-tyred axle or single mega-tyred axle and load share of 55/45 	13,600
	14,500

Continued on next page

B1.5 Axle set mass limits continued

Tandem axle set limits (continued)

Type of axle	Mass limit (kg)
<i>Single standard-tyred axle</i>	
with an oscillating axle	13,000
with a single large-tyred axle or a twin-tyred axle or a single mega-tyred axle	12,000
<i>Other combinations</i>	
Two oscillating axles	15,000

Tri-axle set limits

This table shows the maximum general access sum of axle mass on a tri-axle set.

A tri-axle set consists of three axles where:

- the axles are spaced at least 2 metres (or 1.8 metres in the case of a single standard-tyred axle) but no more than 3 metres from the centre of the first to the centre of the last axle, and
- all axles contain an equal number of tyres.
- **Legislation reference:** VDM Rule schedule 3, part 1, table 1.3.

Type of axle	Mass limit (kg)
<i>Three oscillating axles, three twin-tyred axles, three single large-tyred axles or three single mega-tyred axles</i>	
Spaced 2m or more and less than 2.4m from the first axle to the last axle	16,000
Spaced 2.4m or more and less than 2.5m from the first axle to the last axle	17,500
Spaced 2.5m or more from the first axle to the last axle	18,000
<i>Three single standard-tyred axles</i>	
Spaced 1.8m or more and less than 3m from the first axle to the last axle	8200

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B1.5 Axle set mass limits continued

Quad-axle set limits

This table shows the maximum sum of axle mass for general access on a quad-axle set.

A quad-axle set consists of four axles where:

- the axles are spaced at least 3.75 metres and no more than 4 metres from the centre of the first to the centre of the last axle
- all axles contain an equal number of tyres, and
- none of the axles is a single standard-tyred axle.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.4.

Type of axle	Mass limit (kg)
Four twin-tyred axles	20,000
Four single large-tyred axles	
Four single mega-tyred axles	

Other axle mass limits

This table shows the maximum sum of mass on any two or more axles that together do not constitute a single tandem axle set, a single tri-axle set or a single quad-axle set, where the distance from the centre of the first axle to the centre of the last axle is 1.0 metre or more but less than 1.8 metres (including maximum gross mass).

Legislation reference: VDAM Rule schedule 3, part 1, table 1.5.

Type of axle	Mass limit (kg)
Two single standard-tyred axles	11,000
Two single large-tyred axles	12,000
A single standard-tyred axle with a single large-tyred axle, single mega-tyred axle or a twin-tyred axle	12,000
Any other two or more axles	14,500

B1.6 Axle group and gross mass limits

General access total mass limits

This table shows the maximum sum of mass for general access on any two or more axles that together do not constitute a single tandem axle set, single tri-axle set or single quad-axle set, where the distance from the centre of the first axle to the centre of the last axle is 1.8 metres or more (including maximum gross mass).

Legislation reference: VDAM Rule schedule 3, part 2, table 2.1.

Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
1.8m but less than 2.5m	15,500
2.5m but less than 3.0m	17,500
3.0m but less than 3.3m	19,000
3.3m but less than 3.6m	20,000
3.6m but less than 4.0m	21,000
4.0m but less than 4.4m	22,000
4.4m but less than 4.7m	23,000
4.7m but less than 5.1m	24,000
5.1m but less than 5.4m	25,000
5.4m but less than 5.8m	26,000
5.8m but less than 6.4m	27,000
6.4m but less than 7.0m	28,000
7.0m but less than 7.6m	29,000
7.6m but less than 8.2m	30,000
8.2m but less than 8.8m	31,000
8.8m but less than 9.4m	32,000
9.4m but less than 10.0m	33,000
10.0m but less than 10.8m	34,000
10.8m but less than 11.6m	35,000
11.6m but less than 12.0m	36,000
12.0m but less than 12.5m	37,000
12.5m but less than 13.2m	38,000

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B1.6 Axle group and gross mass limits continued

General access total mass limits (continued)	Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
	13.2m but less than 14.0m	39,000
14.0m but less than 14.8m	40,000	
14.8m but less than 15.2m	41,000	
15.2m but less than 15.6m	42,000	
15.6m but less than 16.0m	43,000	
16.0m or more	44,000	

B1.7 Maximum total mass for heavy vehicles with at least seven axles

45/46t gross mass limits

This table shows the maximum general access gross mass limits for heavy motor vehicles with at least seven axles and a minimum wheelbase of 16.8m.

Note: Restrictions on routes or bridges set by road controlling authorities may reduce the allowable mass. Such restrictions must be signposted.

Legislation reference: VDAM Rule schedule 3, part 2, table 2.2.

Axle requirements	Mass limit (kg)
<i>Distance from the centre of the first axle to the centre of the last axle:</i>	
16.8m or more, and a minimum of 7 axles	45,000
17.4m or more, and a minimum of 8 axles	46,000

Chapter B2: Vehicle requirements

Overview

About this chapter

This chapter contains information on specific vehicle requirements for carrying indivisible loads above the general access mass limits under an overweight permit.

In this chapter

This chapter contains the following sections:

Section	See page
B2.1 Axle requirements for vehicles carrying a separate payload (transporters)	B2-2
B2.2 Vehicle speed and travel time restrictions	B2-3
B2.3 Tyre pressures	B2-4
B2.4 Traction limits	B2-5
B2.5 Mobile plant (other than mobile cranes)	B2-6
B2.6 Mobile cranes	B2-7
B2.7 Traction engines	B2-9
B2.8 Other vehicle types	B2-10
B2.9 VAI and PLR limits by vehicle and permit type	B2-11

B2.1 Axle requirements for vehicles carrying a separate payload (transporters)

Minimum number of axles

To be eligible for an overweight permit, the minimum number of axles for a heavy vehicle **transporting a separate payload** is as follows:

Vehicle type	Minimum number of axles
Rigid heavy vehicle ¹ (single unit)	4 axles
Vehicle combination (prime mover and trailer(s))	<ul style="list-style-type: none"> • 5 axles, and • 2 driving axles
Full trailer ² , if the payload cannot be distributed in part to other axles of the combination	five axles

Notes:

1. Only if transporting a load, ie the minimum axle requirement does not apply to vehicles such as harvesters or mobile plant.
2. A full trailer is a trailer with two axle sets, the foremost of which is steered by a drawbar. It includes a semi-trailer with non-steering axles coupled to a converter dolly.

Dispensations

Waka Kotahi's Lead Advisor, Pavements (for movements on state highways) or the local authority approving engineer (for local roads) may, in exceptional circumstances, approve a dispensation from the above requirements to allow the use of a short wheelbase vehicle combination with less than five axles where the road alignment dictates the use of such a vehicle and no alternative route is available.

B2.2 Vehicle speed and travel time restrictions

Maximum speeds

Maximum vehicle speeds for vehicles operating under an overweight permit are as follows:

If the vehicle...	Then the speed limit is...
has one or more unsprung axles (unless the unsprung axles are connected to the chassis by a longitudinal walking beam or beams)	45km/h ¹
is fitted with large earthmover tyres	30km/h
is truck-mounted with fully sprung axles and is fitted with large or mega truck tyres (see <i>B9.2 Types of tyre</i>)	70km/h

In all other cases, the legal highway speed limit for heavy motor vehicles applies. This is 90km/h except for school buses, which have a speed limit of 80km/h.

Note:

1. **Legislation reference:** Land Transport (Road User) Rule, section 5.5.

Off-peak restriction

If a low speed limit is likely to create a high risk to other road users, travel may be restricted to off-peak hours.

Consult with Waka Kotahi, the police and the heavy transport industry in such cases.

B2.3 Tyre pressures

Policy

Tyres must be at pressures recommended by either the manufacturer or the tyre and rim associations.

Maximum tyre pressures

The **maximum** cold inflation pressures allowed for heavy motor vehicles are:

Type of tyre	Maximum cold inflation pressure
Cross-ply tyre	700kPa
Radial-ply tyre	<ul style="list-style-type: none">• 825kPa, or• if the manufacturer specifies an inflation pressure higher than 825kPa, that inflation pressure, to a maximum of 900kPa

Legislation reference: Land Transport Rule: Tyres and Wheels 2001, section 2.4.

B2.4 Traction limits

Introduction	<p>Traction restrictions for overweight permits are based on the maximum allowable gradient combination (MGC).</p> <p>The MGC indicates whether a vehicle combination is able to develop sufficient traction to prevent damage to the pavement surface by wheel slip.</p> <p>For more details, including how to calculate the MGC, see section <i>B10.7 Traction limits (MGC)</i>.</p>
MGC permit requirement	<p>When applying for an overweight permit, an operator must ensure that the MGC of their vehicle combination is greater than all uphill gradients on the proposed route for the mass applied for.</p>
Finding the gradients for a route	<p>The maximum uphill gradient on a route can be determined by Waka Kotahi from highway information sheets or its databases. It is expressed in percent.</p>
Increasing the MGC	<p>The MGC can be increased by the addition of:</p> <ul style="list-style-type: none">• another prime mover in series, and/or• ballast over the driving axles (see section <i>B3.5 Ballast</i>).

B2.5 Mobile plant (other than mobile cranes)

Introduction	<p>This section describes the overweight permit requirements for mobile plant.</p> <p>For information on mobile cranes, see section <i>B2.6 Mobile cranes</i>.</p>
Definition of 'mobile plant'	<p>'Mobile plant' means a vehicle that is operated mainly off the highway and that does not carry a separate payload while on the highway. This includes motor scrapers, dump trucks, drilling rigs, front-end loaders, forklifts, crushing plants, batching plants and agricultural vehicles.</p> <p>Note: Mobile plant excludes tractors towing trailers carrying divisible loads. Divisible loads are not eligible for an overweight permit under section 5.8 of the VDAM Rule.</p>
Permit depends on VAI	<p>Overweight permits may be issued to mobile plant up to a maximum vehicle axle index (VAI) of 1.50.</p> <p>For details see section <i>B2.9 VAI and PLR limits by vehicle and permit type</i>.</p>
Detachable axles	<p>The use of detachable (or tag) axles is not permitted on items of mobile earthmoving plant for transport purposes.</p>
Dispensations	<p>In exceptional circumstances, a dispensation from VAI and detachable axle requirements may be approved by Waka Kotahi's Lead Advisor, Pavements (for state highways) or the local authority approving engineer (for local roads).</p> <p>Dispensations will only be considered if the pavement loading ratio (PLR) does not exceed 150% for the pavements involved.</p> <p>For more information about PLR, see section <i>B10.3 Pavement grades and pavement loading ratio (PLR)</i>.</p>
Towing of trailers	<p>Trailers and equipment that are associated with the off-highway operation of mobile plant may be towed behind that vehicle provided that this practice does not increase the bridge engineering supervision requirements.</p>

B2.6 Mobile cranes

Introduction	This section describes the overweight permit requirements for mobile cranes.
Maximum VAI	<p>A mobile crane may be issued with an overweight permit up to a maximum VAI of 1.50, provided that this does not result in exceeding any of the manufacturer's safety ratings (eg for gross vehicle mass (GVM), maximum permissible axle ratings, etc).</p> <p>For details see section <i>B2.9 VAI and PLR limits by vehicle and permit type</i>.</p>
Boom trailers	<p>Mobile cranes configured with boom trailers may be issued with overweight permits provided that:</p> <ul style="list-style-type: none">• The boom is free to luff and slew (ie pivot in all directions) at all times the crane is operating on the road.• The application contains a statement from the applicant that:<ul style="list-style-type: none">– the boom is free to pivot, and– no device to alter the load distribution to the axles is in operation.• The maximum VAI on the crane and the boom trailer does not exceed 1.50.• The applicant submits full details of each trailer configuration for technical evaluation when first applying for a permit.
Travel without trailer	<p>Mobile cranes may travel short distances to work sites after parking the trailer provided that:</p> <ul style="list-style-type: none">• the speed of travel does not exceed 10km/h, and• the route does not involve any bridges.

Continued on next page

B2.6 Mobile cranes continued

Counterweights Counterweights may be repositioned from the manufacturer's designed operating position on the crane's body provided that:

- The maximum VAI is reduced by the repositioning.
- The counterweight is securely fixed in the new position while on the road.
- The maximum VAI on the crane does not exceed 1.50.
- The applicant submits full details for technical evaluation when first applying for a permit.

Counterweights required for a mobile crane's normal lifting operation may also be carried on a trailer towed behind the crane provided that this practice does not increase the bridge engineering supervision requirements.

B2.7 Traction engines

Consent required

Consent must be obtained from road controlling authorities before a traction engine can travel on New Zealand roads.

The Heavy Motor Vehicle Regulations 1974 specifically exclude traction engines from the definition of a heavy motor vehicle.

If the traction engine also exceeds legal mass limits, then an overweight permit must be obtained.

Considerations

The two matters for road controlling authorities to consider before authorising travel by traction engines are:

- the effects of high axle loadings on pavements, bridge decks and underground services, and
 - the potential disruption and associated risk to other traffic from their slow travel speed.
-

Travel on state highways

Before a traction engine can travel on a state highway, all wheels must be fitted with solid rubber tyres with a minimum thickness of 25mm.

Waka Kotahi checks any bridge crossings required, assuming an 18.00-22.5 single mega tyre size and reference axle mass of 8.0 tonnes.

In addition, Waka Kotahi may impose conditions on the travel, bearing in mind the impact these vehicles have on other road users. Time of travel may be restricted where traffic flows are significant.

Local roads

Local road controlling authorities may issue permits subject to the conditions they consider appropriate.

B2.8 Other vehicle types

Tracked vehicles

Written consent must be obtained from the road controlling authority before tracked vehicles can use New Zealand roads.

Legislation reference: Land Transport Rule: Tyres and Wheels 2001, section 2.3(18).

Such consent is usually considered only for vehicles that are either of limited mass (eg a Bren Gun carrier) or have rubber cleats or tracks to minimise road damage.

Where consent is given, or the operator applies for a permit for increased mass, conditions can be imposed, such as:

- maximum speed
- legal mass limits not to be exceeded
- vehicles not allowed on motorways
- pivot turns prohibited on pavements
- heavy braking to be minimised on pavements
- minimum clearances for rubber pads on track shoes, or
- compliance with any other Waka Kotahi requirements.

Steel wheeled vehicles – steam rollers

Steel wheeled or tyred vehicles require written consent from road controlling authorities before they can travel on New Zealand roads.

No consent is required for work on road construction sites.

NZ Defence Force vehicles

Operational vehicles controlled by the New Zealand Defence Force may be eligible for exemptions from specific permitting requirements. Waka Kotahi may grant such exemptions to a Defence Force vehicle or vehicle type, having regard to the same considerations as for other exemptions (see *Exemptions for divisible loads* in section B3.1).

Legislation reference: Land Transport Act 1998, section 166A.

B2.9 VAI and PLR limits by vehicle and permit type

Table

The table below shows the vehicle axle index (VAI) and pavement loading ratio (PLR) limits for different vehicle and overweight permit types.

For details about how to calculate the VAI of a vehicle, see *Chapter B9: Calculating the vehicle axle index (VAI)*.

For details about the PLR, see section *B10.3 Pavement grades and pavement loading ratio (PLR)*.

Vehicle type	VAI limit		PLR limit (%)	
	Single or multiple trip permit	Continuous permit	Single or multiple trip permit	Continuous permit
Agricultural harvester	1.50	1.50	150	150
Agricultural vehicle	1.50	1.50	150	150
Agricultural tractor	1.50	1.50	150	150
Building removal vehicle	1.50	1.50	150	150
Dump truck	1.50	1.50	150	150
ISO container truck	1.10	1.10	110	110
Mobile crane	1.50	1.50	150	150
Mobile plant	1.50	1.50	150	150
Motor scraper	1.50	1.50	150	150
Slurry truck ¹	1.50	1.50	150	150
Special projects transporter ²	1.50	N/A	150	N/A
Tow truck	1.50	1.50	150	150
Transporter	1.50	1.50	150	150
Traction engine	1.50	N/A	150	N/A

Notes:

1. Travel is limited to a maximum radius of 20km from the stockpile to the sealing site.
2. Loads greater than 200 tonnes.

Chapter B3: Payload requirements

Overview

About this chapter

This chapter contains information on the requirements for the payloads of vehicles operating under an overweight permit.

In this chapter

This chapter contains the following sections:

Section	See page
B3.1 Divisible loads eligible for overweight permits	B3-2
B3.2 Building removals	B3-4
B3.3 Platform trailers	B3-5
B3.4 Load dividers	B3-6
B3.5 Ballast	B3-7
B3.6 Towing and transporting disabled vehicles	B3-8
B3.7 Fire-fighting vehicles	B3-10
B3.8 Slurry sealing	B3-11
B3.9 ISO containers	B3-12

B3.1 Divisible loads eligible for overweight permits

Definition of 'indivisible'

Under the VDAM Rule, overweight permits can only be issued for indivisible loads.

A load is considered to be indivisible if it cannot, without disproportionate effort, expense or risk of damage, be divided for transport. This includes the loads listed in the table below.

Legislation reference: VDAM Rule section 5.8(1) and part 2, definitions.

Divisible loads eligible for overweight permits

As certain types of divisible load would incur disproportionate effort, expense or risk to the load if they were to be divided or separated, they are considered indivisible loads under the VDAM Rule for the purpose of obtaining an overweight permit.

The following table lists divisible loads that are specified in the VDAM Rule as eligible for an overweight permit.

Load type	For details see section...
Ancillary items associated with the indivisible load or vehicle	
Ballast being carried with an overweight load	B3.5
Building removals	B3.2
Construction equipment being transported with attachments used with that equipment	
Converter dolly or trailer being carried with an overweight load	B2.1
Disabled vehicle being towed or carried	B3.6
Load divider being carried with an overweight load	B3.4
Platform trailer carried on another platform trailer	B3.3
Slurry being carried to or used at sealing sites	B3.8
Transformer oil	
Water being carried by a fire-fighting vehicle	B3.7

Legislation reference: VDAM Rule, section 5.8(3).

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B3.1 Divisible loads eligible for overweight permits

continued

ISO containers Customs-sealed ISO containers loaded or packed for export or import may be considered to be indivisible loads and eligible for overweight permits – see section *B3.9 ISO containers*.

Exemptions for divisible loads

Waka Kotahi may grant an exemption and consider a divisible load to be indivisible and eligible for an overweight permit.

When considering granting an exemption, Waka Kotahi must be satisfied that the risk to safety will not be significantly increased. It must also consider the potential impact on infrastructure, including the potential for damage to roads and the cost of repairs.

Note: There is no legal right to an exemption, and there is no guarantee that an exemption can be granted.

Legislation reference: Land Transport Act 1998, section 166.

B3.2 Building removals

Introduction Theoretically, buildings for removal may be reduced to their individual components. Some judgement is required in determining what is disproportionate effort, expense or risk of damage to a building when reducing it in size and weight.

This section provides the criteria to be followed in granting overweight permits for building removals.

PLR limit Overweight permits may be issued for building removals up to a maximum pavement loading ratio (PLR) of 150%.

PLR exceeds 150% - approval needed For movements on state highways when the PLR exceeds 150%, the approval of Waka Kotahi's Lead Advisor, Pavements, must be obtained. This is done as part of the permitting process.

Overdimension requirements Building removals generally also require an overdimension permit.

Buildings must be transported in accordance with the requirements specified on the overdimension permit. For details refer to *Part C: Overdimension permits* in this volume.

B3.3 Platform trailers

**Permit for
second trailer**

Overweight permits may be issued to allow empty platform trailers towed behind ballasted prime movers to carry a second empty trailer.

Legislation reference: VDAM Rule, section 5.8(3)(b).

B3.4 Load dividers

What is a load divider?	A load divider is a smaller trailer used to spread the load over more axles. It is located between the prime mover and the main transporter.
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May be carried when not in use	In some situations, the load divider may not be required for all sections of a journey. The load divider may be carried on the transporter in addition to the payload when they are required for only a part of the overall journey.
---------------------------------------	--

Permit load description	The description of the load on the overweight permit will include the words 'and a load divider if required'.
--------------------------------	---

B3.5 Ballast

Traction	Ballast may be used to ensure traction. See section <i>B2.4 Traction limits</i> for when such ballast may be required.
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Carriage of ballast not in use	When ballast is required for one section of a journey, or the return/ outward part of a journey, the ballast can remain on the prime mover when the trailer is unladen, even if the ballast is not required for traction purposes for that section of the journey.
---------------------------------------	--

The following criteria apply:

- The VAI of the prime mover must not exceed 1.50.
 - The maximum weight of the prime mover must not exceed 24,000kg gross for three axles.
 - The maximum weight of the prime mover must not exceed 28,000kg for four axles.
-

B3.6 Towing and transporting disabled vehicles

Introduction This section describes the overweight permit requirements for the towing of vehicles that have been involved in an accident or suffered mechanical failure.

The VDAM Rule includes formal provision for the towing of disabled vehicles under an overweight permit.

Legislation reference: VDAM Rule, section 5.8(3).

Overdimension issues The towing of a disabled vehicle also often results in the tow combination exceeding legal dimension requirements. The VDAM Rule allows towing to the nearest safe area without compliance with the rule dimension requirements or the requirement to operate under an overdimension permit.

Legislation reference: VDAM Rule, section 3.14(11).

Requirement to tow to 'nearest safe area' A heavy vehicle recovery service must determine the nearest safe area that a disabled vehicle may legally be towed to by taking account of the following three criteria specified in the VDAM Rule:

- volume of traffic
- vehicle load, and
- ability to undertake repairs safely at the roadside.

The requirement to tow to the **nearest** safe area is paramount and overrides any other considerations by the tow truck operator or vehicle owner.

To access the nearest safe area, tow truck operators must comply with any bridge weight limits or posted limits.

Legislation reference: VDAM Rule, section 3.14(11).

Permits for moving disabled vehicles Continuous overweight permits may be issued to breakdown trucks and multi-axle low bed transporters to move disabled vehicles that exceed the legal mass limits.

These are non-standard overweight permits because the disabled vehicle may not be specifically known to Waka Kotahi. To establish appropriate permit conditions, permitting staff have to run a series of pro-forma heavy vehicles behind the tow truck through the permitting process.

Continued on next page

B3.6 Towing and transporting disabled vehicles continued

Permit conditions

The maximum VAI for an overweight permit is 1.50.

Peak traffic restrictions do not generally apply because the removal of the disabled vehicle enhances traffic flow at such times.

Under normal circumstances, the critical factor is the load on the rear axles of the tow truck. Waka Kotahi generally requires the vehicle to have on-board scales to provide confidence that these critical axle loads are maintained within the stated permit limits.

Waka Kotahi may consider alternatives to on-board scales if the tow operator can demonstrate compliance with permit limits.

There are no specific brake requirements or speed limits for these permits. It is the tow operator's responsibility to ensure that brake capacity for the tow combination and operating speeds are safe at all times.

Other legal requirements

The operator is also responsible for compliance with any other legal requirements that may apply, for example the Land Transport Rule: Dangerous Goods 2005 and the Health and Safety at Work Act 2015.

Permit applications

To apply for an overweight permit for towing a disabled vehicle, complete the overweight permit application form and email it to overweightinquiries@nzta.govt.nz.

You should include the following information:

- overweight permit number of the disabled vehicle (if applicable), or
 - number of axles and axle loadings of the disabled vehicle.
-

B3.7 Fire-fighting vehicles

**Eligible for
overweight
permit**

Fire appliances that exceed the legal mass limits when carrying water to maintain fire-fighting capability are eligible for overweight permits on public roads.

This includes appliances operated by Fire and Emergency New Zealand, the New Zealand Defence Force or by civilian airports.

B3.8 Slurry sealing trucks

Permit eligibility

Overweight permits may be issued to allow loaded slurry sealing trucks to operate between stockpiles and sealing sites.

Restrictions

The VAI limit is 1.50, and the maximum permitted radius of movement from the stockpile is 20km.

B3.9 ISO containers

Eligibility	<p>Generally, containers are considered to be divisible loads. However, ISO containers may be considered to be indivisible loads and eligible for an overweight permit if they have been loaded or packed for the sole purpose of export or import and are customs-sealed.</p> <p>These criteria apply to containers that are up to 40 feet long and carried on articulated vehicles incorporating a prime mover and semi-trailer with a tri-axle set or quad-axle set as defined in the VDAM Rule.</p> <p>Other shipping and transport containers that are not ISO approved are not eligible for an overweight permit.</p>
Permissible prime movers	<p>Prime movers may be either 6 x 4 or 8 x 4 with two rear driving axles, but excluding tri-drive units.</p>
Permits and route conditions	<p>Single, multiple or continuous permits may be issued for vehicles carrying ISO containers, subject to the following conditions:</p> <ul style="list-style-type: none"> • the roads on the journey route(s) are specifically named, and • routes are to and from sea ports. <p>For details see section <i>B8.6 Overweight permit types – overview</i>.</p>
Maximum VAI and mass limits	<p>The following mass limit conditions may apply to overweight permits for vehicles carrying ISO containers:</p> <ul style="list-style-type: none"> • The vehicle axle index (VAI) must not exceed 1.10. • The mass on quad-axle sets on semi-trailers, having either twin-tyred or single large-tyred axles, is limited to 22,000kg. • The mass on each of the front axles on the prime mover is limited to either the legal mass limit, ie 6000kg (standard tyres), 7200kg (large tyres), 7600kg (mega tyres) and 5500kg (twin-steer axle set) OR the manufacturer’s rating, whichever is the lesser. • Gross mass of the vehicle combination is limited to either 46,000kg or the sum of the axle group masses, whichever is the lesser.
Attributes check sheet	<p>All permit applications for ISO containers must be accompanied by a vehicle attributes check sheet completed and signed by a heavy vehicle specialist certifier (see section <i>B8.4 Applying for a permit for ISO containers</i>).</p>

Continued on next page

B3.9 ISO containers continued

SRT compliance certificates

To manage the increased vehicle rollover risk associated with ISO container trucks, valid static roll threshold (SRT) compliance certificates must be submitted with an overweight permit application for all trailers listed on the application form (see section *B8.4 Applying for a permit for ISO containers*).

Acceptable documents for enforcement purposes

The police may demand to see bona fide evidence confirming that, in the case of export containers, the entire contents of the container were loaded or packed for the sole purpose of export or, in the case of imported containers, the entire contents of the container were loaded or packed overseas.

Any of the following documents is acceptable as bona fide evidence:

- shipping company delivery order
- shipping company carter's note
- carrier's waybill
- wharf gate pass, or
- any other traceable document.

A photocopy of the document is sufficient. It must be carried in the vehicle and shown to an enforcement officer on request.

Vehicle safety requirements

Under the VDAM Rule, semi-trailers (vehicles of class TD) with a VAI not exceeding 1.10 must hold a certificate of loading incorporating the vehicle's static roll threshold (SRT) compliance results for load height and gross mass in accordance with the most recent technical bulletin on SRT requirements for export/import containers (memo 70 series) at <https://vehicleinspection.nzta.govt.nz/virms/hvsc/tb/srt-requirements>.

In addition, the semi-trailer mass must not exceed the maximum towed mass on the vehicle's certificate of loading.

Chapter B4: Weight determination

Overview

About this chapter

This chapter contains information about the weighing of vehicles. It also discusses weighing endorsements and certificates.

In this chapter

This chapter contains the following sections:

Section	See page
B4.1 General principles for weighing	B4-2
B4.2 Weighing mobile plant	B4-3
B4.3 Mobile crane weight certificates	B4-4

B4.1 General principles for weighing

Basis of method

All weighing must be done in accordance with the Transport (Measurement of Weight) Notice 1997.

Supervision

All weighings must be supervised by the police or a consultant approved by Waka Kotahi to ensure that correct procedures are used when weighbridge certificates are obtained by the applicant.

Weighing records

The weighing record must include a concise description of the vehicle and its loading condition, including the extent of operating gear carried and the description and position of the payload.

In general, the police will accept these weighing records.

Weighing for permit

The permit issuing officer (PIO) processing an overweight permit application, or any of the road controlling authorities involved in a movement, may require the vehicle to be weighed at a specific locality as a condition of the permit. This requires either that:

- confirmation of axle masses from a certified weighing facility be sent to the PIO clearly indicating the permit serial number, or
- the weighing be done under the control of a person nominated by the PIO.

Evidence of load sharing

In addition, the road controlling authority may, by exception, require evidence of satisfactory load sharing of vehicles that have non-compliant suspension systems.

B4.2 Weighing mobile plant

Permit weight endorsement	Fixed mass mobile plant (such as motor scrapers, forklifts or mobile cranes) having constant axle masses and dimensions may have their overweight permits endorsed with their certified masses obtained from a supervised weighing site.
----------------------------------	--

Conditions for recognition	<p>Police officers recognise such certified masses as an alternative to enforcement weighing, provided that:</p> <ul style="list-style-type: none">• weighings and dimension checks are conducted under police supervision• only approved and certified weighing equipment is used• the endorsement applies only to the trips listed on the permit and ceases to have effect when the permit date has expired• no modifications that affect the certified weights have been made to the vehicle or load• the vehicle has either a current certificate of fitness or a warrant of fitness, whichever is applicable• the vehicle complies with the mass limitations imposed by the certificate of loading, and• the vehicle complies with all the provisions of the Road User Charges Act 1977.
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B4.3 Mobile crane weight certificates

Fixed weight mobile crane

To prevent repeated enforcement weighing of a fixed weight mobile crane, a mobile crane weight certificate may be issued by the Crane Association of New Zealand.

The certificate incorporates a detailed description of major accessories likely to significantly affect the mass. It also includes photographs.

Not routinely weighed

Cranes issued with a mobile crane weight certificate are not routinely weighed by police officers, provided they meet all the conditions for recognition listed in section *B4.2 Weighing mobile plant* above.

Enforcement weighing

The above does not prevent police from weighing a mobile crane if they consider there is good reason to do so.

Chapter B5: Route requirements

Overview

About this chapter

This chapter describes the routes vehicles operating under an overweight permit may follow. Route limitations and restrictions may be a condition of an overweight permit.

In this chapter

This chapter contains the following sections:

Section	See page
B5.1 Alternative routes	B5-2
B5.2 Use of local bypasses for weak bridges	B5-3
B5.3 Use of motorways	B5-4

B5.1 Alternative routes

**When
alternative
routes may be
required**

In general, permits are issued for the route desired by the applicant.

If there are bridges that cannot be bypassed and that have decks with a deck loading ratio (DLR) exceeding 130%, the bridge consultant may require that an alternative route be used.

B5.2 Use of local bypasses for weak bridges

**When
bypasses may
be required**

Where an acceptable ford, railway level crossing or other crossing is available as an alternative to a bridge that would require bridge engineering supervision, the bridge consultant may require that such an alternative crossing be used instead of the bridge.

B5.3 Use of motorways

Why motorway travel may be restricted

In general overweight vehicles are allowed to use the motorway network in preference to urban roads and streets. The principal restriction on the use of motorways is the need to reduce the hazard from vehicles that cannot operate at a reasonable speed.

Vehicles not permitted to travel on motorway

Vehicles are not permitted to travel on motorways if they:

- cannot operate safely at 70km/h or greater, or
 - are restricted to a maximum speed of 50km/h or less as a condition of the overweight permit.
-

Speeds lower than 70km/h

Motorway travel at speeds below 70km/h may be permitted at the discretion of Waka Kotahi's Manager, System Management (regional), provided additional local conditions covering vehicle movement (eg time of travel) are also imposed.

Appropriate local conditions for motorway travel are determined by the Manager, System Management (regional) in consultation with the police and the heavy transport industry.

Evidence of capability

In some cases, evidence of the vehicle's speed capability may be required from the vehicle manufacturer.

Chapter B6: Bridge engineering self supervision (BESS)

Overview

About this chapter

Some bridges may be at risk of being damaged by vehicles operating under an overweight permit. The permit may therefore specify restrictions on speed, vehicle positioning or traffic management to reduce the load effects on certain bridges.

To ensure such restrictions are complied with, permits also specify supervision requirements for bridge crossings. Permits specify whether supervision:

- can be carried out by bridge engineering self supervision (BESS), or
- must be done by a qualified bridge engineering consultant.

This chapter describes the BESS system that enables operators to supervise their own bridge crossings.

Supervision by a bridge engineering consultant is covered in the next chapter.

Results of BESS

The effect of BESS has been largely to eliminate the use of Waka Kotahi consultants for bridge crossings with restrictions on state highways and the associated costs and delays.

In this chapter

This chapter contains the following sections:

Section	See page
B6.1 General BESS policy	B6-2
B6.2 Getting BESS registered – companies	B6-5
B6.3 Getting BESS registered – drivers	B6-7
B6.4 Breaches of BESS conditions	B6-10
B6.5 Traffic control at bridge crossings	B6-12

B6.1 General BESS policy

What is BESS?	Bridge engineering self supervision (BESS) is a training and registration system for companies and drivers of heavy vehicles that operate under an overweight permit.
When is BESS registration needed?	Companies and drivers must be registered for bridge engineering self supervision (BESS) if they operate a heavy motor vehicle under an overweight permit with bridge restrictions.
What bridge restrictions may apply?	Bridge restrictions on a permit may be: <ul style="list-style-type: none">• speed limits when crossing a bridge to reduce the dynamic load effects on the bridge• removal of other traffic crossing at the same time to reduce total load effects, and/or• positioning the vehicle (usually in the centre) to optimise load distribution over the bridge.
Supervision by bridge engineer	Under specific circumstances, bridge capacity and/or traffic safety considerations may necessitate that qualified bridge engineering consultants supervise bridge crossings. Load pilots and/or traffic controllers may also need to be involved – see <i>Chapter B7: Bridge engineering supervision and traffic safety</i> .
Who is eligible for BESS?	Waka Kotahi may approve companies to carry out bridge engineering self supervision if they have a good record of compliance with driving rules, transport legislation, permit conditions and Waka Kotahi’s overweight permit policy.
BESS registration of drivers	<p>A BESS-approved company can nominate, on the basis of a proven good record, the driver(s) it wishes to have BESS-registered to provide bridge supervision.</p> <p>Drivers may also apply in their own right for BESS registration without being nominated by a company.</p> <p>Drivers accepted for BESS registration must sit and pass the NZQA unit standard 23436.</p> <p>For details see section <i>B6.3 Getting BESS registered – drivers</i>.</p>

Continued on next page

B6.1 General BESS policy continued

Register	Waka Kotahi keeps a register of approved companies, together with a schedule of approved drivers.
Permit conditions	Permit issuing officers specify on an overweight permit if a BESS-registered driver or supervisor is needed and which bridges have restrictions.
Who may supervise bridge crossings under BESS?	<p>Usually, the person who performs bridge engineering self supervision is a BESS-registered driver operating the permitted overweight vehicle.</p> <p>Alternatively, a BESS-registered supervisor may accompany the driver to control any restricted bridge crossings and ensure that restrictions on the permit are complied with.</p> <p>Pilots who are BESS-registered cannot act as a BESS driver as well as act as a pilot for a bridge crossing.</p>
Advice of damage	<p>The BESS driver or supervisor, or the overweight permit holder, must advise the road controlling authority or the Manager, System Management (regional) at the relevant Waka Kotahi office of any damage associated with a bridge crossing on a state highway.</p> <p>Such advice should be given as soon as possible, but in any event within 24 hours of the crossing.</p>
Disqualification	<p>If permit conditions are breached, Waka Kotahi may disqualify the company and/or the driver and remove their names from the BESS register.</p> <p>For details see sections <i>B6.4 Breaches of BESS conditions</i>.</p>
Reinstatement after disqualification	Companies that provide evidence of measures taken to avoid a recurrence of a breach of an overweight permit may be reinstated to the BESS register after six months.

Continued on next page

B6.1 General BESS policy continued

Appealing against a BESS decision

Companies or drivers may appeal to Waka Kotahi's Manager Permitting against a decision about their BESS registration, such as a declined application or disqualification.

The Manager Permitting will convene a review panel, which will review the initial decision and any additional information submitted and provide a final decision in writing.

B6.2 Getting BESS registered – companies

Company registration requirements

To be eligible for BESS registration, companies must:

- be valid legal entities
 - hold a transport service licence (TSL), if applicable, and
 - have a good record of compliance with driving rules, transport legislation and permit conditions.
-

Considerations and consultation

When assessing applications for BESS registration, Waka Kotahi considers the compliance record of the company together with advice received from consultants and other road controlling authorities.

Provisional registration

If there are concerns about a company's traffic offence history or compliance record, Waka Kotahi may approve BESS registration on a six-month trial basis.

Waka Kotahi may decline an application in rare cases when there are serious concerns about a company's compliance record.

How to apply for BESS registration

Companies can apply for BESS registration by completing the company application form on Waka Kotahi's website at www.nzta.govt.nz/commercial-driving/permits/overweight-permits/bridge-engineering-self-supervision-bess/.

Overview diagram

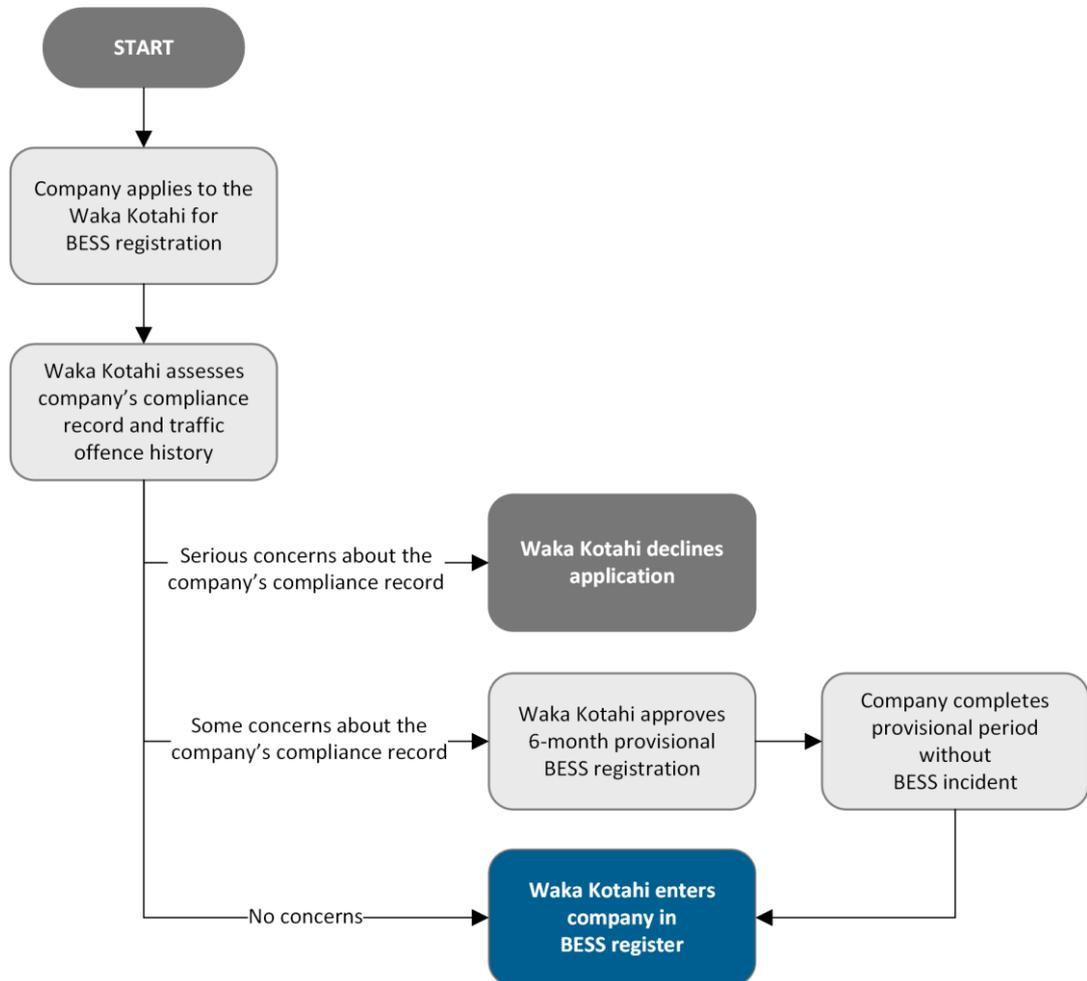
The diagram on the next page gives an overview of the BESS registration process for companies.

Continued on next page

B6.2 Getting BESS registered – companies continued

Diagram

This diagram shows the process for companies to become BESS registered.



B6.3 Getting BESS registered – drivers

Acceptable driver licence classes

To be eligible for BESS registration, drivers must have a current driver licence class 1, 2, 3, 4 or 5 when they apply.

Good driving record

Drivers must also meet Waka Kotahi's criteria for a good driving record, ie:

If in the last 2 years a driver got...	Then the driver is...
less than 50 demerit points	eligible for BESS training and full registration valid for 5 years.
50-99 demerit points	eligible for BESS training and provisional registration for 6 months.
100 or more demerit points	not eligible for BESS training and registration.

BESS training

A driver eligible for BESS training must sit and pass the NZQA unit standard 23436 within six months from being referred to a BESS assessor by Waka Kotahi.

Provisional or full registration

When a driver has successfully completed BESS training, Waka Kotahi will grant either full or provisional registration based on the driver's demerit points over the last two years (see the table above).

Drivers with provisional registration will automatically receive full BESS registration after six months if they get no more demerit points during the provisional period.

How to apply for BESS registration

Drivers can apply for BESS registration by completing the driver application form on Waka Kotahi's website at www.nzta.govt.nz/commercial-driving/permits/overweight-permits/bridge-engineering-self-supervision-bess/.

Overview diagram

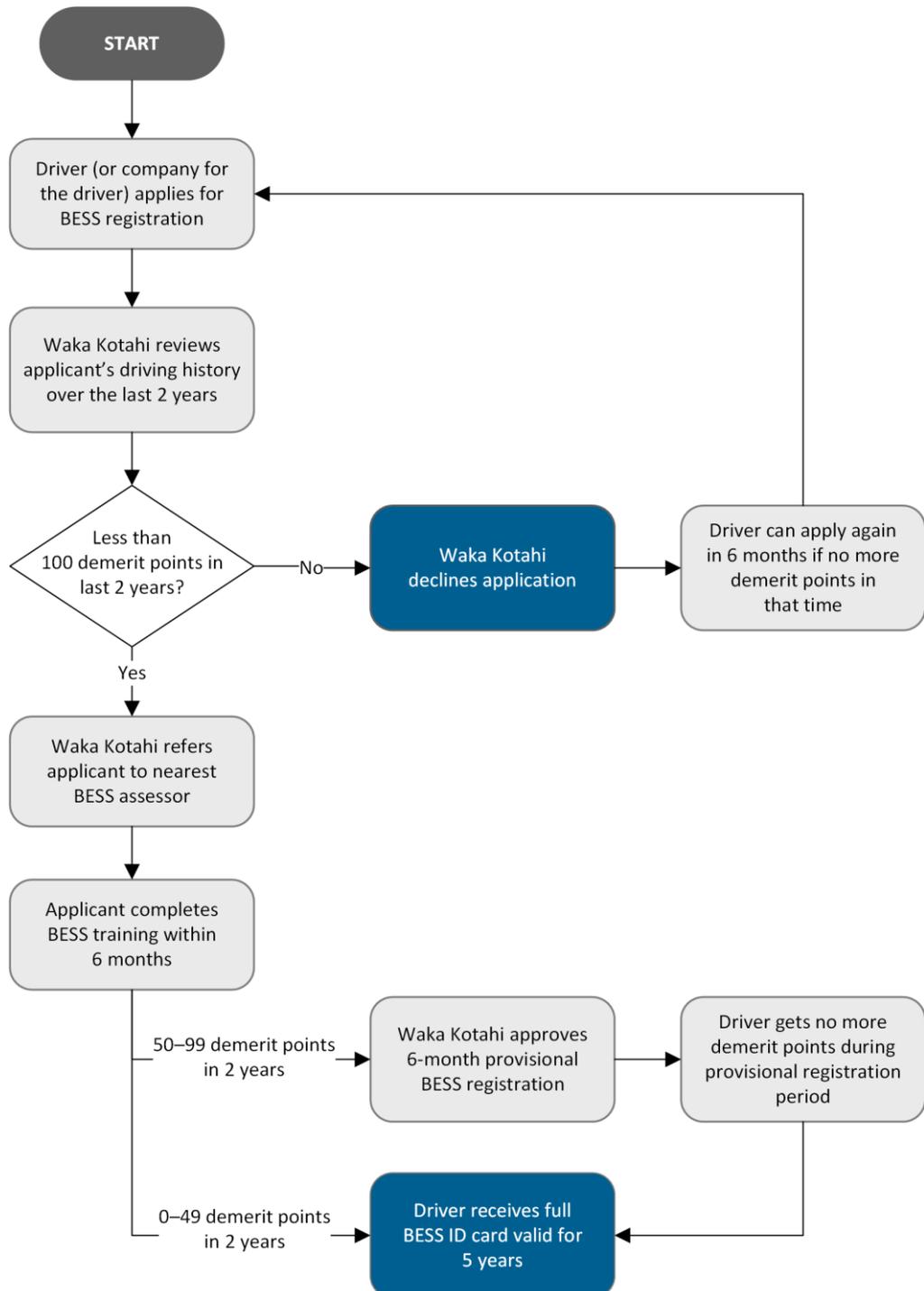
The diagram on the next page gives an overview of the BESS registration process for drivers.

Continued on next page

B6.3 Getting BESS registered – drivers continued

Diagram

This diagram shows the process for drivers to become BESS registered.



Continued on next page

B6.3 Getting BESS registered – drivers continued

Renewing driver registration

BESS driver registration is valid for five years. To renew their registration, drivers must complete a renewal course with a Waka Kotahi approved assessor before their current registration expires.

Companies can book a renewal course on behalf of their drivers.

Approved assessors

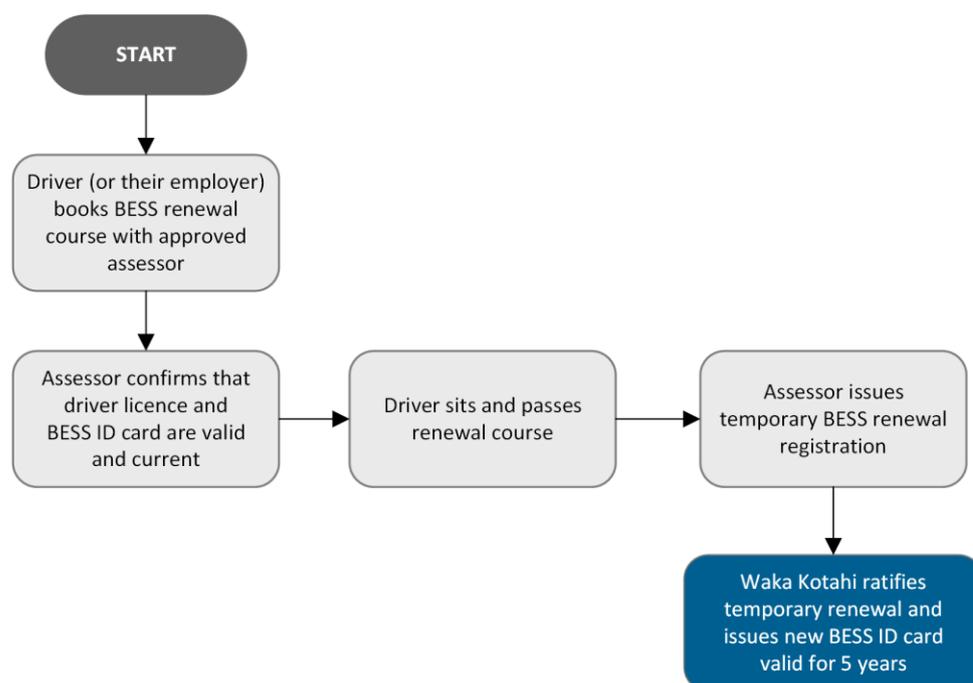
A list of Waka Kotahi approved BESS assessors can be found at www.nzta.govt.nz/commercial-driving/permits/overweight-permits/bridge-engineering-self-supervision-bess/.

What to bring to a renewal course

Drivers must bring their driver licence and their current full BESS ID card to the renewal course.

Overview diagram

The diagram below gives an overview of the BESS driver registration renewal process.



B6.4 Breaches of BESS conditions

Removal from BESS register

If a driver or BESS supervisor breaches BESS supervision requirements, Waka Kotahi may disqualify both the company and the driver or supervisor and remove their names from the BESS register.

Minor or first breach

If it was a minor or first offence, the company and driver may be put on probation for a period and reinstated on the BESS register if there are no repeat offences during the probation period.

Serious or repeat breaches

In the case of serious or repeated breaches of bridge supervision requirements, Waka Kotahi may permanently disqualify a company or driver from the BESS register.

Waka Kotahi may also revoke the company's permits and decline any new permit applications from the company.

Overview diagram

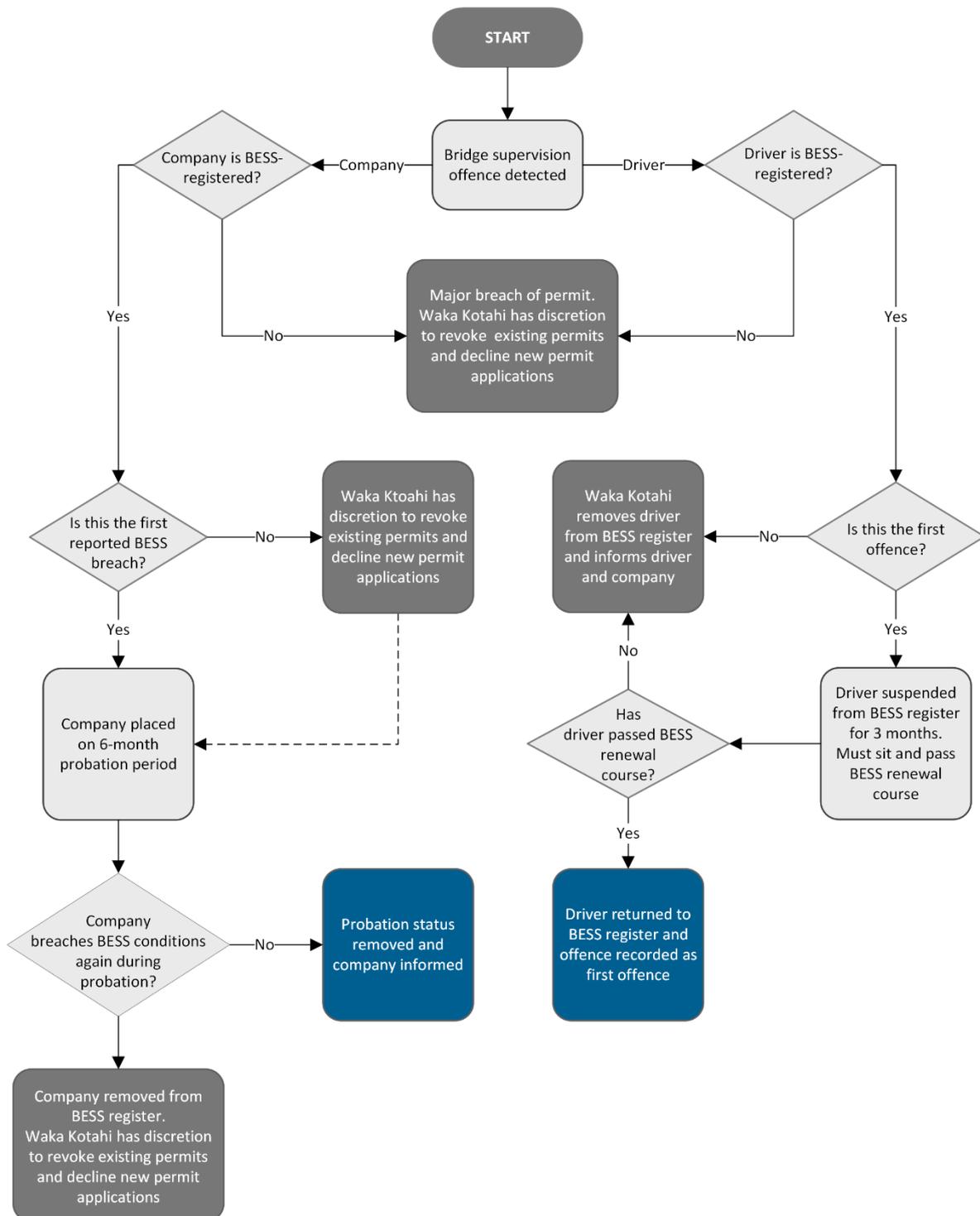
The diagram on the next page shows the process by which Waka Kotahi handles BESS breaches.

Continued on next page

B6.4 Breaches of BESS conditions continued

Diagram

This diagram shows how Waka Kotahi handles breaches of BESS requirements.



B6.5 Traffic control at bridge crossings

Introduction This section describes traffic control requirements at bridge crossings. Depending on the specific bridge crossing restrictions on an overweight permit, qualified load pilots or traffic controllers may be required to attend bridge crossings in addition to a BESS-registered driver or supervisor.

Approved industry procedure The New Zealand Heavy Haulage Association and the Crane Association of New Zealand have jointly developed the code of practice *Traffic control at bridges being crossed by overweight vehicles*. This document meets Waka Kotahi's requirements for traffic control of bridge crossings by overweight vehicles.

Qualification Traffic controllers who have been registered with either of the New Zealand Heavy Haulage Association or the Crane Association of New Zealand or who have been separately recognised by the road controlling authority may accompany overweight vehicles in order to provide traffic control on bridge crossings as required by this policy. In addition to traffic controllers, a Class 1 or Class 2 pilot may also carry out the traffic control in compliance with the approved industry procedure.

Power to stop vehicles Any person accompanying an overweight vehicle for which a permit has been issued has the power to stop other vehicles on any road where safety is an issue.

Continued on next page

B6.5 Traffic control at bridge crossings continued

Requirements This table shows the requirements for traffic control at bridge crossings.

Bridge crossing requirement ¹	Risk to other vehicles	Traffic control requirement ⁴
50km/h or 20km/h own lane	Not significant	None required
All 10km/h own lane ('crawl speed') ^{2,3}	Low	Overweight vehicle to have revolving amber light or flashing amber light visible from the rear. If the vehicle is also overdimension, it must have rear facing retro-reflective hazard panels. See <i>Part C: Overdimension permits</i> in this volume.
All 10km/h central or 10km/h offset ^{2,5}	High	Provide qualified traffic controllers or Class 1 or Class 2 certified pilots ⁶ using approved industry procedures.

Notes to table:

1. 'Bridge crossing requirement' refers to the bridge engineering supervision requirements, which are outputs from Waka Kotahi's overweight permitting system. It is expected that permits issued by local road controlling authorities using alternative methods follow a similar pattern.
2. Operators may need to provide a traffic controller for own lane travel (20km/h or crawl) if other heavy vehicles have to be prevented from travelling on the same bridge as the overweight vehicle.
A minimum separation of 100 metres is required between the overweight vehicle and any other heavy vehicle travelling in the same direction.
3. 'Crawl speed' means not exceeding a uniform speed of 10km/h.
4. Vehicles or loads exceeding 3.1 metres in width may require a pilot under the VDAM Rule, irrespective of the bridge crossing requirements.
5. For 10km/h central or 10km/h offset on one lane bridges, overweight vehicles must comply with the low risk traffic control requirements given in the table.
6. Class 1 and Class 2 pilots are certified under Waka Kotahi's scheme for classifying pilots used to escort overdimension vehicles and loads.

Chapter B7: Bridge engineering supervision and traffic safety

Overview

About this chapter

This chapter describes bridge engineering supervision requirements for overweight vehicles by qualified engineering consultants.

For information on bridge engineering self supervision (BESS), see *Chapter B6: Bridge engineering self supervision (BESS)*.

In this chapter

This chapter contains the following sections:

Section	See page
B7.1 Bridge engineering supervision as a permit condition	B7-2
B7.2 Roles and responsibilities in bridge engineering supervision	B7-3
B7.3 Arrangements for rendezvous with bridge supervisor	B7-4
B7.4 Bridge engineering supervision fees	B7-5

B7.1 Bridge engineering supervision as a permit condition

General policy Overweight permits specify bridge engineering supervision as a condition for any bridge on the route that needs special positional and/or speed controls to keep the effects of the vehicle to within the bridge's capacity.

Under specific circumstances, for example during bridge maintenance work, an overweight permit may specify that a qualified bridge engineering consultant must supervise bridge crossings.

Legal basis Under the VDAM Rule, a road controlling authority may:

- impose bridge supervision controls on an overweight vehicle, and
- have its authorised officers ensure that the conditions are met.

Legislation reference: VDAM Rule, section 5.8(5)(f) and 5.8(5)(g).

B7.2 Roles and responsibilities in bridge engineering supervision

Who does it? Bridge engineering supervision is normally carried out by personnel directly responsible for maintaining the structural integrity of the bridge.

For travel on state highways, the bridge supervision service is provided by Waka Kotahi's bridge engineering consultants.

What is involved? Bridge engineering supervision involves checking that the overweight vehicle complies with the permit conditions on bridge crossings.

In many cases a speed restriction with the vehicle remaining in its own lane is sufficient.

For details see section *B6.5 Traffic control at bridge crossings*.

Who is responsible for safety? The responsibility for traffic safety during bridge crossings rests principally with the holder of the overweight permit.

During bridge crossings, bridge engineering consultants limit their routine activities to the protection of the structure, rather than the direction and control of traffic.

Pilots and traffic controllers If complying with supervision conditions means that the overweight vehicle has an impact on traffic safety, then the requirement for a certified load pilot to be present to warn other traffic may also be specified as a permit condition.

For details see section *B6.5 Traffic control at bridge crossings*.

Record of supervision Bridge engineering consultants should keep a record of each bridge crossing for which they have provided supervision. These records must be supplied to Waka Kotahi on request.

Inspecting for damage Road controlling authorities may require that the bridge engineering consultant inspect the bridge for damage after the overweight vehicle has crossed.

The bridge consultant must immediately report any damage observed on a state highway bridge to the Manager, System Management (regional) at the relevant regional Waka Kotahi office.

In the event of an emergency, the police must be notified immediately.

B7.3 Arrangements for rendezvous with bridge supervisor

24-hour notice If supervision by a bridge engineer is a condition of your overweight permit, you must contact the bridge engineering consultant at least 24 hours before the bridge crossing and arrange a meeting at a convenient place before the bridge.

Delay If your overweight vehicle is delayed through unforeseen circumstances, you must make every effort to contact the bridge consultant and change the arranged rendezvous time.

Failure to rendezvous If your overweight vehicle fails to rendezvous within one hour of the time arranged, the crossing arrangements will be deemed to have been cancelled.
The bridge consultant should advise the permit issuing officer of the failure.

Fee incurred Failure to rendezvous incurs a fee – see the next section *B7.4 Bridge engineering supervision fees*.

B7.4 Bridge engineering supervision fees

Scale of fees A bridge engineering supervision fee is charged at the rates below for engineering supervision of state highway bridges:

Fee type	Fee (GST exclusive)
Each bridge crossed under supervision However, there is a maximum per trip, as follows:	\$40
• on trips up to 160km	\$80
• on trips between 160km and 320km	\$160
• on trips over 320km	\$240
Failure to rendezvous	\$40

Local authority fees Local authorities may have other fee scales for local bridges.

Return trips Bridge engineering supervision fees are charged for both directions of a return trip.

Multiple trip permits A separate bridge engineering supervision fee is charged for each of the trips of a multiple trip permit.

Failure to rendezvous If bridge supervision is cancelled because of failure to rendezvous, then you will be charged the equivalent to one supervised crossing.

Payment of fees Bridge engineering supervision fees for the complete permit movement and any adjustments must be paid to the office issuing the permit.
The permitting office then pays the road controlling authority.

Adjustments Fee adjustments may arise because of bridges that were not crossed, additional crossings or by failure to rendezvous.

Chapter B8: How to apply for an overweight permit

Overview

About this chapter

This chapter describes how to apply for an overweight permit.

Audience

The audience for this chapter is transport operators who need overweight permits.

In this chapter

This chapter contains the following sections:

Section	See page
B8.1 Where to apply for an overweight permit?	B8-2
B8.2 Overview diagrams of the overweight permitting process	B8-4
B8.3 Before you apply for an overweight permit	B8-6
B8.4 Applying for a permit for ISO containers	B8-7
B8.5 Specialist analysis of overweight permit applications	B8-8
B8.6 Overweight permit types – overview	B8-10
B8.7 Single trip permits	B8-12
B8.8 Multiple trip permits	B8-13
B8.9 Continuous permits	B8-14
B8.10 Completing and submitting an overweight permit application	B8-15
B8.11 Permit fees and processing time	B8-17

B8.1 Where to apply for an overweight permit?

State highways

Waka Kotahi NZ Transport Agency as road controlling authority has the authority to issue permits for overweight movements on state highways. This authority is delegated to permit issuing officers (PIOs).

Local roads

For roads under the control of a local road controlling authority (RCA), the local RCA is responsible for issuing overweight permits for local roads (ie roads that are not state highways) within its boundary.

Most local authorities that issue overweight permits follow the policies described in this part of the manual.

Delegated authority

Some local road controlling authorities have delegated authority to issue overweight permits for local roads under their control to Waka Kotahi. If Waka Kotahi has such delegated authority, it may issue permits for local roads for these areas on behalf of the road controlling authority.

Contact the local RCA or Waka Kotahi office in your region to find out about local arrangements.

Multiple regions involved

For single and multiple trip permits across several Waka Kotahi permit regions, the PIO of the region where you apply for the permit generally issues a permit for the complete journey. The PIO of the region where the journey starts first obtains clearance to travel within the other region(s) from other regional PIOs.

Continuous permits are issued by permit region. If you need continuous permits for several Waka Kotahi regions, you must apply for a permit in each region.

For a list of permit regions see www.nzta.govt.nz/resources/.

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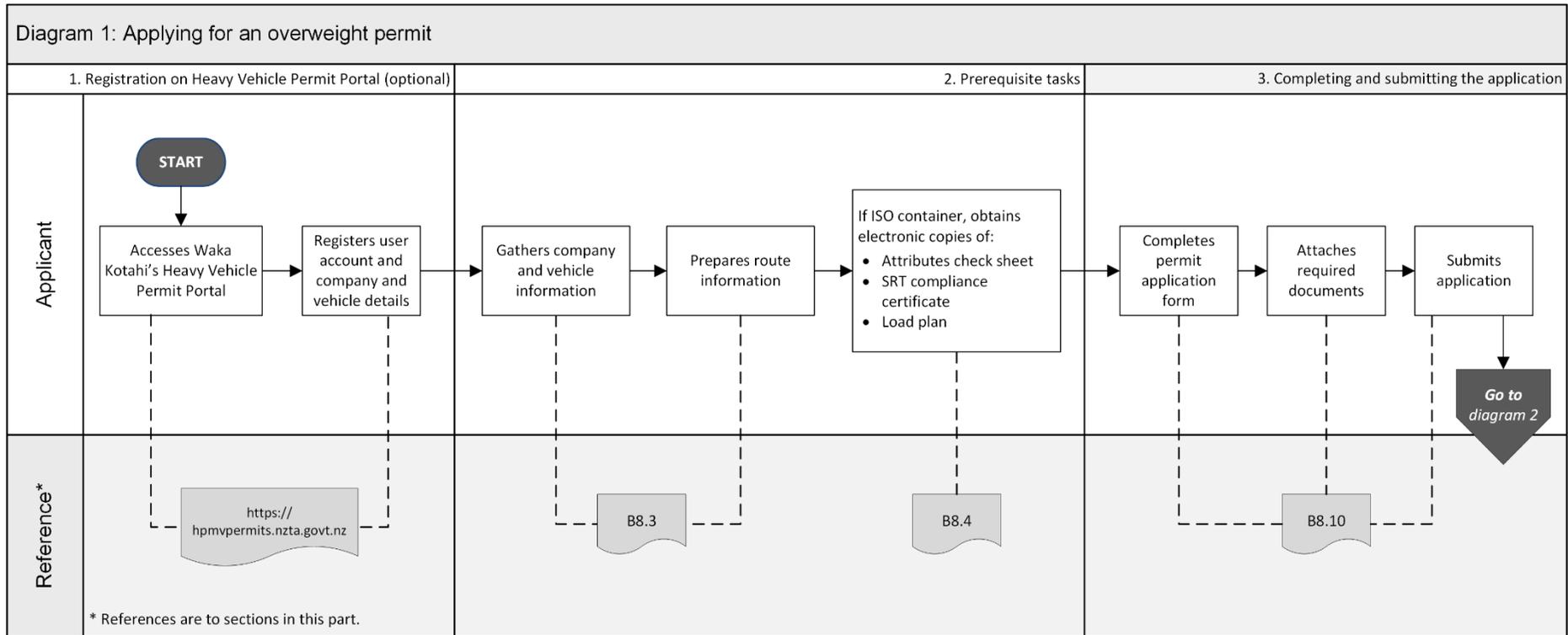
B8.1 Where to apply for an overweight permit? continued

Where to apply Refer to the table below to determine where to apply for the overweight permit(s) that you need.

For the part of your route that is on...	Apply to the...
state highways	Waka Kotahi via the Heavy Vehicle Permit Portal (see section B8.10)
local roads	<ul style="list-style-type: none">• local RCA, or• Waka Kotahi if the local RCA has delegated permit issuing authority for local roads

B8.2 Overview diagrams of the overweight permitting process

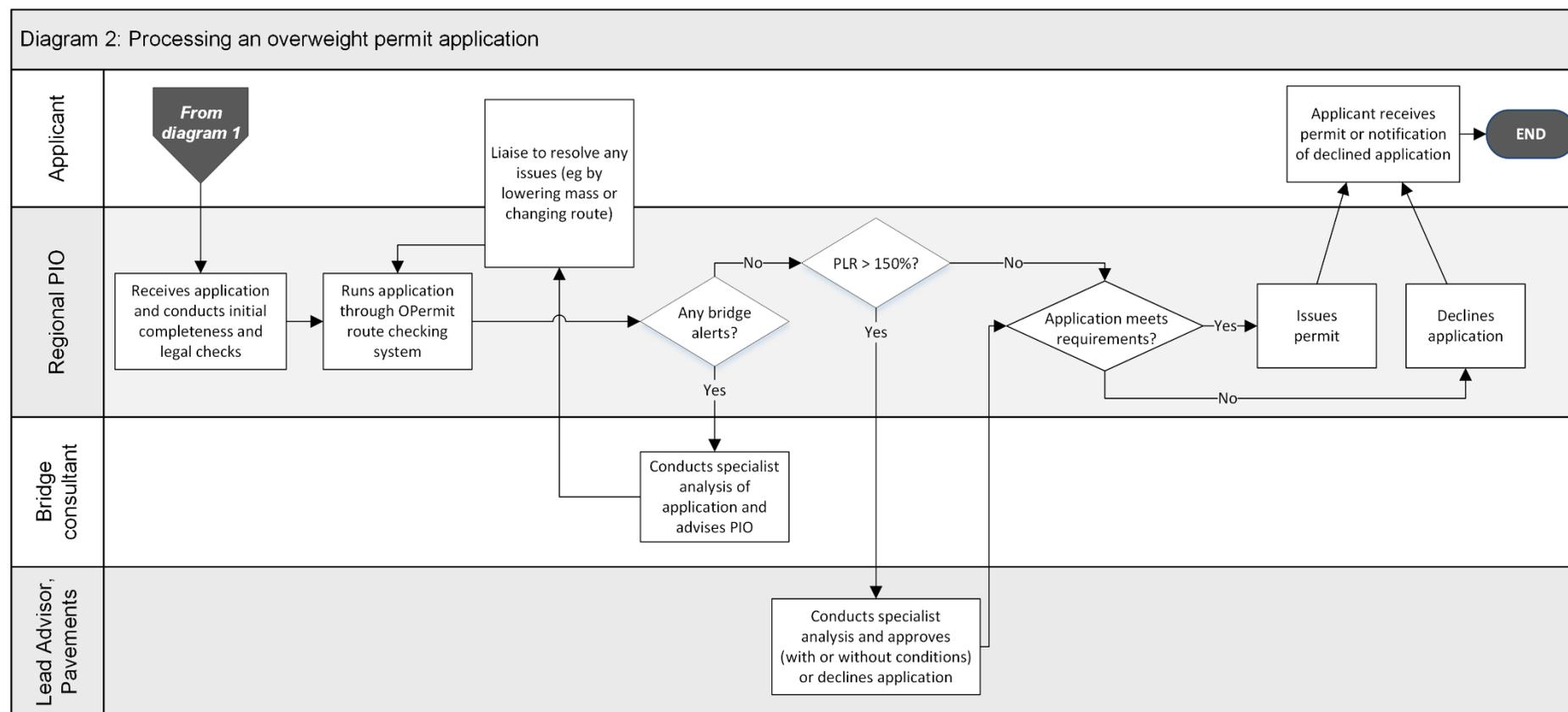
Diagram 1 This diagram shows the steps involved in applying for an overweight permit.



Continued on next page

B8.2 Overview diagrams of the overweight permitting process continued

Diagram 2 This diagram illustrates how Waka Kotahi processes an overweight permit application.



B8.3 Before you apply for an overweight permit

Introduction

This section describes prerequisites to being eligible and the information and documentation required for an overweight permit application.

BESS registration

To be eligible for continuous permits, companies must be BESS-registered. For other permit types, applicants are generally required to be registered for bridge engineering self supervision (BESS) if their route includes bridges that have crossing restrictions and supervision requirements. For details see *Chapter B6: Bridge engineering self supervision (BESS)*.

Accurate masses and axle spacings

It is essential that you use accurate axle masses on the application form. You must also provide accurate measurements of the distance between axles. Axle spacings must be measured on the **laden** vehicle from the centre of the first axle to the centre of the last axle.

Route information

You must give specific points of origin and destination of movements as well as details of the proposed route. Waka Kotahi recommends that you submit a map (or maps) with the route clearly marked together with the application form.

Payload description for continuous permits

If you are applying for a continuous permit, you must provide either:

- a list of items to be carried (eg details of construction plant), or
- a general description of the payload, eg:
 - ‘individual unladen items of construction equipment’, or
 - ‘one ISO container sealed for export’ (provided this can be supported by documentary evidence of mass if requested by the PIO or the police).

Attributes check sheets

If you are applying for a permit for a vehicle carrying an ISO container, you need to submit a vehicle attributes check sheet together with the application – see the next section *B8.4 Applying for a permit for ISO containers*.

B8.4 Applying for a permit for ISO containers

Required documentation

If you are applying for an overweight permit for a vehicle carrying an ISO container, you need to supply the following along with your application form:

- a 'High Productivity Motor Vehicle/ISO Permit Attributes Check Sheet' for the prime mover and each trailer listed on the application form
- valid SRT compliance certificates for all trailers listed on the application form, and
- a load plan if SRT option 3 (uniform density SRT at a load height of less than 3.90 metres) is selected on the application form.

For details about SRT options refer to Waka Kotahi's technical bulletin *Memo 70c: SRT requirements for OPermit Export/Import containers*, available at

<https://vehicleinspection.nzta.govt.nz/virms/hvsc/tb/srt-requirements>.

Where to obtain attributes check sheets

Vehicle attributes check sheets can be obtained from a heavy vehicle specialist certifier.

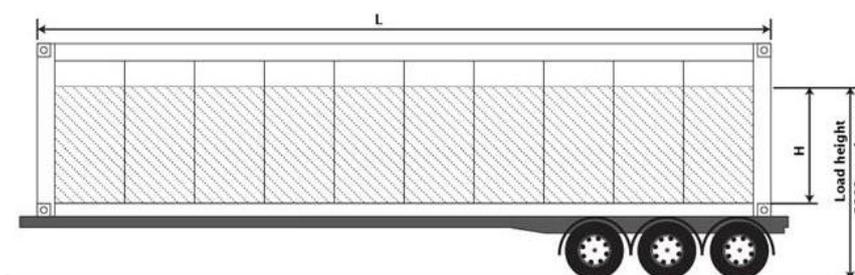
Certifiers must complete and sign the correct Waka Kotahi issued form for each unit of the vehicle combination applied for.

A list of Waka Kotahi approved heavy vehicle specialist certifiers can be found at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers/.

What the load plan must cover

A load plan if SRT option 3 is selected on the application form must show the:

- internal height the container is loaded to ('H' in the diagram below)
- mass of the contents, and
- distance from the road to the top of the load in the container (the load height in the diagram).



The load plan can be in the form of a diagram. It must be carried in the vehicle and shown to an enforcement officer on request.

B8.5 Specialist analysis of overweight permit applications

Introduction When proposed overweight vehicle movements load the route facilities above prescribed limits, Waka Kotahi requires permit issuing officers (PIOs) to refer such permit applications to a bridge consultant and/or the Lead Advisor, Pavements, for consideration.

This section describes what the bridge consultant and Lead Advisor, Pavements, look at if asked to investigate a permit application.

When a bridge consultant gets involved A bridge consultant is asked to analyse bridge decks on a proposed route when the deck loading ratio (DLR) exceeds 130%.
The bridge consultant may also be asked to investigate other bridge issues arising during permit processing.

Permit conditions for bridges The bridge consultant may specify permit conditions to protect bridges, such as the requirement to use a local bypass.

Other actions If the bridge consultant determines that a bridge on the proposed route has insufficient capacity and cannot be bypassed, the bridge consultant may advise the PIO to discuss the following options with the applicant:

- use another route
- strip or adjust the load to reduce axle masses
- request further engineering analysis if the applicant is willing to meet the cost, or
- investigate the use of a more suitable transporter to move the load.

When the Lead Advisor, Pavements, gets involved If the pavement loading ratio (PLR) of a proposed overweight movement exceeds 150%, then Waka Kotahi's Lead Advisor, Pavements, must approve the movement before a permit can be issued.

The Lead Advisor, Pavements, will investigate the proposed route of the movement and either approve or decline the movement. He or she may also specify any special conditions or arrangements required as a condition of the permit.

Continued on next page

B8.5 Specialist analysis of overweight permit applications continued

Analysis criteria

Waka Kotahi's Lead Advisor, Pavements, applies the following general criteria in the analysis:

- Can the payload be carried for all or part of the proposed journey by rail or sea transport?
- Is it a non-productive movement (eg sales promotion, routine servicing, etc)?
- Does the size of the item being transported exceed the requirements of use at the destination (eg cranes with surplus lifting capacity, large tractors or motor scrapers for small tasks)?

If any of these apply, the Lead Advisor, Pavements, may reject the application.

B8.6 Overweight permit types – overview

Movement type

There are three types of overweight permit, depending on the frequency of an overweight movement and the route required:

- single trip
- multiple trip, and
- continuous.

These three permit types are covered in more detail in the following sections.

Vehicle fitness testing permit

Single or multiple trip overweight permits may be issued for vehicle fitness testing purposes subject to the following limitations:

- the PLR must not exceed 150% at any time, even if this means driving up to a test site and loading up there
 - sites for brake testing must be limited to sections of road as directed by the road controlling authority, and
 - bridges requiring bridge engineering supervision must not be used.
-

Feasibility study

The application form has the option to apply for a 'Feasibility Study' to find out about the permit eligibility of, for example:

- a new vehicle design
 - a vehicle you wish to import, or
 - a project-specific investigation such as the proposed movements of tunnel-boring machines or large electrical transformers.
-

Continued on next page

B8.6 Overweight permit types – overview continued

Multiple registration permits for identical vehicles

A single overweight permit may be issued for more than one vehicle (or more than one vehicle combination). Such permits are colloquially referred to as 'multi-rego' permits.

To be eligible for a multi-rego permit, the vehicles included must be identical, ie they must meet all the following criteria:

- same model prime mover
 - identical axle spacings
 - same tyre size
 - identical inner and outer wheel track
 - all units (including prime movers) in the combination have a sufficient GVM for the load in question
 - all units (including prime movers) in the combination have sufficient axle ratings for the load in question, and
 - all units (including prime movers) in the combination have sufficient maximum towed mass (MTM), gross combination mass (GCM) and, if applicable, 5th wheel, tow bar and tow ball ratings, etc, for the load in question.
-

B8.7 Single trip permits

Policy	When the payload or route is unique for a particular vehicle or when required dates of travel are spaced well apart, overweight permits are issued for a single trip at a time.
Permit period	The permit is restricted to the date(s) required to complete the proposed movement. The total period allowed for the movement generally does not exceed seven days.
VAI and PLR limits	For VAI and PLR limits for single trip permits, refer to section <i>B2.9 VAI and PLR limits by vehicle and permit type</i> .

B8.8 Multiple trip permits

Policy	One permit may be issued for multiple trips if there is no significant increase in administrative effort in processing the application.
Permit period	<p>The permit may be issued either for a number of specified dates or for a continuous period, but in both cases the expiry date should be no later than one month from the date of issue of the permit.</p> <p>Special projects</p> <p>Multiple trip permits may be issued for a maximum of six months for specific large projects, such as the movement of multiple bridge beams to a construction site, provided there are no infrastructure issues.</p> <p>The application must include evidence of a specific need if a longer permit period is required.</p> <p>Note: PIOs must obtain approval from Waka Kotahi’s Lead Advisor, Pavements, before issuing a multiple trip permit for longer than six months.</p>
Bridge supervision	When bridge engineering supervision is required for bridges on the route, the exact number of trips must be specified.
VAI and PLR limits	For VAI and PLR limits for multiple trip permits for different vehicles types, refer to section <i>B2.9 VAI and PLR limits by vehicle and permit type</i> .

B8.9 Continuous permits

Policy	Continuous permits are issued for travel on either: <ul style="list-style-type: none">• a network of linked roads, or• in the case of vehicles carrying ISO containers, on specifically named routes that are to and from sea ports.
Permit period	A continuous permit is issued for a maximum of two years.
More than one permit	A vehicle will be issued with more than one continuous permit if it travels across multiple Waka Kotahi permit regions (one permit per region). A list of permit regions can be found at www.nzta.govt.nz/resources/ .
BESS requirement	Continuous permits are granted only to operators who are registered for bridge engineering self supervision. For details see <i>Chapter B6: Bridge engineering self supervision (BESS)</i> .
VAI and PLR limits	For VAI and PLR limits for continuous permits, refer to section <i>B2.9 VAI and PLR limits by vehicle and permit type</i> .
Other conditions	Continuous permits for any type of vehicle are only granted provided that: <ul style="list-style-type: none">• loads to be carried have been substantiated by weighing, or calculations involving known plant masses, to the satisfaction of the bridge consultant• vehicle tare masses are substantiated by weighing at least once in any three-year period, and• unspecified payloads are supported by documented evidence covering both mass and indivisibility.

B8.10 Completing and submitting an overweight permit application

Apply on the permit portal

To apply for an overweight permit from Waka Kotahi, complete and submit the online application form on Waka Kotahi's Heavy Vehicle Permit Portal at <https://hpmvpermits.nzta.govt.nz>.

Registering on the permit portal

To apply on the permit portal, it is recommended to register a user account. Registration is not mandatory, but if you regularly need permits, then having a user account will streamline the application process and save you time.

As a registered user, you can:

- reuse company and vehicle information
- complete applications in stages and save drafts
- monitor the progress of your applications, and
- look up previous applications.

For help with using the permit portal, refer to the portal user guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

Gather required information and documents

It is advisable to have all required information and documents at hand when completing the application form on the permit portal. Unless you are a registered user (see above), you will not be able to save drafts of your application if you have missing information.

Refer to this checklist for the information you need:

- Legal company name and contact details
- Transport service licence (TSL) number, if held
- BESS company registration number, if applicable
- Route information (points of origin and destination, postal codes and electronic map or list of roads)
- Vehicle details (eg registration numbers, make and model, dimensions, GVM, GCM, axle types, masses and spacings, tyre sizes and suspension types), and
- If you are applying for a vehicle transporting an ISO container, electronic copies of attributes check sheets, SRT compliance certificates and load plan (for details see section *B8.4 Applying for a permit for ISO containers*).

Continued on next page

B8.10 Completing and submitting an overweight permit application continued

Trouble-shooting when completing the form

You must complete all fields in the online form marked with an asterisk (*).

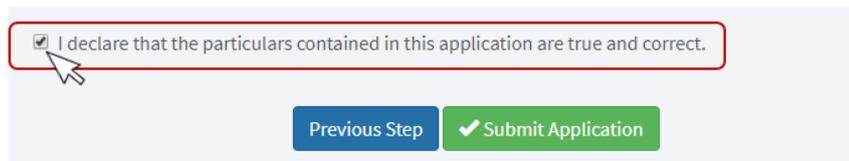
If the portal system does not advance to the next page when you are completing the form, then one or more fields have either missing or incomplete information.

To identify the error, scroll through the page and correct any errors until the red outlines around fields disappear.

Tip: A common error is not entering numbers in the required format. You must enter numerical values to two decimal places and without commas.

Formal declaration

Before you submit your application, you must select the tick box above the Submit button to declare that the particulars you have provided in your application are true and correct.



I declare that the particulars contained in this application are true and correct.

Previous Step Submit Application

Note: By selecting the tick box, you are making a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.

Legislation reference: Land Transport Act 1998, section 44.

Summary email

After submitting a permit application, you will receive an automatic email confirming that Waka Kotahi has received your application.

The email includes a reference number that allows you to track the progress of your application if you are a registered permit portal user.

Note: If you do not receive the confirmation email, Waka Kotahi has not received your application. For assistance contact Waka Kotahi on 0800 699 000.

B8.11 Permit fees and processing time

Permit fees For the standard fees for overweight permits, see section A1.8 in *Part A: Introduction to VDAM permits* in this volume of the manual.

Permit processing times Waka Kotahi will make every effort to process overweight permit applications quickly.

In general, permits are issued within two to five working days, depending on the permit type. For details, see section *A1.9 Permit processing times* in this volume.

Delays to travel Single or multiple trip permits that involve travel across several regions take longer to process. It may also be necessary to delay travel if the permit specifies bridge engineering supervision requirements, which involve at least 24 hours' notice. Take such possible delays into account when applying for a permit.

Chapter B9: Calculating the vehicle axle index (VAI)

Overview

About this chapter

This chapter describes how to calculate the vehicle axle index (VAI). It includes worked examples.

In this chapter

This chapter contains the following sections:

Section	See page
B9.1 What is the vehicle axle index (VAI)?	B9-2
B9.2 Types of tyre	B9-3
B9.3 Types of axle	B9-4
B9.4 Calculating the VAI	B9-6
B9.5 Reference axle masses for standard-tyred axles	B9-9
B9.6 Reference axle masses and contact areas for large tyres	B9-11
B9.7 Reference axle masses and contact areas for mega tyres	B9-13
B9.8 Reference axle masses and contact areas for single specified standard-tyred axles spaced at 2.4 metres or more	B9-17
B9.9 Reference axle masses and contact areas for twin small-tyred axles spaced at 2.4 metres or more	B9-18
B9.10 Example – Calculating the VAI for a transporter	B9-19
B9.11 Example – Calculating the VAI for an articulated vehicle	B9-20
B9.12 Example – Calculating the VAI for a mobile crane	B9-22
B9.13 Example – Calculating the VAI for a harvester	B9-24

B9.1 What is the vehicle axle index (VAI)?

Definition of VAI The vehicle axle index (VAI) is a rating determined by a road controlling authority that:

- indicates the relative effect on road pavements and bridge decks of the mass on the axles of a vehicle compared to standard axle mass, and
- describes the highest rating for any of the axles on the vehicle.

Axle index (AI) The AI is given by:

$$AI = \frac{\text{Axle mass}}{\text{Reference axle mass for that axle}}$$

Reference axle mass The reference axle mass for any axle is a nominal allowable mass given to that axle which takes into account the axle type and spacing.

The reference axle mass is the mass for the specified axle and tyres that has the same pavement effects as the standard legal axle mass.

Reference axle masses for various axle types and spacings are listed in the tables in sections B9.5 to B9.9 below.

Basis of calculation Waka Kotahi's vehicle parameter calculations, in particular VAI, are based on axle groups and not axle sets.

Axles are considered to be in a group if all spacings are less than 2.4 metres.

Spaced axle A spaced axle is an axle that is 2.4 metres or more from the nearest axle.

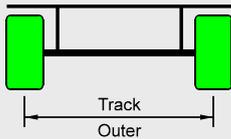
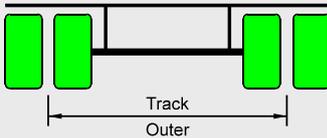
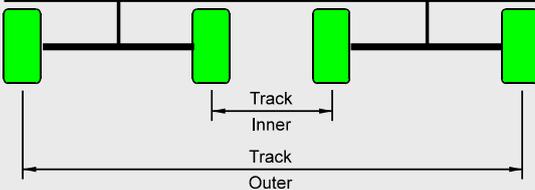
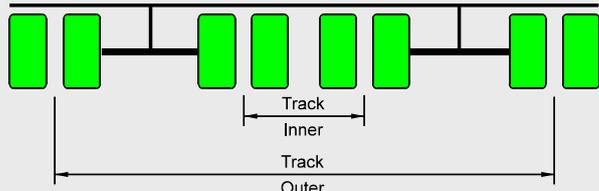
B9.2 Types of tyre

Types of tyre This table shows the types of tyre generally involved in overweight permit applications.

Tyre type	Description
Standard	<ul style="list-style-type: none"> Any tyre with a manufacturer's designated tyre section width of less than 355mm Legal status as per the VDAM Rule <p>Note: Only standard tyres are used on twin-tyred axles and oscillating axles.</p>
Large	<ul style="list-style-type: none"> Any tyre with a manufacturer's designated tyre section width of 355mm or more but less than 444mm Legal status as per the VDAM Rule Tyre designation listed in the table in section B9.6
Mega	<ul style="list-style-type: none"> Any tyre with a manufacturer's designated tyre section width of 444mm or more Legal status as per the VDAM Rule Tyre designation listed in the table in section B9.7
Specified standard	<ul style="list-style-type: none"> Standard tyres with their tyre designation listed in section B9.8 Specified by Waka Kotahi for use in vehicle parameter calculations Can have larger footprint areas, and hence higher reference axle masses, than standard tyres No legal status (legally defined as standard tyres)
Small standard	<ul style="list-style-type: none"> Standard tyres with their tyre designation listed in section B9.9 Specified by Waka Kotahi for use in vehicle parameter calculations Have smaller footprint areas, and hence lower reference axle masses, than standard tyres No legal status (legally defined as standard tyres)

B9.3 Types of axle

Types of axle This table shows the different types of axle referred to in this manual, and their codes.

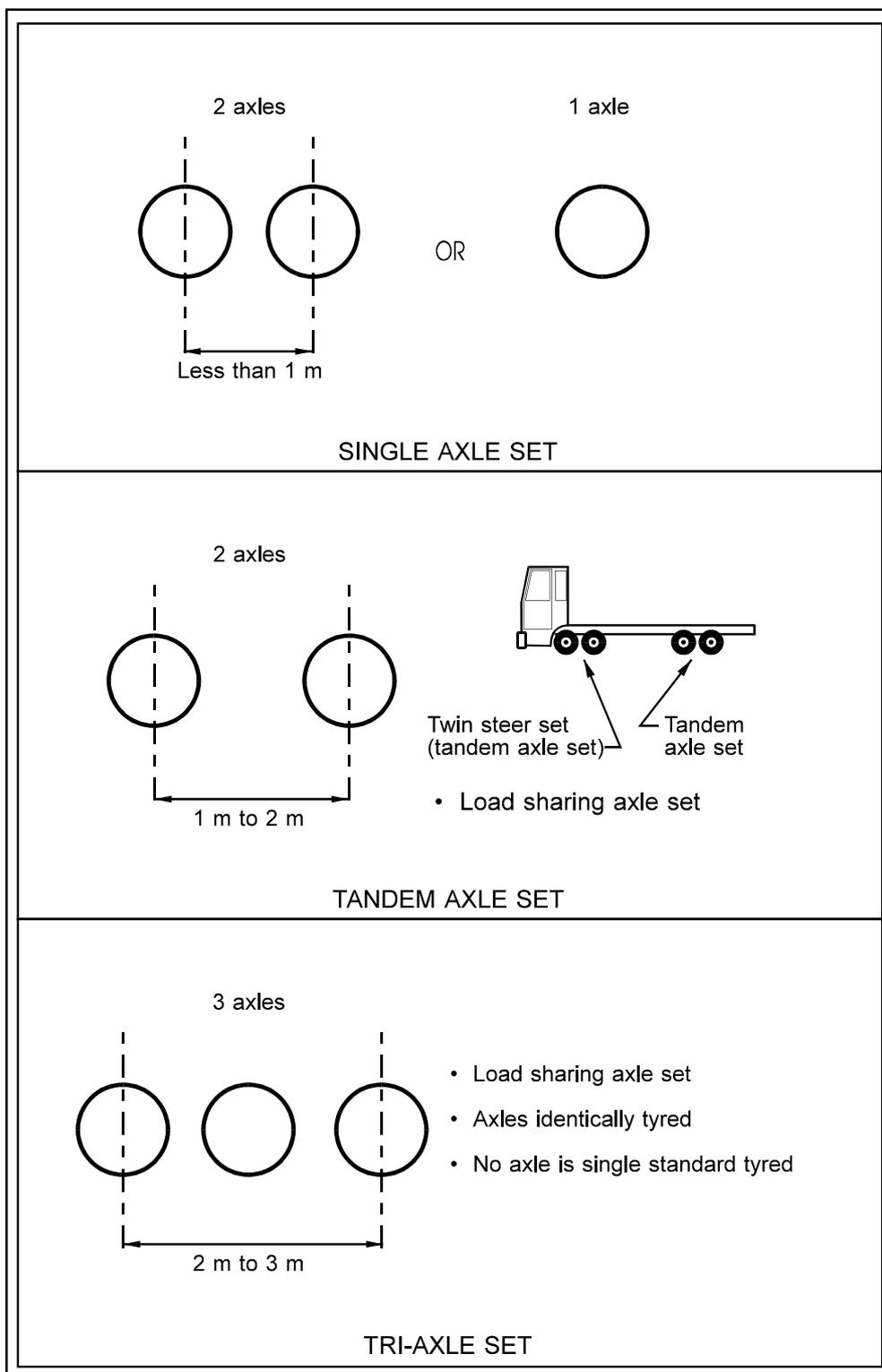
Axle type	Code
 <p data-bbox="475 741 655 763">SINGLE-TYRED AXLE</p>	<p data-bbox="938 510 1023 539"><i>Either:</i></p> <ul data-bbox="938 551 1369 741" style="list-style-type: none"> <li data-bbox="938 551 1369 584">• Single standard-tyred: S <li data-bbox="938 629 1369 663">• Single large-tyred: SL <li data-bbox="938 707 1369 741">• Single mega-tyred SM
 <p data-bbox="483 1003 647 1025">TWIN-TYRED AXLE</p>	<p data-bbox="1158 902 1174 931">T</p>
 <p data-bbox="424 1267 711 1290">FOUR-TYRED OSCILLATING AXLE</p>	<p data-bbox="1150 1167 1182 1196">(4)</p>
 <p data-bbox="424 1525 711 1547">EIGHT-TYRED OSCILLATING AXLE</p>	<p data-bbox="1150 1435 1182 1464">(8)</p>

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B9.3 Types of axle continued

Axle sets

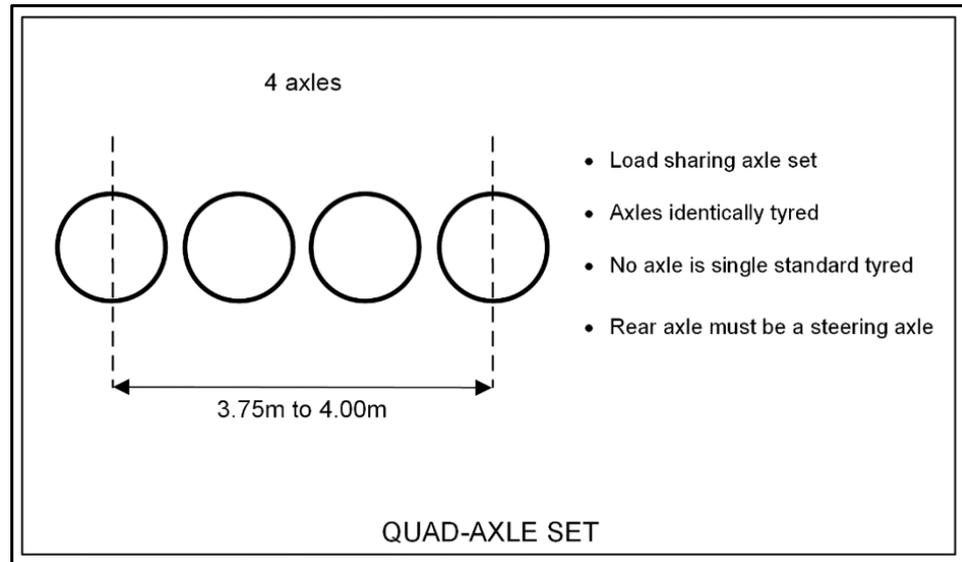
This diagram illustrates the different axle sets.



Continued on next page

B9.3 Types of axle continued

Axle sets (continued)



B9.4 Calculating the VAI

Procedure for calculating VAI

Follow these steps to calculate the VAI for a particular vehicle.

Step	Action																														
1	Obtain the following for the vehicle: <ul style="list-style-type: none"> • axle types • axle spacings • axle masses 																														
2	For each axle, determine the number of axles in the axle group.																														
3	For each axle on the vehicle, look up and note down the value(s) for the reference axle mass using the following table: <table border="1" data-bbox="603 808 1406 1624"> <thead> <tr> <th>If the tyre size is...</th> <th>Then look up the value for the axle in section...</th> <th>And also the value in section...</th> </tr> </thead> <tbody> <tr> <td>standard-tyred</td> <td>B9.5</td> <td>N/A</td> </tr> <tr> <td>single large-tyred spaced</td> <td>B9.6</td> <td>N/A</td> </tr> <tr> <td>single mega-tyred spaced</td> <td>B9.7</td> <td>N/A</td> </tr> <tr> <td>large-tyred other than single-tyred spaced</td> <td>B9.5</td> <td>B9.6</td> </tr> <tr> <td>mega-tyred other than single-tyred spaced</td> <td>B9.5</td> <td>B9.7</td> </tr> <tr> <td>single specified standard-tyred spaced</td> <td>B9.8</td> <td>N/A</td> </tr> <tr> <td>specified standard other than single-tyred spaced</td> <td>B9.5</td> <td>B9.8</td> </tr> <tr> <td>twin small standard-tyred spaced</td> <td>B9.9</td> <td>N/A</td> </tr> <tr> <td>twin small standard-tyred in a group</td> <td>B9.5</td> <td>B9.8</td> </tr> </tbody> </table>	If the tyre size is...	Then look up the value for the axle in section...	And also the value in section...	standard-tyred	B9.5	N/A	single large-tyred spaced	B9.6	N/A	single mega-tyred spaced	B9.7	N/A	large-tyred other than single-tyred spaced	B9.5	B9.6	mega-tyred other than single-tyred spaced	B9.5	B9.7	single specified standard-tyred spaced	B9.8	N/A	specified standard other than single-tyred spaced	B9.5	B9.8	twin small standard-tyred spaced	B9.9	N/A	twin small standard-tyred in a group	B9.5	B9.8
If the tyre size is...	Then look up the value for the axle in section...	And also the value in section...																													
standard-tyred	B9.5	N/A																													
single large-tyred spaced	B9.6	N/A																													
single mega-tyred spaced	B9.7	N/A																													
large-tyred other than single-tyred spaced	B9.5	B9.6																													
mega-tyred other than single-tyred spaced	B9.5	B9.7																													
single specified standard-tyred spaced	B9.8	N/A																													
specified standard other than single-tyred spaced	B9.5	B9.8																													
twin small standard-tyred spaced	B9.9	N/A																													
twin small standard-tyred in a group	B9.5	B9.8																													

Continued on next page

B9.4 Calculating the VAI continued

Procedure for calculating VAI (continued)

Step	Action																
4	<p>Use the following table to calculate the reference axle mass for the axle.</p> <table border="1"> <thead> <tr> <th>If the tyre size is...</th> <th>Then the reference axle mass is...</th> </tr> </thead> <tbody> <tr> <td>standard-tyred</td> <td>the single value from step 3 above.</td> </tr> <tr> <td>single large-tyred spaced</td> <td>the single value from step 3 above.</td> </tr> <tr> <td>large-tyred other than single-tyred spaced</td> <td>the two values from step 3 multiplied and then divided by: <ul style="list-style-type: none"> • 5.4 if the axle is single-tyred • 6.7 if the axle is twin-tyred. </td> </tr> <tr> <td>single specified standard-tyred spaced</td> <td>the single value from step 3 above.</td> </tr> <tr> <td>specified standard other than single-tyred spaced</td> <td>the two values from step 3 multiplied and then divided by: <ul style="list-style-type: none"> • 5.4 if the axle is single-tyred • 6.7 if the axle is twin-tyred. </td> </tr> <tr> <td>twin small standard-tyred spaced</td> <td>the single value from step 3 above.</td> </tr> <tr> <td>twin small standard-tyred in a group</td> <td>the two values from step 3 multiplied and then divided by 8.2.</td> </tr> </tbody> </table>	If the tyre size is...	Then the reference axle mass is...	standard-tyred	the single value from step 3 above.	single large-tyred spaced	the single value from step 3 above.	large-tyred other than single-tyred spaced	the two values from step 3 multiplied and then divided by: <ul style="list-style-type: none"> • 5.4 if the axle is single-tyred • 6.7 if the axle is twin-tyred. 	single specified standard-tyred spaced	the single value from step 3 above.	specified standard other than single-tyred spaced	the two values from step 3 multiplied and then divided by: <ul style="list-style-type: none"> • 5.4 if the axle is single-tyred • 6.7 if the axle is twin-tyred. 	twin small standard-tyred spaced	the single value from step 3 above.	twin small standard-tyred in a group	the two values from step 3 multiplied and then divided by 8.2.
If the tyre size is...	Then the reference axle mass is...																
standard-tyred	the single value from step 3 above.																
single large-tyred spaced	the single value from step 3 above.																
large-tyred other than single-tyred spaced	the two values from step 3 multiplied and then divided by: <ul style="list-style-type: none"> • 5.4 if the axle is single-tyred • 6.7 if the axle is twin-tyred. 																
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twin small standard-tyred spaced	the single value from step 3 above.																
twin small standard-tyred in a group	the two values from step 3 multiplied and then divided by 8.2.																
5	<p>Calculate the axle index (AI) for the axle using:</p> $AI = \frac{\text{Axle mass}}{\text{Reference axle mass from step 4}}$																
6	<p>Repeat steps 3 to 5 until you have calculated the AI for all axles.</p> <p>Result: The highest AI for the vehicle is the vehicle axle index.</p>																

B9.5 Reference axle masses for standard-tyred axles

**Table for
standard-tyred
axles**

This table shows the reference axle masses in tonnes for various configurations of standard type axle.

Axles in group	Distance (m) to nearest axle	Axle types			
		S	T	(4)	(8)
1	2.4 or more	5.4	8.2	9.5	11.8
2	1.0 or more	4.8	7.3	8.4	10.5
	1.1 or more	4.8	7.3	8.5	10.5
	1.2 or more	4.8	7.3	8.5	10.5
	1.3 or more	4.9	7.4	8.5	10.6
	1.4 or more	4.9	7.4	8.6	10.7
	1.5 or more	4.9	7.5	8.7	10.8
	1.6 or more	5.0	7.5	8.7	10.8
	1.7 or more	5.0	7.6	8.8	10.9
	1.8 or more	5.1	7.7	8.9	11.0
	1.9 or more	5.1	7.8	9.0	11.2
	2.0 or more	5.2	7.8	9.1	11.3
	2.1 or more	5.2	7.9	9.2	11.4
	2.2 or more	5.3	8.0	9.3	11.5
2.3 or more	5.3	8.1	9.4	11.7	
3	1.0 or more	4.0	6.1	7.1	8.8
	1.1 or more	4.1	6.2	7.2	8.9
	1.2 or more	4.1	6.3	7.3	9.0
	1.3 or more	4.2	6.3	7.4	9.1
	1.4 or more	4.3	6.5	7.5	9.3
	1.5 or more	4.3	6.6	7.6	9.5
	1.6 or more	4.4	6.7	7.8	9.7
	1.7 or more	4.5	6.9	8.0	9.9
	1.8 or more	4.6	7.0	8.1	10.1
	1.9 or more	4.7	7.2	8.3	10.4
	2.0 or more	4.9	7.4	8.6	10.6
	2.1 or more	5.0	7.6	8.8	10.9
	2.2 or more	5.1	7.8	9.0	11.2
2.3 or more	5.3	8.0	9.2	11.5	

Continued on next page

B9.5 Reference axle masses for standard-tyred axles continued

**Table for
standard-tyred
axles
(continued)**

Axles in group	Distance (m) to nearest axle	Axle types			
		S	T	(4)	(8)
4 or more	1.0 or more	3.8	5.8	6.8	8.4
	1.1 or more	3.9	5.9	6.8	8.5
	1.2 or more	3.9	6.0	6.9	8.6
	1.3 or more	4.0	6.1	7.0	8.7
	1.4 or more	4.1	6.2	7.2	8.9
	1.5 or more	4.2	6.3	7.3	9.1
	1.6 or more	4.3	6.5	7.5	9.4
	1.7 or more	4.4	6.7	7.7	9.6
	1.8 or more	4.5	6.9	7.9	9.9
	1.9 or more	4.6	7.1	8.2	10.2
	2.0 or more	4.8	7.3	8.4	10.5
	2.1 or more	4.9	7.5	8.7	10.8
	2.2 or more	5.1	7.7	8.9	11.1
	2.3 or more	5.2	8.0	9.2	11.4

B9.6 Reference axle masses and contact areas for large tyres

Table for large tyres This table shows the reference axle masses in tonnes and real contact areas for single large-tyred axles spaced at 2.4 metres or more, sorted by rim size.

Tyre size	Reference axle mass (t)	Contact area (cm ²)
435/50 R19.5	7.8	968
Bridgestone 13.00R20	8.0	1090
14.00-20	7.6	484
365/80R20	7.5	395
365/85R20	7.5	488
395/85R20	7.6	600
14.75/80R20 (13.00R20 Pilote)	7.5	850
15.50/80R20 (G20 Pilote)	7.6	860
16.00-20	8.2	1160
350/75R22.5	6.9	645
355/50R22.5	6.9	406
14R22.5	7.0	650
365/65R22.5	7.1	667
15.00-22.5	7.2	710
385/55R22.5	7.2	439
385/65R22.5	7.2	465
16.50-22.5	7.8	968
425/65R22.5	7.8	968
12.00R24	7.0	464
13.00-24	7.3	774
385/95R24 (14.00R24)	7.8	968
14.00-24	7.8	968
14.9R24	6.5	279
16.00-24	8.6	1355

Continued on next page

B9.6 Reference axle masses and contact areas for large tyres continued

Table for large tyres
(continued)

Tyre size	Reference axle mass (t)	Contact area (cm ²)
13.00-25	7.3	774
14.00-25	7.9	1032
385/95R25 (14.00R25)	8.2	1125
16.00-25	8.8	1420
380/85R30	6.0	311
16.9R34	6.5	341
420/80R46	6.5	415

B9.7 Reference axle masses and contact areas for mega tyres

Table for mega tyres

This table shows the reference axle masses in tonnes and real contact areas for single mega-tyred axles spaced at 2.4 metres or more, sorted by rim size.

Tyre size	Reference axle mass (t)	Contact area (cm ²)
445/45R19.5	7.9	968
17.50/65R20	7.5	840
445/65R22.5	7.9	598
18.00-22.5	7.9	1030
500/60R22.5	8.8	1420
550/60R22.5	8.8	1420
560/60R22.5	7.2	970
700/50R22.5	10.5	2174
710/45R22.5	10.5	1113
750/45R22.5	10.5	2496
480/70R24	6.5	533
500/85R24	7.0	578
540/65R24	7.0	474
445/80R25	8.8	1290
445/95R25	8.8	1290
17.50-25	8.5	1290
18.00-25	9.2	1725
505/95R25	9.2	1725
20.5R25 (525/95R25)	9.5	1740
525/80R25	9.5	1740
20.50-25	9.5	1740
22/65R25	9.6	1740
23.50-25	10.5	2200
24R21 XZL	9.3	1675
26.50-25	11.3	2380

Continued on next page

B9.7 Reference axle masses and contact areas for mega tyres continued

Table for mega tyres
(continued)

Tyre size	Reference axle mass (t)	Contact area (cm ²)
29.50-25	11.8	2496
750/65R25	11.8	2496
480/80R26	6.5	533
540/65R26	7.0	674
580/70R26	7.3	510
28L26	8.2	1165
750/65R26	8.5	702
Trelleborg 500/60R26.5	8.8	1420
600/55 R26.5	9.5	1740
680/55R26.5	8.0	1070
Trellborg 700/50R26.5	9.5	1740
750/45R26.5	10.5	2200
800/45R26.5	10.6	1388
480/65R28	6.8	385
540/65R28	7.0	449
600/65R28	7.5	541
600/70R28	7.5	822
540/65R30	7.0	518
600/65R30	7.5	832
600/70R30	7.5	563
710/55R30	8.2	574
650/75R32	7.9	760
800/65 R32	9.5	866
800/75R32	9.5	1420
900/60R32	10.0	1021
Claas Terratrak 635mm wide	10.5	2144
18.00-33	10.0	2000
18.4R34	6.5	533

Continued on next page

B9.7 Reference axle masses and contact areas for mega tyres continued

Table for mega tyres
(continued)

Tyre size	Reference axle mass (t)	Contact area (cm ²)
480/70R34	6.8	439
540/65R34	7.0	536
540/70R34	7.0	674
600/65R34	7.5	651
710/75R34	8.5	781
600/65R38	7.5	663
650/65R38	7.9	759
650/70R38	7.9	791
650/75R38	7.9	791
650/85R38	7.9	864
710/70R38	8.5	788
715/75R38	8.5	1181
800/70R38	9.5	972
480/70R42	6.8	533
18.4R42	6.8	533
480/80R42	6.8	453
520/85R42	7.0	585
20.8R42	6.9	544
620/70R42	7.6	722
650/65R42	7.9	756
710/65R42	8.5	707
710/70R42	8.5	707
850/55R42	9.5	1669
900/50R42	10	940
18.4R46	6.8	533
480/80R46	6.8	609
520/80R46	7.0	630

Continued on next page

B9.7 Reference axle masses and contact areas for mega tyres continued

**Table for
mega tyres**
(continued)

Tyre size	Reference axle mass (t)	Contact area (cm ²)
520/85R46	7.0	653
620/70R46	7.6	791
480/80R50	6.8	629

B9.8 Reference axle masses and contact areas for single specified standard-tyred axles spaced at 2.4 metres or more

Table for specified standard-tyred axles

This table shows the reference axle masses in tonnes and contact areas for single specified standard-tyred axles spaced at 2.4 metres or more.

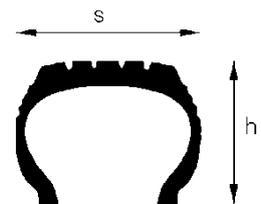
This table applies to mobile plant, including mobile cranes and accompanying towed trailers that use specified standard tyres.

Tyre size	Reference axle mass (t)	Contact area (cm ²)
13/80 R20	6.5	550
12.00 R20	6.9	410
14/80 R20	7.0	610

Tyre size example

Example truck tyre marking 14/80 R20 where:

- 14 is the tyre section width in inches
- 80 is the aspect ratio ($h/s = 0.80$)
- R is the tyre construction (R = radial)
- 20 is the bead seat diameter in inches
- s = section width of tyre
- h = section depth of tyre



If the aspect ratio is 1 (ie $h = s$), then the /80 is not included in the tyre marking, for example, 12.00 R20.

B9.9 Reference axle masses and contact areas for twin small-tyred axles spaced at 2.4 metres or more

Table for twin small-tyred axles

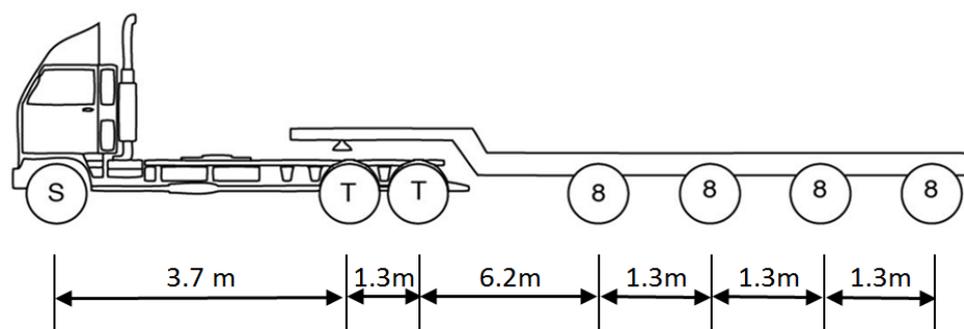
This table shows the reference axle masses in tonnes and contact areas for twin small-tyred axles spaced at 2.4 metres or more.

This table applies to articulated vehicles fitted with small tyres, typically involved in the movement of ISO containers.

Tyre size	Reference axle mass (t)	Contact area (cm ²)
235/75 R17.5	7.8	245
10 R17.5	7.8	310

B9.10 Example – Calculating the VAI for a transporter

Diagram This diagram shows the transporter with axle types and axle spacings.



Standard tyres The vehicle has standard tyres.

Proposed axle masses This table shows the proposed axle mass in tonnes for each of the axles in the above diagram.

Axle type	S	T	T	(8)	(8)	(8)	(8)
Proposed mass (t)	6	8.5	8.5	10	10	10	10

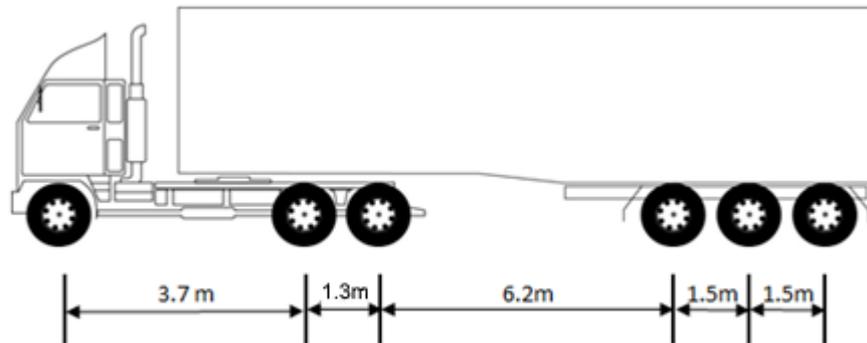
Calculation of axle indices This table shows the reference axle masses for each axle and uses this value and the value of the proposed mass for the axle (see above) to calculate the axle index.

Axle type	S	T	T	(8)	(8)	(8)	(8)
Reference axle mass value from table in section B9.5	5.4 (1 axle in group)	7.4 (2 axles in group)	7.4 (2 axles in group)	8.7 (4 axles in group)			
<u>Proposed axle mass</u> Reference axle mass	6/5.4	8.5/7.4	8.5/7.4	10/8.7	10/8.7	10/8.7	10/8.7
Axle index	= 1.11	= 1.15	= 1.15	= 1.15	= 1.15	= 1.15	= 1.15

VAI The VAI for the vehicle is 1.15 (ie the highest axle index from the above table).

B9.11 Example – Calculating the VAI for an articulated vehicle

Diagram This diagram shows an articulated vehicle carrying an ISO container with axle spacings.



Axle types The first axle is single-tyred. The remainder (axles 2 to 6) are twin-tyred.

Standard tyres All axles have standard tyres.

Proposed axle masses This table shows the proposed axle mass in tonnes for each of the axles in the above diagram.

Axle type	S	T	T	T	T	T
Proposed mass (t)	5.95	8.14	8.14	7.26	7.26	7.26

Calculation of axle indices This table shows the reference axle masses for each axle and uses this value and the value of the proposed mass for the axle (see above) to calculate the axle index.

Axle type	S	T	T	T	T	T
Reference axle mass value from table in section B9.5	5.4 (1 axle in group)	7.4 (2 axles in group)	7.4 (2 axles in group)	6.6 (3 axles in group)	6.6 (3 axles in group)	6.6 (3 axles in group)
<u>Proposed axle mass</u> Reference axle mass	5.95/5.4	8.14/7.4	8.14/7.4	7.26/6.6	7.26/6.6	7.26/6.6
Axle index	= 1.10	= 1.10	= 1.10	= 1.10	= 1.10	= 1.10

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B9.11 Example – Calculating the VAI for an articulated vehicle continued

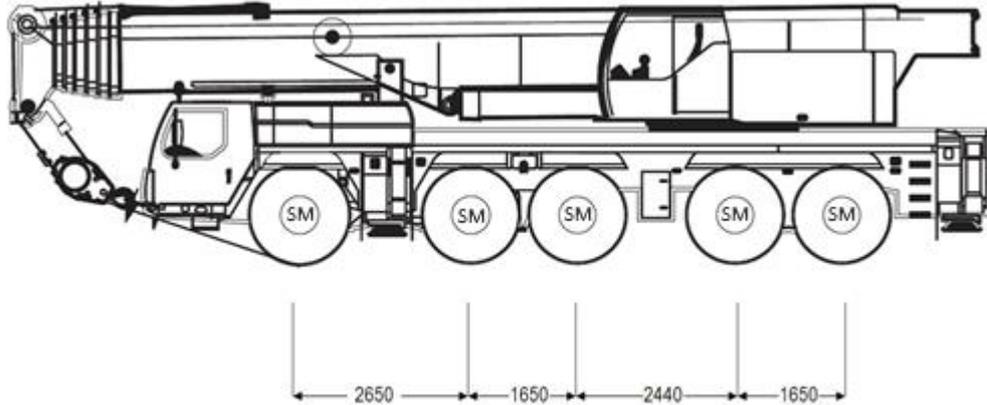
VAI

The VAI for the vehicle is 1.10 (ie the highest axle index from the above table).

B9.12 Example – Calculating the VAI for a mobile crane

Diagram

This diagram shows the mobile crane with axle types and axle spacing in millimetres.



Tyres

All axles have 20.5R25 tyres. These are single mega (SM) tyres.

Proposed axle masses

This table shows the proposed axle mass in tonnes for each of the axles in the above diagram.

Axle type	SM	SM	SM	SM	SM
Proposed mass (t)	11.2	11.2	11.2	10.8	10.9

Continued on next page

B9.12 Example – Calculating the VAI for a mobile crane continued

Calculation of axle indices This table calculates the reference axle masses for each axle and uses this value and the value of the proposed mass for the axle (see above) to calculate the axle index.

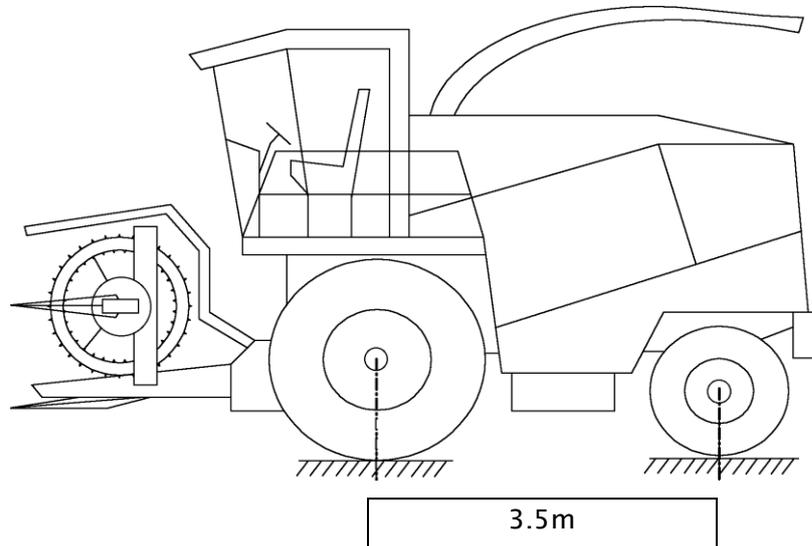
Axle type	SM	SM	SM	SM	SM
Reference axle mass value from table in section B9.5	5.4 (1 axle in group)	5.0 (2 axles in group)	5.0 (2 axles in group)	5.0 (2 axles in group)	5.0 (2 axles in group)
Reference axle mass value from table in section B9.7	9.5	9.5	9.5	9.5	9.5
Combined values from the tables divided by factor 5.4 (see step 4 in section B9.4)	$(5.4 \times 9.5)/5.4$ = 9.5	$(5.0 \times 9.5)/5.4$ = 8.796			
<u>Proposed axle mass</u> Reference axle mass	11.20/9.5	11.20/8.796	11.20/8.796	10.80/8.796	10.90/8.796
Axle index	= 1.18	= 1.27	= 1.27	= 1.23	= 1.24

VAI The VAI for the vehicle is 1.27 (ie the highest axle index from the above table).

B9.13 Example – Calculating the VAI for a harvester

Diagram

This diagram shows the harvester with axle spacings (in metres).



Tyres

Tyres are 800/65R32 front and 540/65R24 rear. Both are single mega (SM) tyres.

Proposed axle masses

This table shows the proposed axle mass in tonnes for each of the axles in the above diagram.

Axle type	SM	SM
Proposed mass	11.4	5

Continued on next page

B9.13 Example – Calculating the VAI for a harvester

continued

Calculation of axle indices

This table calculates the reference axle masses for each axle and uses this value and the value of the proposed mass for the axle (see above) to calculate the axle index.

Axle type	S	S
Reference axle mass value from table in section B9.5	5.4 (1 axle in group)	5.4 (1 axle in group)
Reference axle mass value from table in section B9.7	9.5	7.0
Combined values from the tables divided by factor 5.4 (see step 4 in section B9.4)	$(5.4 \times 9.5)/5.4$ = 9.5	$(5.4 \times 7.0)/5.4$ = 7.0
<u>Proposed axle mass</u> Reference axle mass	11.4/9.5	5.0/7.0
Axle index	1.20	0.71

VAI

The VAI for the vehicle is 1.20 (ie the highest axle index from the above table).

Chapter B10: Vehicle parameter calculations other than VAI

Overview

About this chapter

This chapter provides information on how to calculate:

- the vehicle gross index (VGI)
- the pavement loading ratio (PLR)
- the deck loading ratio (DLR), and
- traction limits (maximum allowable gradient for combination or MGC).

It includes worked examples.

In this chapter

This chapter contains the following sections:

Section	See page
B10.1 Vehicle gross index (VGI)	B10-2
B10.2 Reference gross masses for VGI calculation	B10-6
B10.3 Pavement grades and pavement loading ratio (PLR)	B10-8
B10.4 Graphical representation of the PLR	B10-10
B10.5 Deck loading ratio (DLR)	B10-11
B10.6 Graphical representation of the DLR	B10-12
B10.7 Traction limits (MGC)	B10-13
B10.8 Example of MGC calculation	B10-14

B10.1 Vehicle gross index (VGI)

Introduction The vehicle gross index (VGI) is an indicator of the effect of the gross mass(es) of a vehicle on bridges, in particular the main structural members.

It is based on the axle masses of the groups of axles on the vehicle and the reference gross mass for that grouping.

This section describes how to calculate the VGI.

Note that axle types are not relevant; they have no effect on the VGI.

Reference gross mass The reference gross mass for any grouping of axles is the nominal allowable mass given to that grouping of axles.

The reference gross mass for various wheelbases is given in the table in section B10.2.

Wheelbase A wheelbase is the distance between two axles on a vehicle.

A single axle is considered to have a wheelbase of 0.0.

A vehicle with two axles has one non-zero wheelbase.

A vehicle with four axles has six wheelbases. Namely, the distance between axles 1 and 2, 2 and 3, 3 and 4, 1 and 3, 1 and 4, and 2 and 4.

Gross index The gross index (GI) for any group of axles is given by:

$$GI = \frac{\text{Sum of the axle masses for the grouping}}{\text{Reference gross mass for the grouping wheelbase}}$$

VGI The VGI is the maximum gross index for the vehicle.

Critical wheelbase The wheelbase that gives the VGI is the critical wheelbase for the vehicle.

Continued on next page

B10.1 Vehicle gross index (VGI) continued

Procedure for calculating the VGI

Follow these steps to calculate the VGI.

Step	Action
1	Obtain for the vehicle: <ul style="list-style-type: none"> • axle masses • axle spacings
2	For the heaviest loaded axle look up the reference gross mass for the axle in section B10.2.
3	Calculate the gross index (GI) for the axle using: $GI = \frac{\text{Axle mass}}{\text{Reference gross mass}}$
4	For one of the axle groups: <ul style="list-style-type: none"> • sum the axle masses for the group • sum the axle spacings to get the wheelbase • look up the reference gross mass for the group in the table in section B10.2.
5	Calculate the gross index for the group using: $GI = \frac{\text{Sum of axle masses}}{\text{Reference gross mass}}$
6	Repeat steps 4 and 5 until the GIs for all axle groups have been calculated. Result: The VGI is the maximum of the GIs calculated.

Example 1: Transporter

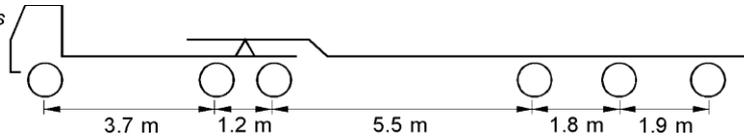
On the next page is an example of calculating the VGI for a transporter.

Continued on next page

B10.1 Vehicle gross index (VGI) continued

Example 1: Transporter (continued)

Note: Axle types and tyre sizes are not relevant to gross loading.



Proposed axle loads (tonnes)

6.4 9.0 9.0 9.3 9.0 8.7

Wheelbase = 1.2 m

Wheelbase = 1.8 m Wheelbase = 1.9 m

$$\frac{6.4}{14.5} = 0.44 \quad \frac{18.0}{14.5} = 1.24$$

$$\frac{18.3}{15.5} = 1.18 \quad \frac{17.7}{15.5} = 1.14$$

Wheelbase = 4.9 m

Wheelbase = 3.7 m

$$\frac{24.4}{25.0} = 0.98$$

$$\frac{27.0}{22.0} = 1.23$$

Wheelbase = 10.4 m

Wheelbase	GI
0.0 m	0.85
1.2 m	1.24
10.4 m	1.30
14.1 m	1.35

$$\frac{45.0}{34.0} = 1.30$$

Wheelbase = 14.1 m

$$\frac{51.4}{38.0} = 1.35$$

Heaviest loaded individual axle is axle 4 with a GI of $9.3/11.0=0.85$
VGI is 1.35 at the critical wheelbase of 14.1 metres.

Critical wheelbase

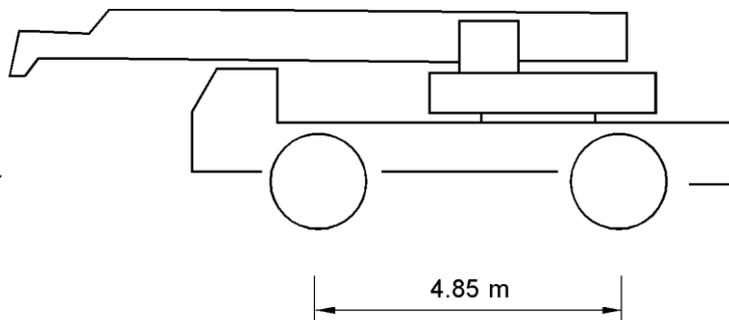
The wheelbase that gives the VGI is the critical wheelbase for the vehicle.

Continued on next page

B10.1 Vehicle gross index (VGI) continued

Example 2: Here is an example of calculating the VGI for a mobile crane.
Mobile crane

Note: Axle type and tyre sizes are not relevant to gross loading.



Proposed axle loads (tonnes)

10.3

12.5

Wheelbase = 0.0
(heaviest axle)

$$\frac{12.5}{11.0} = 1.14$$

Wheelbase = 4.85 m

$$\frac{22.8}{25.0} = 0.91$$

VGI is 1.14 at the critical wheelbase of 0.0 metres.

B10.2 Reference gross masses for VGI calculation

Table of reference gross masses

This table shows the reference gross mass in tonnes for various lengths of wheelbase in metres.

Wheelbase (m)	Reference gross mass (t)
0.0 (individual axles)	11.0
1.0 or more	14.5
1.7 or more	15.5
2.2 or more	17.0
2.5 or more	18.0
2.8 or more	19.0
3.1 or more	20.0
3.4 or more	21.0
3.7 or more	22.0
4.0 or more	23.0
4.4 or more	24.0
4.8 or more	25.0
5.2 or more	26.0
5.6 or more	27.0
6.0 or more	28.0
6.4 or more	29.0
7.1 or more	30.0
7.8 or more	31.0
8.5 or more	32.0
9.2 or more	33.0
9.9 or more	34.0
10.4 or more	34.5
10.9 or more	35.0
11.4 or more	35.5
11.9 or more	36.0
12.4 or more	36.5
12.9 or more	37.0
13.4 or more	37.5

Continued on next page

B10.2 Reference gross masses for VGI calculation

continued

**Table of
reference
gross masses**
(continued)

Wheelbase (m)	Reference gross mass (t)
13.9 or more	38.0
15.0 or more	38.5
16.0 or more	39.0
17.0 or more	39.5
18.0 or more	40.0
19.0 or more	40.5
20.0 or more	41.0
21.0 or more	41.5
22.0 or more	42.0
23.0 or more	42.5
24.0 or more	43.0
25.0 or more	43.5
26.0 or more	44.0
27.0 or more	44.5
28.0 or more	45.0
29.0 or more	45.5
30.0 or more	46.0

B10.3 Pavement grades and pavement loading ratio (PLR)

Introduction

The pavement loading ratio (PLR) is used to control the loading on pavements according to the pavement strength.

It is based on the vehicle axle index (see *Chapter B9: Calculating the vehicle axle index (VAI)* above), and a pavement grading factor.

Formula

The PLR is given by the following formula:

$$\text{PLR} = (\text{VAI} / \text{Pavement grade factor}) \times 100\%$$

This formula is represented graphically in section B10.4 below.

The PLR is expressed as a percentage.

Pavement grade factor

This table shows the pavement grade factor for various grades of pavement.

Grade of pavement	Pavement grade factor
A	1.000
B	0.889
C	0.778
D	0.667

Pavement grades

A grade A pavement allows axle weights approximating the legal axle weight limits (refer to chapter B1) at a PLR of 100%.

Grades B, C and D allow progressively reducing axle weights, as shown in the following table.

Grade of pavement	Approximate % legal axle weight limits ¹ at PLR 100%	Pavement grade factor
A	100%	1.000
B	89%	0.889
C	78%	0.778
D	67%	0.667

Note:

1. Exact for twin-tyred spaced axles.

Continued on next page

B10.3 Pavement grades and pavement loading ratio (PLR) continued

Who grades pavements?

Waka Kotahi's Managers, System Management (regional) are responsible for grading state highway pavements. They must inform Waka Kotahi's National Office of all grading and regrading determinations as soon as they are made.

Pavement grading considerations

At a PLR of 150%, which is allowed in most cases, axle masses are 50% in excess of masses at the PLR 100% level.

The grading of a particular pavement should be chosen so that the pavement structure and its underlying components (foundation, culverts, services, etc) can sustain axle weights at the 150% PLR level without substantially increasing the pavement wear at the likely overload frequency.

Pavement gradings should be determined in the expectation that they can be maintained for at least five years, although as a matter of routine, gradings should be subject to review at two-yearly intervals.

The following points regarding a pavement's condition should be considered:

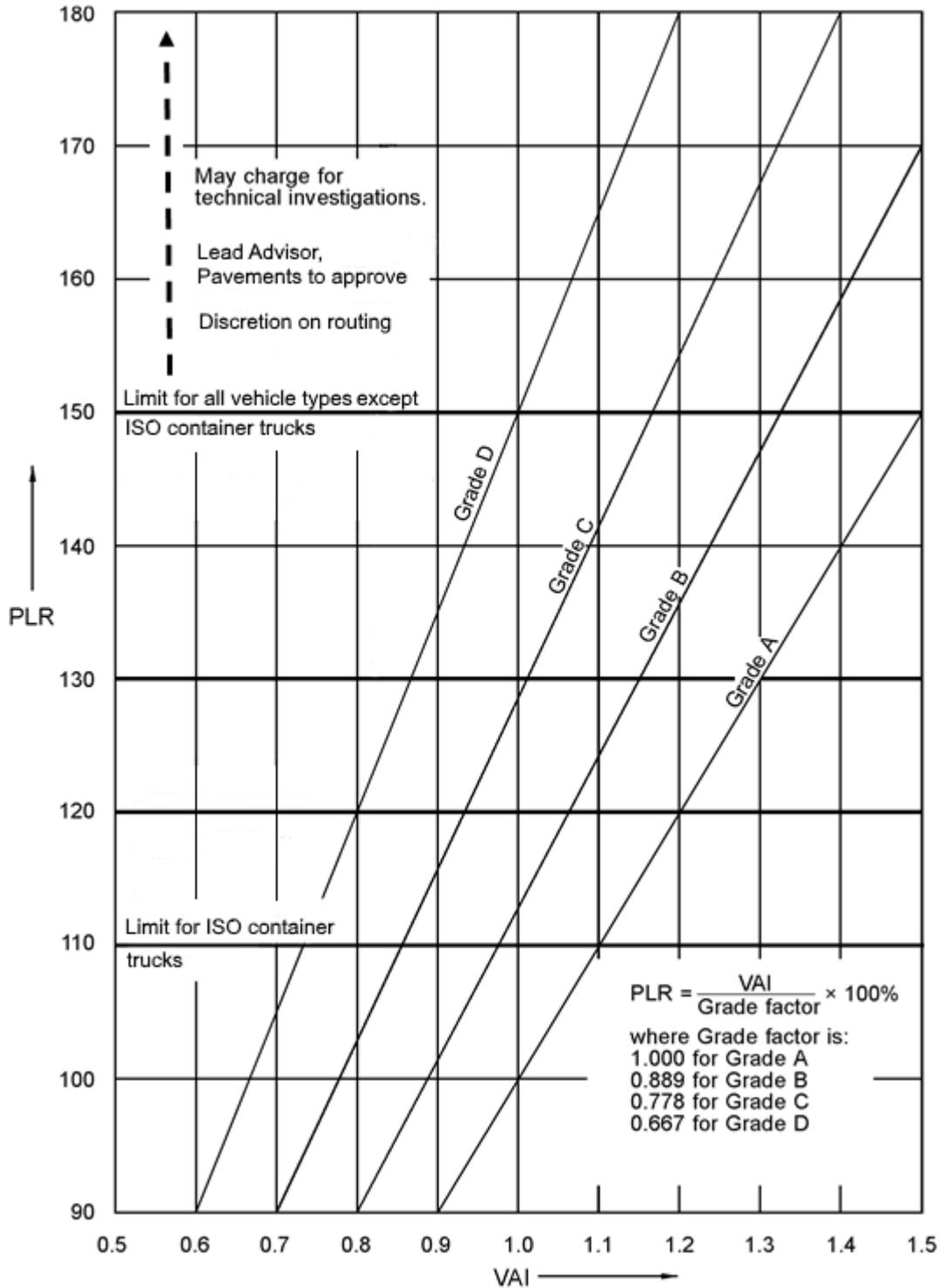
- Pavements that show signs of shape defects appearing, particularly in the wheel tracks, may be suffering from foundation overstrain or low basecourse shear strength, which may justify a lower pavement grading. 'Shape' and 'ride' components of pavement structural ratings should indicate this condition.
- Pavements that are surfaced with structurally dense asphaltic layers and have a 'high' Benkelman Beam deflection together with signs of surface cracking may justify a lower pavement grading, as in this situation the cracking represents a loss of structural competence as well as surface waterproofing. 'Cracking' and 'patching' components of pavement structural ratings should indicate this condition.
- If the strength of a pavement significantly varies on a seasonal basis, the grading of that pavement can be varied accordingly.

If unexpected deterioration of any pavement occurs, the pavement grading should be modified immediately.

B10.4 Graphical representation of the PLR

Diagram

This diagram gives a graphical representation of the PLR.



B10.5 Deck loading ratio (DLR)

Introduction The deck loading ratio (DLR) is used as a first check on bridge decks. It is based on the vehicle axle index (see *Chapter B9: Calculating the vehicle axle index (VAI)*), and a deck grading factor.

Formula The DLR is given by the following formula:

$$\text{DLR} = (\text{VAI} / \text{Deck grade factor}) \times 100\%$$

This formula is represented graphically in section B10.6.

The DLR is expressed as a percentage.

Deck grade factor This table shows the deck grade factor for various grades of deck.

Grade of deck	Deck grade factor
A	1.000
B	0.889
C	0.778
D	0.667

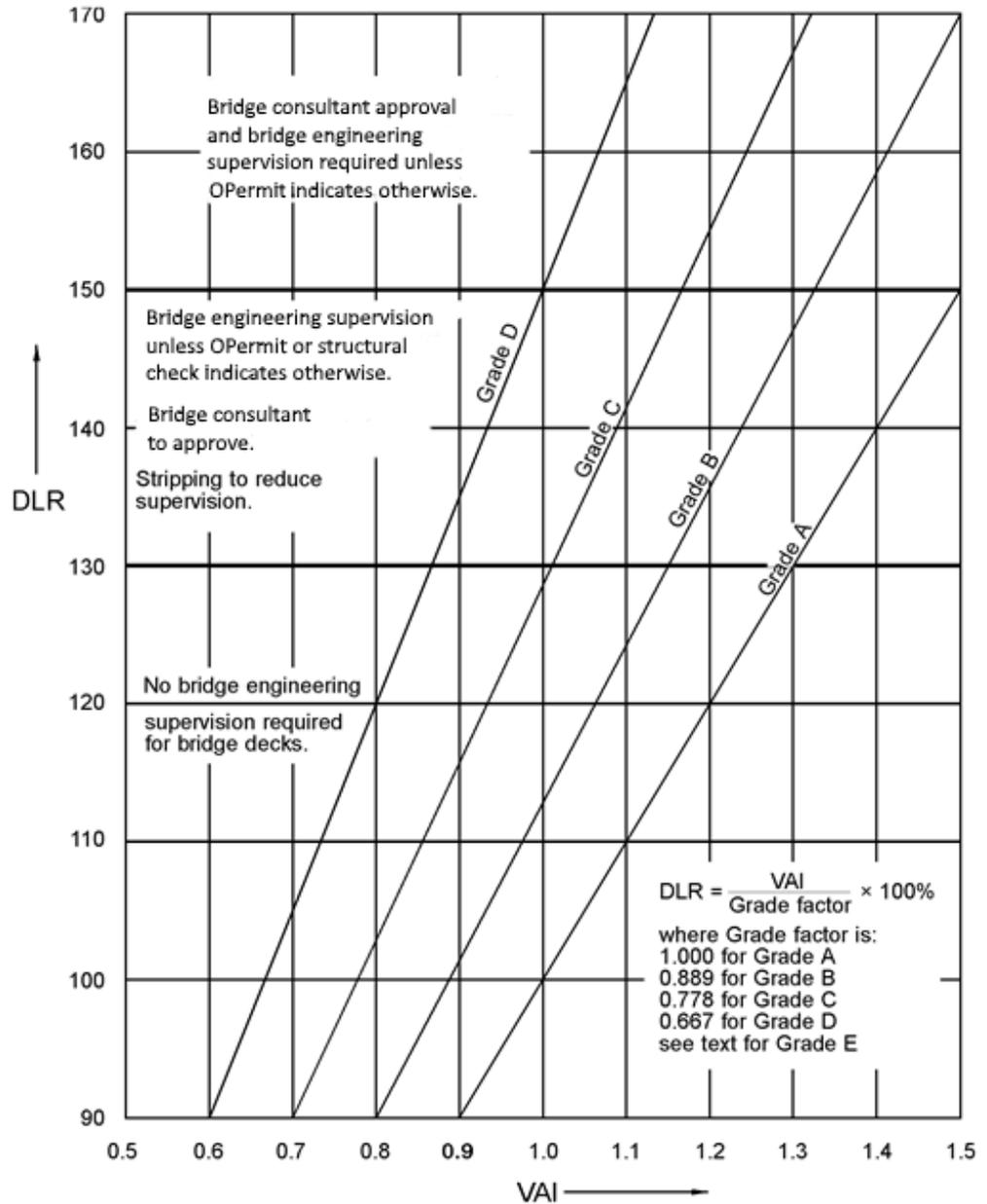
Grade E decks If a bridge deck is grade E then the DLR shall be taken as greater than 130%.

Use of deck capacity factor If the deck capacity factor (DCF) is available from the OPermit system, this should be used in place of the above deck grade factor for more accurate determination of the DLR.

B10.6 Graphical representation of the DLR

Diagram

This diagram gives a graphical representation of the DLR.



B10.7 Traction limits (MGC)

Introduction The maximum allowable gradient for combination (MGC) indicates whether a vehicle combination is able to develop sufficient traction to prevent damage to the pavement surface by wheel slip.

Operator's responsibility It is the operator's responsibility to ensure that a vehicle has sufficient traction for the mass it carries on the route it travels on.

Formula The MGC for a particular vehicle combination is given by:

$$\text{MGC} = [(\text{TFC} \times \text{Drive axle mass} \times 100) / \text{Total mass}] - 2$$

Where:

- TFC (traction friction coefficient) is:
 - 0.6 for chipseal surfacing
 - 0.8 for asphaltic concrete surfacing.
- Total mass is the mass of the whole combination, in tonnes. It includes the mass of prime movers, ballast, trailer and payload.
- Drive axle mass is the sum of the axle masses of all driving axles, in tonnes.
- The numbers 2 and 100 are constants.

The MGC is expressed in percentage.

MGC > maximum gradient When the MGC is greater than the maximum uphill gradient for the route, then the combination has sufficient traction to travel without damaging the road surface.

B10.8 Example of MGC calculation

Introduction This example calculates the MGC for a loaded combination consisting of two prime movers and a ten-axle trailer.

Vehicle data

Prime mover 1:

- mass on steering axle = 5.2 tonnes
- mass on driving axles = 7.0 tonnes each

Prime mover 2:

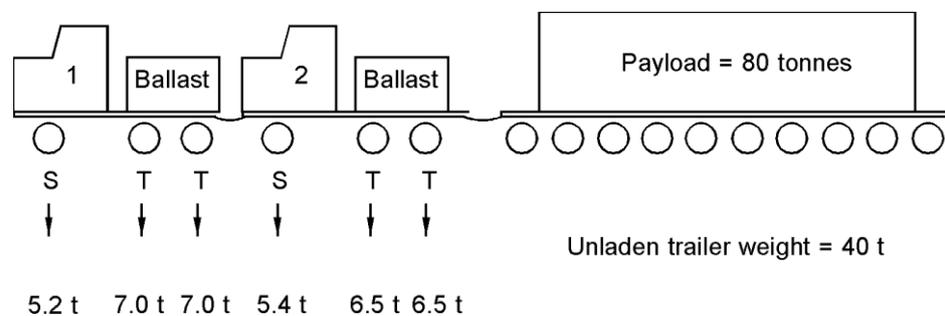
- mass on steering axle = 5.4 tonnes
- mass on driving axles = 6.5 tonnes each

Ten-axle trailer: mass of unladen trailer = 40 tonnes
Payload = 80 tonnes

Road data

Maximum uphill gradient on proposed route = 8%
Pavement surface on proposed route is chipseal.

Diagram Here is a diagram of the combination showing axle masses and axle types.



Continued on next page

B10.8 Example of MGC calculation continued

Calculation

$$\text{MGC} = [(\text{TFC} \times \text{Drive axle mass} \times 100) / \text{Total mass}] - 2$$

Using the above data:

- TFC = 0.6
- Drive axle mass = $2 \times 7 + 2 \times 6.5 = 27$ tonnes
- Total mass = Combination axle mass + payload = $(5.2 + 2 \times 7 + 5.4 + 2 \times 6.5 + 40) + 80 = 157.6$ tonnes

Substituting these in the formula we get:

$$\text{MGC} = [(0.6 \times 27 \times 100) / 157.6] - 2 = 8.28\%$$

This is greater than the maximum uphill gradient for the route, so the prime movers are able to develop sufficient traction to shift the load without damaging the pavement. If this combination complies with the other overweight permit requirements, a permit may be issued.

Vehicle dimensions and mass permitting manual (volume 1)

Part C

Overdimension permits

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of heavy commercial vehicles. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi the NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to this manual, please refer to the 'Record of amendments' at the start of both volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Revisions reflect legislation changes from the Land Transport (NZTA) Legislation Amendment Act 2020 and the Land Transport Rule: Omnibus Amendments 2020, and a policy change to overheight piloting requirements.</p> <p>Updated sections:</p> <p>Introduction: Information added about the Director of Land Transport role, delegations of authority, and the terminology used in the manual.</p> <p>C4.2 Piloting requirements: The piloting requirements for overheight permits have been revised. A Class 2 load pilot must be used within city limits or anywhere in New Zealand, depending on the height of the vehicle or load.</p> <p>C3.3 Travel time restrictions: Exemptions from restricted travel times now also apply to snow ploughs.</p>	1 May 2021
Amendment 2	<p>This amendment covered updates from the Land Transport Rule: Vehicle Dimensions and Mass Amendment 2019. Updates also included a policy change for category 4B dimensions and minor clarifications.</p> <p>The following sections were revised:</p> <p>C1.2 and C3.1 Length exceeding 35 metres: Notes added to tables that overdimension vehicles or loads may exceed 35m in length (and come within category 3 limits) if they use a manned steering jinker.</p> <p>C2.3 Route restrictions on Auckland motorways clarified for vehicles up to and including 4.8 metres high.</p> <p>C2.5 Overheight requirement under Wellington trolley bus wires: Deleted because no longer applicable following the removal of the trolley bus wires.</p> <p>C3.1 Operating requirements by category: Requirements updated for loads longer than 30 metres and up to 50 metres.</p> <p>C3.2 Hazard warning signs: Reference to standard for retroreflective signs updated.</p>	1 June 2020

Continued on next page

Record of amendments in this part continued

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 2 (continued)	<p>C4.2 Piloting requirements: Class 1 and Class 2 pilot qualifications clarified.</p> <p>C5.5 Category 4B loads: Engineering assessment requirements updated. Depending on the type of load ('L' or 'G'), a written statement by the operator may be acceptable with an overdimension permit application instead of an engineering assessment.</p>	1 June 2020

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Part C: Overdimension permits

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* describes Waka Kotahi NZ Transport Agency's policy for issuing overdimension permits. It also describes the requirements for applying for and operating under an overdimension permit.

Legal basis and role of the Director of Land Transport

Under section 6.49 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule), Waka Kotahi's Director of Land Transport is responsible for issuing overdimension permits in accordance with the requirements of the rule.

The Director has delegated the authority to issue permits to Waka Kotahi's permitting staff and their contractors. References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be interpreted as references to the Director if the reference relates to a Director function under the VDAM Rule.

Not covered in this part

Vehicles may exceed some dimension limits of the VDAM Rule without needing a permit, provided they comply with the specific operating requirements set out in the rule.

This part does not cover in detail the operating requirements for overdimension vehicles or loads that **do not** require a permit. Operators are advised to refer to section 6 of the VDAM Rule, or to the factsheets on Waka Kotahi's website (see *Further information* below).

Audience

The intended audience for this part is:

- transport operators who operate overdimension vehicles or carry overdimension loads
 - Waka Kotahi staff involved in overdimension permitting
 - local road controlling authorities
 - truck and trailer manufacturers, and
 - enforcement agents such as the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.
-

Continued on next page

Introduction continued

Further information

For further information on vehicle dimensions and loads, see:

- Factsheet 53a – Overdimension vehicles and loads, available at www.nzta.govt.nz/resources/factsheets/53/
- Factsheet 13 series, available at www.nzta.govt.nz/resources/factsheets/13.

You can also call the Overdimension Permit Issuing Agency (OPIA) helpdesk on 0800 OVERSIZE (0800 683 774).

Terminology and abbreviations

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations see *Part I: Definitions and glossary* in this volume of the manual.

In this part

This part contains the following chapters:

Chapter	See page
Chapter C1: General information about overdimension permits	C1-1
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Chapter C5: How to apply for an overdimension permit	C5-1

Chapter C1: General information about overdimension permits

Overview

About this chapter

This chapter explains the different overdimension categories and when an overdimension permit is required.

In this chapter

This chapter contains the following sections:

Section	See page
C1.1 Definition and general principles	C1-2
C1.2 Overdimension categories	C1-3
C1.3 When you need an overdimension permit	C1-6
C1.4 Revocation of overdimension permits	C1-8

C1.1 Definition and general principles

What is an overdimension vehicle or load?

An overdimension vehicle or load is one that exceeds one or more of the maximum dimensions allowed for standard vehicles.

'Overdimension' may refer to:

- a load that exceeds standard dimensions, even though it is being transported on a standard-sized vehicle
- a specialist overdimension vehicle that exceeds standard dimensions, or
- a vehicle designed primarily for transporting overdimension loads.

The dimension requirements for standard vehicles can be found in the VDAM Rule schedule 2, or in Factsheet 13, which is available at www.nzta.govt.nz/resources/factsheets/13/.

Indivisible loads

To be considered overdimension, a load must be **indivisible**, which means it cannot, without disproportionate effort, expense or risk of damage, be divided for transport.

Divisible loads

If your load is divisible, and your vehicle is within the standard width and height limits but exceeds the standard vehicle lengths, you may be eligible for an HPMV overlength permit. Refer to *Part E: HPMV Overlength permits* in this volume of the manual.

C1.2 Overdimension categories

Four categories

Overdimension vehicles and loads are classified into either category 1, 2, 3 or 4.

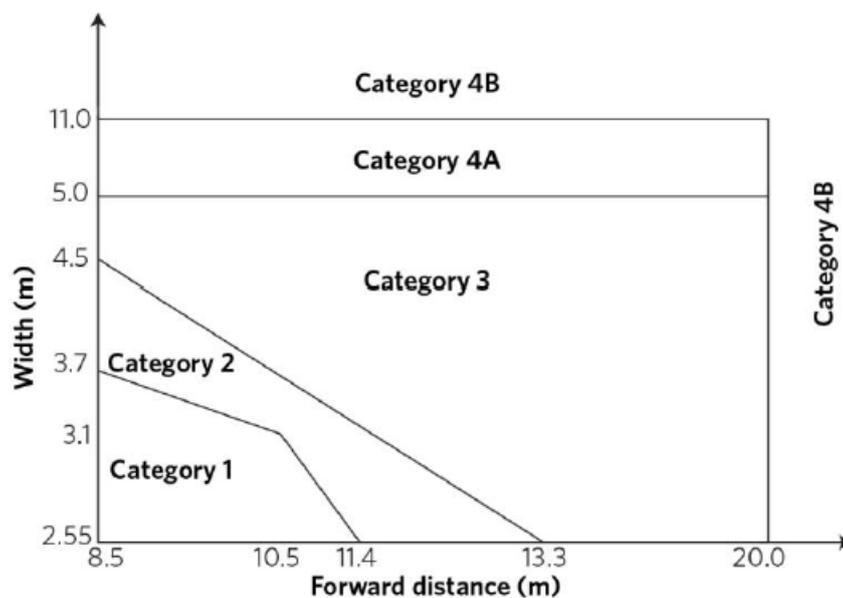
The category an overdimension vehicle or load falls into depends on the extent by which it exceeds standard limits for one or more of the following dimensions:

- width
- forward distance
- length, and/or
- front or rear overhang.

Categories by width and forward distance

The combination of width and forward distance of a vehicle or load determines its swept path requirement. The swept path requirement is the maximum road width taken up by a vehicle when it negotiates a turn.

The graph below shows the overdimension categories and their width/forward distance thresholds.



Note:

Vehicles or loads that are less than 2.55 metres wide, or that have a forward distance of less than 8.5 metres, are considered to be 2.55 metres wide and have a forward distance of 8.5 metres for the purpose of determining their category according to the above graph.

Continued on next page

C1.2 Overdimension categories continued

Forward distance calculations

Load-sharing trailer

If the vehicle combination includes a load-sharing trailer, forward distance is calculated as follows:

If the forward distance...	Then...
is 3.5 metres or less	the load-sharing trailer does not have to be included in forward distance calculations.
exceeds 3.5 metres	this distance must be added to the forward distance of the main trailer, less 3.5 metres.

Manned steering jinker

If the vehicle combination includes a manned steering jinker, the forward distance used for determining the category according to the graph above is half the distance between the two turntables supporting the load.

Other dimensions determining category

In addition to width and forward distance, the other dimensions that determine whether a vehicle or load is overdimension are length, and front and rear overhang.

It may not be a single dimension but a combination of dimensions that determines a vehicle's category.

The table on the next page shows which overdimension category a vehicle falls into based on its length, and/or front and rear overhang.

Note: Height is not associated with an overdimension category. However, special requirements apply to operating vehicles or loads higher than 4.3 metres. For details see section *C2.5 Overheight requirements*.

Continued on next page

C1.2 Overdimension categories continued

Categories by length and front and rear overhang

This table shows which overdimension category a vehicle falls into based on its length and/or front and rear overhang. For categories by width and forward distance, see the graph on page C1-3.

Dimension	Cat 1	Cat 2			Cat 3	Cat 4	
		2A	2B	2C		4A	4B
Length	up to 25m, and/or	>25m up to 35m, and/or	up to 25m, and/or	>25m up to 35m, and/or	up to 35m ² , and/or	up to 35m ² , and/or	>35m ³ , and/or
Front overhang	up to 7m, and/or	>7m up to 10m, and	up to 7m, and	>7m up to 10m, and	up to 10m, and	up to 10m, and/or	>10m, and/or
Rear overhang	up to 7m	up to 7m	>7m up to 10m	>7m up to 10m	>7m up to 10m	up to 10m	>10m

Notes:

1. 'Up to' in this table means 'up to and including'.
2. Up to 50m overall length if the combination includes a manned steering jinker.
3. Over 50m overall length if the combination includes a manned steering jinker.

C1.3 When you need an overdimension permit

No permit needed for categories 1 and 2

If your vehicle or load falls within categories 1 or 2 and does not exceed 25 metres in length, then you can operate the vehicle without an overdimension permit provided you comply with the special operating requirements that apply to these categories.

For the operating requirements for categories 1 and 2, refer to:

- the VDAM Rule schedule 6, part 1, or
 - Factsheet 53, available at www.nzta.govt.nz/resources/factsheets/53/.
-

When you need an overdimension permit

You will need an overdimension permit if your vehicle or load:

- has a width and forward distance combination within categories 3 or 4 (see *Categories by width and forward distance* in section C1.2 above)
 - is higher than 5 metres
 - is longer than 25 metres
 - has a front or rear overhang exceeding 7 metres, or
 - is in any category (including categories 1 and 2) and is unable to comply with the operating requirements that apply to its category.
-

Critical permit conditions

When operating a vehicle under an overdimension permit, you must comply with the following critical conditions:

- The vehicle or its load must not exceed the lesser of –
 - the dimension limits for its category stated in the permit, or
 - the maximum width, if stated in the permit, plus 0.5 metres.
 - You must provide pilots as specified on the permit or, if not specified on the permit, as required under the VDAM Rule.
-

Additional conditions

Waka Kotahi may include any additional conditions it considers necessary to ensure the safety and convenience of other road users.

You must comply with all conditions specified on the permit, as well as the general and specific operating conditions described in the following chapters.

Continued on next page

C1.3 When you need an overdimension permit continued

Carrying the permit together with associated documents

Overdimension permits must be carried in the vehicle during travel together with associated documents such as:

- an overweight permit, if applicable
- evidence of any required permissions (see section *C2.4 Permissions required when operating an overdimension vehicle*), or
- an engineering assessment for a category 4B vehicle or load, if applicable.

Permits and associated documents must be shown to an enforcement officer or operator of a pilot vehicle on request.

Direction of enforcement officer

In an emergency or unforeseen event, an enforcement officer may approve the immediate use of an overdimension vehicle on a road without a permit. In such an event, the enforcement officer may impose any conditions that ensure the safe operation of the vehicle.

Operating requirements

Waka Kotahi issues overdimension permits on condition that the permit holder complies with any conditions specified on the permit as well as the operating requirements for overdimension vehicles in the VDAM Rule. The VDAM Rule requirements can broadly be divided as follows:

- general operating requirements that apply to **all** overdimension vehicles and loads
- special permissions that may be required
- notification requirements, and
- specific requirements for operating under an overdimension permit.

These requirements are described in detail in the following chapters.

C1.4 Revocation of overdimension permits

When can a permit be revoked?

Waka Kotahi may revoke an overdimension permit if in its view there is significant risk to public safety.

Revocation process

Waka Kotahi must advise an operator or the on-road supervisor as soon as practicable that it has revoked the overdimension permit. The notice does not need to be in writing.

Waka Kotahi must give its reasons for revoking a permit.

Immediate effect

A revocation of an overdimension permit takes effect immediately when the operator or on-road supervisor is advised of the revocation, or at the time specified in the notice of revocation.

Chapter C2: General requirements for overdimension vehicles and loads

Overview

About this chapter

This chapter describes the general operating requirements for overdimension vehicles and loads. The general requirements apply to all overdimension vehicles and loads, including those operating under a permit.

In this chapter

This chapter contains the following sections:

Section	See page
C2.1 General operating requirements for all overdimension vehicles or loads	C2-2
C2.2 Lighting requirements	C2-4
C2.3 Specific route restrictions for overdimension vehicles	C2-6
C2.4 Permissions required when operating an overdimension vehicle	C2-8
C2.5 Overheight requirements	C2-9
C2.6 General notification requirements	C2-10
C2.7 Interference with traffic control devices, structures or foliage	C2-11

C2.1 General operating requirements for all overdimension vehicles or loads

Category determines operating requirements

Overdimension vehicles must comply with specific operating requirements for their category, as specified in the VDAM Rule schedule 6. The rule sets out, by category, the requirements for:

- hazard warning equipment
- travel times, and
- minimum piloting.

For the requirements for overdimension vehicles operating under a permit, see section *C3.1 Specific operating requirements by category*.

Route must be suitable

An overdimension vehicle must, when available, use a designated overdimension route. Such routes have been identified by road controlling authorities in consultation with the road transport industry, engineers and planners.

There are also specific route restrictions for overdimension vehicles that operators must be aware of – see section *C2.3 Specific route restrictions for overdimension vehicles*.

Operators applying for a permit for a category 4 overdimension vehicle or load must declare that the route has been assessed and can be safely managed – see section *C5.4 Prerequisites to completing the application form*.

Visibility

An overdimension vehicle or load must not operate if visibility is less than 350 metres because of fog, hail, heavy rain or other factors.

If the journey has started and the conditions change to reduce visibility to less than 350 metres, the vehicle must pull over and stop clear of moving traffic as soon as possible until visibility improves.

Vehicle must not cause damage

An overdimension vehicle or load must not be operated on a road where it is likely to damage any wires, cables or structures.

Vehicles or loads with excess height may require permission to pass underneath overhead obstructions, and long vehicles may require permission to cross railway level crossings – see section *C2.4 Permissions required when operating an overdimension vehicle*.

An operator may temporarily move a traffic control device in the path of an overdimension vehicle – see section *C2.7 Interference with traffic control devices, structures or foliage*.

Continued on next page

C2.1 General operating requirements for all overdimension vehicles or loads continued

**Excess height
requirements**

Vehicles or loads higher than 4.3 metres must comply with the overheight operating requirements in the VDAM Rule schedule 6, part 3. For details see section *C2.5 Overheight requirements*.

**Consideration
for other road
users**

Operators must consider other road users when operating an overdimension vehicle and allow them to pass their vehicle as soon as it is safe to do so.

C2.2 Lighting requirements

Lighting during daylight

During daylight hours, overdimension vehicles must have their headlamps on low beam.

Vehicles that are more than 3.7 metres wide or that are being piloted must display an amber beacon at all times when operating.

Lighting in darkness

When travelling in darkness, the lighting on all overdimension vehicles must be clearly visible (in clear weather) from at least 200 metres away.

Specific lighting requirements depend on width and are as follows:

Width	Lighting requirement
Up to 5m wide ¹	<ul style="list-style-type: none"> • Amber beacon • Steady white or amber lamps at the front, and steady red or amber lamps at the rear (see <i>Placement of lamps</i> below for how the lamps must be positioned) • Amber side marker lamps towards the front, spaced approximately 3m apart • Red or amber side marker lamps towards the rear, spaced approximately 3m apart
Wider than 5m	<p>In addition to the above, two or more white scene lamps to illuminate the front of the load so that it is visible to approaching traffic from a distance of 200m.</p> <p>Note: The scene lamps must not be directly visible to following traffic.</p>

Note:

1. Lighting as described in the table may be fitted to, but is not compulsory for, a standard motor vehicle carrying a load up to 2.7 metres wide that is not overlength.

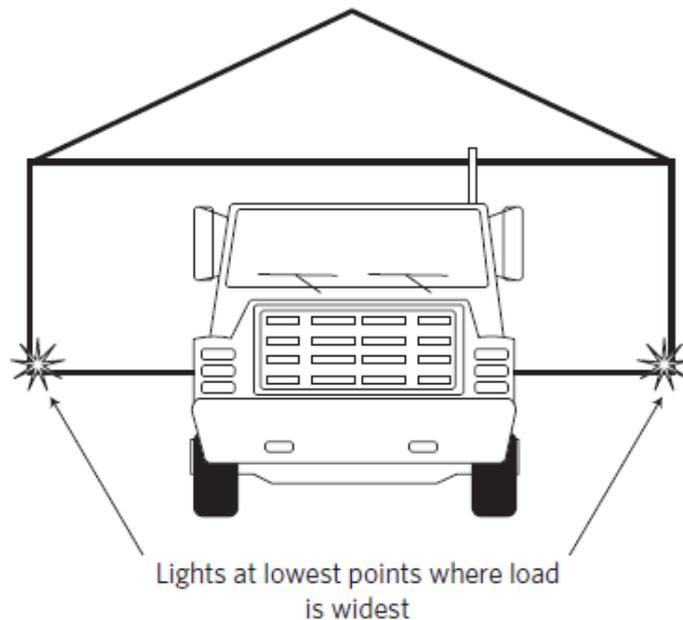
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C2.2 Lighting requirements continued

Placement of lamps

Front and rear lights must be positioned so that they outline the load to enable approaching traffic to determine the size of the load and safely get past it. They must illuminate an area of the vehicle or load of at least 50 square centimetres.

If the load overhangs the deck of the vehicle sideways, these lights must be spaced approximately 1 metre apart across the lowest part of the load and at the widest parts of the load, as shown below.



C2.3 Specific route restrictions for overdimension vehicles

Specific route restrictions

Overdimension vehicles must comply with particular restrictions on specific routes, as set out in the table below.

These specific restrictions apply whether the vehicle is operated under a permit or not, and are in addition to the travel time and zone restrictions described in section C3.3 *Travel time and zone restrictions*.

Legislation reference: VDAM Rule schedule 8.

Route	Maximum dimensions	Exceptions
Auckland Harbour Bridge	4.8m high 3.1 m wide	Vehicles wider than 3.1 m may travel across the bridge if authorised by the Traffic Operations Centre and accompanied by a Class 1 pilot vehicle (or more pilots if required by the VDAM Rule).
Auckland Motorways	4.3m high 3.1 m wide	<ul style="list-style-type: none"> • Vehicles wider than 3.1 m but no higher than 4.8m, and • vehicles higher than 4.8m with permission from Waka Kotahi as the road controlling authority — may use: <ol style="list-style-type: none"> (b) SH1 between Ramarama Interchange (Ararimu Rd underpass) and the southern end of the Auckland Southern Motorway (c) SH18 between the intersection with SH16 and the intersection with Albany Highway, and (d) SH1 between the Silverdale interchange and the northern end of the Auckland Northern Motorway.
Wellington Motorway	4.8m high 3.7m wide	Vehicles exceeding maximum dimensions may travel on this route provided they comply with Waka Kotahi's conditions as the road controlling authority.
Lyttelton Tunnel	4.27m high 2.6m wide 23m long ¹ 2m front and rear load overhang	<p>Vehicles exceeding maximum dimensions may travel through the tunnel if the operator:</p> <ul style="list-style-type: none"> • has obtained permission from Waka Kotahi as the road controlling authority (through Tunnel Control), and • complies with any piloting or travel time restrictions required by Tunnel Control.

Continued on next page

C2.3 Specific route restrictions for overdimension vehicles continued

Specific route restrictions (continued)

Route	Maximum dimensions	Exceptions
Toll routes	4.3m high 3.1 m wide	Wider or higher vehicles may only travel on toll routes with explicit authority from Waka Kotahi as the road controlling authority and provided the operator complies with any piloting or travel time restrictions required by Waka Kotahi.

Note:

1. Towing vehicle and semi-trailer.

Local road restrictions

Some local road controlling authorities have bylaws that restrict the use of roads by overdimension vehicles. Under the VDAM Rule, Waka Kotahi must not issue an overdimension permit for local roads if it has been notified that the local road controlling authority objects to the permit being issued.

C2.4 Permissions required when operating an overdimension vehicle

Introduction This section outlines permissions that may be required when operating an overdimension vehicle. These permissions are in addition to the permissions required for using specific routes as described in the previous section and may be needed even if operating under an overdimension permit.

Permissions to cross railway level crossings If your vehicle or load exceeds 25 metres in length and will cross a railway level crossing on its journey, you must obtain written permission from the access provider to travel over the level crossing.

Some level crossings may also have height, weight or width restrictions, and a permit from KiwiRail or another access provider may be required to cross those safely.

For details see *Obtaining permissions* in section *C5.4 Prerequisites to completing the application form*.

Overheight vehicles If your vehicle is higher than 4.3 metres, you may need written permission from the asset owner to pass under overhead obstructions or electrical lines. For details see the next section *C2.5 Overheight requirements*.

Evidence Evidence of permissions must be carried in a readable format in the vehicle and shown to an enforcement officer on request.

C2.5 Overheight requirements

Requirements if height exceeds 4.3m

The table below shows the VDAM Rule requirements for operating a vehicle or load that is higher than 4.3 metres.

Legislation reference: VDAM Rule schedule 6, part 3.

Height (metres)	Permission required	Other requirements
4.3 to 5.0	<ul style="list-style-type: none"> • Written permission from the owner of an overhead obstruction that the vehicle cannot clear. • Written approval from relevant access provider if: <ul style="list-style-type: none"> – the vehicles travels over a level crossing that is not on a state highway, and – the vehicle exceeds the height shown on an electrified railway safe height sign. 	For loads higher than 4.8m, you must use a vehicle with a deck height of less than 1.3m above the road.
> 5.0	<p>As above, plus:</p> <ul style="list-style-type: none"> • Written permission from the owner of overhead wires or cables that the vehicle travels under, and • overdimension permit from Waka Kotahi. 	

Permits for overheight

Vehicles or loads higher than 5 metres require an overdimension permit to operate.

Height is not associated with any of the overdimension categories under the VDAM Rule. If height is the only excess dimension, then Waka Kotahi's permitting system assigns a default category 1 to the permit.

For piloting requirements under an overheight permit, see *Overheight permit piloting conditions* in section C4.2.

Operator responsibility

Operators of overheight vehicles are responsible at all times for ensuring that their vehicle or load does not damage any lawful overhead wires, cables or constructions.

Legislation reference: VDAM Rule section 3.1(4).

C2.6 General notification requirements

Notifying emergency services

The on-road supervisor of an overdimension vehicle must notify local emergency services if operating the vehicle is likely to significantly delay the emergency services. If there is no on-road supervisor, then the driver of the overdimension vehicle must notify the emergency services.

Note: The operator of an overdimension vehicle must nominate an on-road supervisor if the vehicle is operated under a permit and/or more than one pilot is required to accompany the load.

Causing interference or damage

See the next section *C2.7 Interference with traffic control devices, structures or foliage* for notification requirements if a traffic control device needs to be moved temporarily, or an overdimension vehicle damages a traffic control device, road structure or plants.

When operating under permit

Specific notification requirements apply to operating under an overdimension permit. See section *C3.4 Notification requirements when operating under an overdimension permit*.

C2.7 Interference with traffic control devices, structures or foliage

Temporary removal allowed

Operators of overdimension vehicles or loads may temporarily remove a traffic control device to enable the safe passage of the vehicle, but the traffic control device must be immediately re-erected in its original position after the vehicle has passed.

If the traffic control device is not immediately re-erected, then the operator of the overdimension vehicle must notify the road controlling authority or the person responsible for the device.

Legislation reference: VDAM Rule section 6.10.

Interference or damage

If an overdimension vehicle interferes with or damages a traffic control device, bridge, tunnel or other structure, the operator must notify the road controlling authority.

If trees or foliage are damaged by an overdimension vehicle or load, the operator must notify the owner of the plants.

Chapter C3: Specific requirements for operating under an overdimension permit

Overview

About this chapter

This chapter describes the specific requirements that apply to operating an overdimension vehicle or load under a permit. These requirements are in addition to the general requirements outlined in the previous chapter.

In this chapter

This chapter contains the following sections:

Section	See page
C3.1 Specific operating requirements by category	C3-2
C3.2 Hazard warning equipment	C3-5
C3.3 Travel time and zone restrictions	C3-8
C3.4 Notification requirements when operating under an overdimension permit	C3-15

C3.1 Specific operating requirements by category

Introduction This section sets out the specific operating requirements for overdimension vehicles and loads that require a permit to operate, ie those that fall into categories 3 or 4.

Note: Height is not associated with any of the overdimension categories. For overheight operating requirements, see section *C2.5 Overheight requirements*, and *Overheight permit piloting conditions* in section C4.2.

Loads longer than 30m An overdimension vehicle that is longer than 30 metres and is transporting a load must have a rear steering facility.

Category 3 operating requirements The specific operating requirements for overdimension category 3 vehicles or loads are set out in the table below.

Legislation reference: VDAM Rule schedule 6, part 1.

Category 3 ¹		
Dimensions		
Width/forward distance <i>may also include:</i>	Exceeding 2.55m/13.3m and exceeding 4.5m/8.5m up to and including 2.55m/20m, up to and including 5m/20m and up to and including 5m/8.5m	
Length ² <i>and/or:</i>	Up to and including 35m (50m if the combination includes a manned steering jinker)	
Front overhang <i>AND:</i>	Up to and including 10m	
Rear overhang ³	Exceeding 7m, up to and including 10m	
Operating requirements		
Hazard warning equipment ⁴	Travel times	Minimum piloting requirements
<ul style="list-style-type: none"> Excess projections delineated with panels OVERSIZE sign Amber beacon Headlamps on low beam during daylight hours Additional lamps if travelling during the hours of darkness (see section <i>C2.2 Lighting requirements</i>) 	Restricted travel times (see section <i>C3.3 Travel time and zone restrictions</i>)	One Class 1 pilot, plus: <ul style="list-style-type: none"> one Class 2 pilot if rear overhang is ≤ 7m, or two Class 2 pilots if rear overhang is > 7m Additional pilots as required ⁵

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C3.1 Specific operating requirements by category continued

Category 4 operating requirements

The specific operating requirements for overdimension category 4 vehicles or loads are set out in the table below.

Legislation reference: VDAM Rule schedule 6, part 1.

Category 4A ¹		
Dimensions		
Width/forward distance <i>may also include:</i>	Exceeding 5m/20m and exceeding 5m/8.5m up to and including 11m/20m and up to and including 11m/8.5m	
Length ² <i>and/or:</i>	Up to and including 35m (50m if the combination includes a manned steering jinker)	
Front overhang <i>and/or:</i>	Up to and including 10m	
Rear overhang ³	Up to and including 10m	
Category 4B ¹		
Dimensions		
Width/forward distance, length, front and rear overhang	Exceeding any of the limits for category 4A Note: For category 4B, an engineering assessment of the route is required with a permit application.	
Operating requirements ⁶		
Hazard warning equipment ⁴	Travel times	Minimum piloting requirements
<ul style="list-style-type: none"> • Excess projections delineated with panels • OVERSIZE sign • Amber beacon • Headlamps on low beam during daylight hours • Additional lamps if travelling during the hours of darkness (see section C2.2 <i>Lighting requirements</i>) 	Restricted travel times (see section C3.3 <i>Travel time and zone restrictions</i>)	<ul style="list-style-type: none"> • Two Class 2 pilots, plus • one Class 1 pilot Additional pilots as required ⁵

Continued on next page

C3.1 Specific operating requirements by category continued

Notes to tables

1. See section *C1.2 Overdimension categories* for details.
 2. For loads longer than 25 metres, you must get permission from the access provider to cross railway level crossings (see section *C2.4 Permissions required when operating an overdimension vehicle*). For loads exceeding 30 metres, a rear steering facility must be used.
 3. The centre of gravity of the load must be forward of the rear axis. If an overdimension vehicle is operated with a manned steering jinker or a pole trailer, the rear overhang is measured between the centre of the rear turntable load support and the rearmost part of the load.
 4. For alternative hazard marking requirements for mobile crane booms or agricultural vehicles with excess front overhang, see the next section *C3.2 Hazard warning equipment*.
 5. Additional pilots may be required to comply with the VDAM Rule. For details see *Chapter C4: Piloting requirements*.
 6. For overdimension category 4B vehicles or loads, the operating requirements for category 4A apply, plus any specific conditions included in the permit. For example, Waka Kotahi permitting staff would scrutinise the route for a category 4B permit, and may also take windage into account.
-

C3.2 Hazard warning equipment

Introduction

This section describes the specifications for hazard panels and signs for overdimension loads or vehicles.

For the hazard warning equipment that must be used with category 3 or 4 vehicles, refer to the previous section *C3.1 Specific operating requirements by category*.

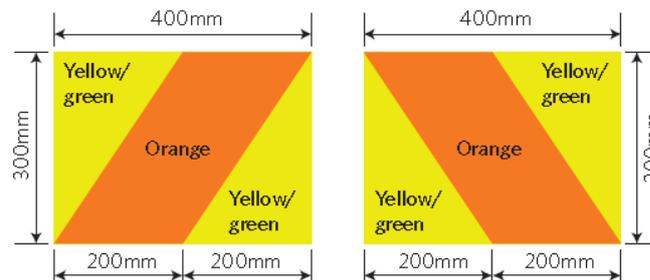
Hazard panel colour and material

Hazard warning panels and signs must:

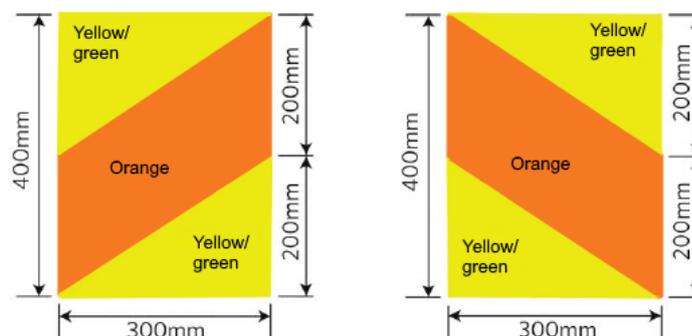
- comply with AS/NZS 1906.1: 2017 *Retroreflective materials and devices for road traffic control purposes, Part 1: Retroreflective sheeting* (or, if an existing sign, with a previous version of this standard)
- consist of retroreflective material with a 200mm-wide diagonal stripe pattern with alternate yellow-green and orange retroreflective sheeting (see diagrams below), and
- be frangible (ie fragile and easily broken if hit, eg by a cyclist) for those portions that extend beyond the vehicle's limits.

Hazard panel dimensions

The required minimum dimensions of hazard warning panels are shown below:



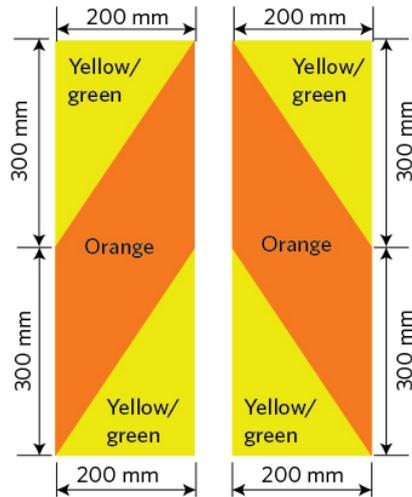
Alternative orientation:



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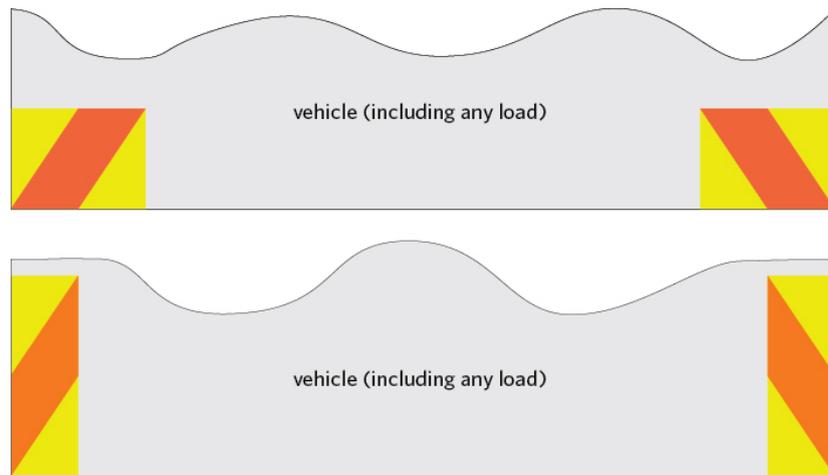
C3.2 Hazard warning equipment continued

Hazard panel dimensions (continued)



Orientation and placement of hazard panels

Hazard warning panels must be placed so they delineate excess projections of an overdimension load or vehicle, as illustrated by these diagrams:



Continued on next page

C3.2 Hazard warning equipment continued

OVERSIZE sign An overdimension vehicle wider than 3.1 metres must display an 'OVERSIZE' sign as shown below at the front and rear of the vehicle.

The dimensions of the sign must be as follows:



Note: The OVERSIZE sign must not be displayed unless the vehicle or load is overdimension and the operating requirements for its category require the sign to be displayed (see section *C3.1 Specific operating requirements* above).

Alternative hazard markings on mobile cranes

Instead of displaying a hazard warning panel, the boom head of a mobile crane may be painted to delineate its excess front overhang. The painted area must be:

- on the front face and on each side of the boom head
- painted in either white, yellow or red, or in a combination of these colours, and
- cover at least 0.12 square metres.

Alternative hazard warnings on agricultural vehicles

Agricultural tractors with a width not exceeding 3.1 m may use an amber beacon in lieu of overdimension panels.

Overdimension attachments or implements on agricultural vehicles may be painted with high visibility paint on the parts that extend beyond the front overhang of the vehicle instead of marking those parts with hazard warning panels.

C3.3 Travel time and zone restrictions

Introduction	Vehicles operating under an overdimension permit are subject to travel restrictions on specific days of the year as well as at specific times of the day. Explicit restrictions also apply to travel in specified areas or 'zones'. This section summarises these restrictions.
General rule	As a general rule, overdimension vehicles must not travel at times when there is unusually heavy traffic or when travel is likely to cause significant delay to other road users.
Specified days when travel is prohibited	Category 3 or 4 overdimension vehicles must not travel: <ul style="list-style-type: none">• between 22 December and 5 January inclusive• on a public holiday (including provincial anniversary holidays)• on the day preceding a public holiday (or provincial anniversary day) after the start of the earliest applicable morning travel time restriction for that day of the week (see below), or• on a Saturday if that day is Anzac Day (25 April).
Meaning of 'city area'	Specific restrictions apply to city areas, which are defined in the VDAM Rule as the following urban areas: <ul style="list-style-type: none">• Auckland (between Albany and Drury)• Christchurch• Dunedin• Hamilton• Hastings• Invercargill• Napier• Nelson• New Plymouth• Palmerston North• Tauranga• Wellington (including all areas south of Mackays Crossing on SH 1 and Te Marua on SH 2)• Whanganui, and• Whangarei.

Continued on next page

C3.3 Travel time and zone restrictions continued

Category 3 travel time restrictions

Vehicles operating under an overdimension permit are prohibited from travelling at the times of day shown below.

Restrictions in city areas

Category 3 overdimension vehicles and loads are not allowed to travel in city areas at the following times of day:

Day of the week	AM	PM
Monday to Thursday	6:30 – 9:00	16:00 – 18:00
Friday		16:00 – 24:00
Saturday	0:00 – 5:00	12:00 – 24:00
Sunday		12:00 – 22:30

Restrictions outside city areas

Travel is not allowed at the following times of day:

Day of the week	AM	PM
Friday	N/A	18:00 – 24:00
Saturday	0:00 – 5:00	12:00 – 16:00 18:00 – 24:00
Sunday		12:00 – 16:00 18:00 – 22:30

Category 4 travel time restrictions

Prohibited travel times for category 4 overdimension loads and vehicles depend on location. Refer to the tables below in conjunction with the tables under *Zones for restricted travel* on the next page.

Zone 1

Day of the week	AM	PM
Monday to Thursday	6:30 – 22:30	
Friday	6:30 – 24:00	
Saturday	All travel prohibited	
Sunday	0:00 – 22:30	

Continued on next page

C3.3 Travel time and zone restrictions continued

Category 4 travel time restrictions (continued)

Zone 2

Day of the week	AM	PM
Monday to Thursday	6:30 – 19:00	
Friday	6:30 – 24:00	
Saturday	All travel prohibited	
Sunday	0:00 – 22:30	

Zone 3

Day of the week	AM	PM
Monday to Thursday	6:30 – 9:00	16:00 – 19:00
Friday		16:00 – 24:00
Saturday	All travel prohibited	
Sunday	0:00 – 22:30	

Zones for restricted travel

Category 4 overdimension vehicles and loads must not travel at the times specified above in the zones specified in the table below.

Zone 1

Area	Boundary
Northland (southern part), Auckland, Bay of Plenty, Waikato	Kamo and south of Kamo
	Maungatapere and east of Maungatapere
	Maungaturoto and east of Maungaturoto
	North of the intersection of SH 2 and SH 33 Paengaroa
	North of the intersection of SH 5 and SH 1 Tirau
	North of the intersection of SH 3 and SH 31 Otorohanga
Wellington	North to Mackays Crossing
	East to Te Marua including Te Marua

Continued on next page

C3.3 Travel time and zone restrictions continued

Zones for restricted travel (continued)

Zone 1 (continued)

Area	Boundary
Christchurch (state highways) Note: Travel on the boundary roads is subject to Zone 3 restrictions.	Northern boundary: Ashley River from the coast to Lehmans Road Western boundary: Lehmans Road Oxford Road Swannanoa Road Two Chain Road Thompsons Road Calders Road Sandy Knolls Road Hoskyns Road Southern boundary: SH 1 between Hoskyns and Burnham Roads Burnham Road Ellesmere Junction Road Edward Street Lincoln Tai Tapu Road SH 75 to Motukarara Gebbies Pass Road Governors Bay Teddington Road Main Road Governors Bay Road Park Terrace Brittan Terrace Simeon Quay SH 74 to Lyttelton Port

Continued on next page

C3.3 Travel time and zone restrictions continued

Zones for restricted travel
(continued)

Zone 2

Area	Boundary
Southern Waikato, Eastern Bay of Plenty	The intersection of SH 2 and SH 33 Paengaroa and south of the intersection of SH 2 and SH 33 Paengaroa
	The intersection of SH 5 and SH 1 Tirau and south of the intersection of SH 5 and SH 1 Tirau
	The intersection of SH 3 and SH 31 Otorohanga and south of the intersection of SH 3 and SH 31 Otorohanga
	Opotiki and west of Opotiki
	Te Whaiti and north of Te Whaiti
	North of the intersection of SH 5 and SH 1 at Taupo
	North of Motuoapa
	North of the intersection of SH 32 and SH 41 at Kuratau, but excluding SH 41 and SH 32 (Kuratau to Tokoroa)
	North of the intersection of SH 43 and SH 4 Taumarunui
North of Awakino	
South Island highways Note: Side roads off SH 1 are Zone 3.	SH 1 between Rolleston and Tinwald

Continued on next page

C3.3 Travel time and zone restrictions continued

Zones for restricted travel
(continued)

Zone 3	
Area	Boundary
Northland (northern part)	North of Kamo
	West of Maungatapere
	West of Maungaturoto
Southern North Island (excluding Wellington as defined in Zone 1)	South of Opotiki
	East of Opotiki
	South of Te Whaiti
	South and east of the intersection of SH 1 and SH 5 at Taupo
	Motuoapa and south of Motuoapa
	The intersection of SH 32 and SH 41 Kuratau including SH 41 and south of the intersection of SH 32 and SH 41
	SH 32 Kuratau to Tokoroa
	The intersection of SH 43 and SH 4 Taumarunui and south of the intersection of SH 43 and SH 4 Taumarunui
	Awakino and south of Awakino
	Mackays Crossing and north of Mackays Crossing
North of Te Marua	
South Island and Stewart Island (excluding Zone 1 and Zone 2 areas in Canterbury)	<p>The boundary roads of Christchurch Area Zone 1</p> <p>Note: Zone 3 includes:</p> <ul style="list-style-type: none"> Travel on those boundary roads SH 1 north from Ashley River SH 1 south of Tinwald SH 73 west of Sandy Knolls Road

Continued on next page

C3.3 Travel time and zone restrictions continued

Extension to travel time restriction

If there is an unforeseen delay in travel and a travel time restriction prohibits the completion of the journey, and there is no safe place to park the overdimension vehicle, you must notify the police and get their agreement to extend your travel time before you can continue the journey.

Such extensions are usually limited to 30 minutes, unless the police have agreed to a longer extension so that the vehicle can reach a place where it can park safely.

Exemption in an emergency

An overdimension vehicle may operate outside of the restricted travel times in an emergency to:

- repair or restore access to a road, railway or bridge
- supply or repair:
 - reticulated water, sewerage or natural gas, or
 - electricity lines
- attend an incident or accident
- stabilise land or reduce risk to people or property
- carry out emergency response work in a civil defence emergency, or
- clear snow (and the vehicle is a snow plough).

Valid authorisation required

In such situations, operators must show evidence that the work was required and authorised by:

- a road controlling authority or rail access provider
 - a territorial or local authority
 - a body or person providing electricity services or supplying reticulated natural gas, or
 - a civil defence controller, the police or a person acting under their authority.
-

C3.4 Notification requirements when operating under an overdimension permit

Notifying Waka Kotahi

If an overdimension vehicle or load exceeds 5 metres in width, the on-road supervisor must call Waka Kotahi at least 30 minutes before the start of the journey.

This notification requirement, including the 0800 number to call, is specified in the overdimension permit.

If the on-road supervisor is aware of the presence of another overdimension vehicle on the road, or if advised by Waka Kotahi or a local road controlling authority of this, they must manage the movement of the vehicle in relation to the other overdimension vehicle so as to avoid a hazardous situation.

Other notification requirements

Specific notification requirements may apply for certain routes for permitted overdimension loads. For example, operators must notify Waka Kotahi's Wellington Traffic Operations Centre 24 hours before travelling through the Wellington state highway network with an overdimension vehicle or load under permit.

Such specific requirements are stated in the overdimension permit.

Chapter C4: Piloting requirements

Overview

About this chapter

This chapter describes the piloting requirements for overdimension vehicles operating under a permit.

Audience

The intended audience for this chapter is operators or drivers of overdimension vehicles or loads so that they understand their obligations in regard to piloting when operating a vehicle under an overdimension permit.

This chapter is not intended to be a detailed reference for load pilots. Load pilots should refer to the following resources for information:

- Waka Kotahi's Load pilot driver code for Class 2 pilots, available at www.nzta.govt.nz/resources/load-pilot-driver-code
- industry organisations or MITO for Class 1 pilot training and certification, and
- the piloting provisions in the VDAM Rule.

In this chapter

This chapter contains the following sections:

Section	See page
C4.1 Responsibilities of operators in regard to piloting	C4-2
C4.2 Piloting requirements	C4-3
C4.3 Pilot warning sign specifications	C4-8
C4.4 Pilot vehicle lighting requirements	C4-11

C4.1 Responsibilities of operators in regard to piloting

Adequate number of pilots

An operator of an overdimension vehicle is responsible for providing an adequate number of pilot vehicles to give adequate warning of the overdimension movement to other traffic. For minimum piloting requirements by overdimension category, see section *C3.1 Specific operating requirements by category*.

Designation of on-road supervisor

If more than one pilot is required, either under the VDAM Rule or as a permit condition, operators must ensure that an on-road supervisor is designated.

An on-road supervisor is responsible for ensuring that:

- the driver and the pilots are briefed
 - the vehicle is operated in compliance with the VDAM Rule, and
 - the appropriate notifications are given – for details see sections:
 - *C2.6 General notification requirements*, and
 - *C3.4 Notification requirements when operating under an overdimension permit*.
-

Suitably qualified

The operator of an overdimension vehicle must ensure that persons acting as pilots or on-road supervisors are suitably qualified to meet their responsibilities under the VDAM Rule.

C4.2 Piloting requirements

Piloting compulsory with permit

All overdimension vehicles operating under a permit must be piloted by suitably qualified load pilots.

Pilot qualifications

A load pilot must have a certified load pilot licence from Waka Kotahi. While it is not a legal requirement that load pilots must hold a driver licence, they must meet legal requirements when driving on New Zealand roads, including holding a driver licence when driving a pilot vehicle.

Class 1 and Class 2 pilots

There are two classes of load pilot, depending on training and experience.

Class 2 load pilots

To obtain a Class 2 certified pilot licence, drivers must complete a Waka Kotahi approved course, which consists of learning the *Load pilot driver code* and passing a written test.

Class 1 load pilots

Class 1 pilots have additional training on technical and practical issues that may arise when managing traffic around movements of large and complex loads.

To qualify as a Class 1 load pilot, drivers must:

- either have had three years' experience as a Class 2 load pilot, OR
- have assisted a Class 1 pilot on at least 25 piloting jobs, AND
- successfully complete a Waka Kotahi approved course, which generally takes around nine months.

More information can be found at www.nzta.govt.nz/resources/load-pilot-driver-code.

Continued on next page

C4.2 Piloting requirements continued

Minimum number of pilots under a permit

The minimum number of pilots required for overdimension vehicles operating under a permit is shown below.

Overdimension category	Minimum number of pilot vehicles at all times ^{1,2}
Category 3 with rear overhang of 7m or less	<ul style="list-style-type: none"> • One Class 2 pilot, plus • One Class 1 pilot
Category 3 with rear overhang of more than 7m	<ul style="list-style-type: none"> • Two Class 2 pilots, plus • One Class 1 pilot
Category 4A	
Category 4B	Same as for category 4A unless specified otherwise in the permit
Overheight (if height is the only excess dimension)	See <i>Overheight permit piloting conditions</i> below

Important notes:

1. The operator must ensure that there is an adequate number of pilot vehicles to accompany the overdimension vehicle to give adequate warning to other traffic throughout the journey. This may require **additional pilots**.
2. A permit may specify that additional pilot vehicles must be provided for part or all of a journey.

Continued on next page

C4.2 Piloting requirements continued

Overheight permit piloting conditions

The piloting requirements under an overheight permit (if height is the only excess dimension) depend on the height, as follows:

Height (metres)	Permit condition
exceeding 5m up to and including 5.5m	A Class 2 load pilot must be used within the city areas named in 6.20 of the VDAM Rule. The pilot should be placed either at the rear or the front, depending on where the most risk to other traffic is.
exceeding 5.5m	A Class 2 load pilot must accompany the load anywhere in New Zealand. The pilot should be placed either at the rear or the front, depending on where the most risk to other traffic is.

See *Meaning of 'city area'* in section C3.3 above.

Rationale for overheight piloting requirements

A pilot can provide warning to oncoming or following traffic if a vehicle needs to deviate outside its lane or slow down within its lane to clear an overhead restriction.

The minimum height for overhead power cables and telecommunications wires is 5.5 metres. But within city limits, overheight movements may encounter lower overhead signs, traffic signals, trees or vegetation.

Loads higher than 5.5 metres are likely to have power line escorts during travel in addition to the load pilot required under a permit.

Note: Overhead power cables can droop over time and may not meet the 5.5-metre clearance standard. A permit does not absolve the operator from the responsibility to ensure that all overhead obstructions can be cleared safely.

Legislation reference: VDAM Rule section 3.1(4).

Convoys under permit

If two or more overdimension vehicles are travelling in convoy under a permit, the piloting requirements specified in the permit must be complied with.

All pilot vehicles and the overdimension vehicle travelling in convoy must be in radio communication with one another.

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C4.2 Piloting requirements continued

Pilot vehicles

Pilot vehicles must:

- have sufficient manoeuvrability and dynamic performance to carry out their duties
- be clearly identifiable as pilot vehicles, and
- not carry overdimension loads themselves or tow trailers with overdimension loads.

Class 1 pilot vehicles must be substantially white in colour.

Front pilot vehicle

Front pilot vehicles must not tow another vehicle. They must display the correct warning sign above their roofs as specified below.

A Class 1 pilot vehicle travelling at the front must not exceed a gross vehicle mass of 3500kg.

A Class 2 pilot vehicle travelling at the front must not exceed a gross vehicle mass of 7000kg.

Rear pilot vehicles

A rear pilot vehicle must be a rigid motor vehicle with no more than three axles, unless it tows a simple trailer with a maximum of two axles.

The rear pilot vehicle (or its trailer) must display the correct warning sign or variable message sign as specified below.

Vehicle markings

A Class 1 pilot vehicle must clearly display a Waka Kotahi approved pilot logo, device or marking.

A Class 2 pilot vehicle may display an approved logo, device or marking, but it is not compulsory.

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C4.2 Piloting requirements continued

Pilot warning signs	Pilot warning signs must comply with strict wording as well as size and colour specifications. For details see the next section <i>C4.3 Pilot warning sign specifications</i> .
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Pilot warning signs may be displayed only when the pilot vehicle is escorting an overdimension vehicle.

Variable message signs	Variable message signs may be used as an alternative to standard pilot warning signs on front or rear pilot vehicles, provided that Waka Kotahi has approved the alternative signs.
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Variable message signs must communicate the same messages and provide warnings to other road users that are as effective as or better than the standard pilot warning signs described in section *C4.3 Pilot warning sign specifications*.

Use of sound warning device	Pilots may also use a sound warning device if they consider it necessary to alert other road users to potential danger from an approaching overdimension vehicle or load.
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C4.3 Pilot warning sign specifications

Introduction

This section describes the specifications for warning signs to be displayed on pilot vehicles.

For warning signs and equipment on overdimension vehicles and loads, see section *C3.2 Hazard warning equipment* above.

Sign placement on pilot vehicle

The diagram below illustrates the correct placement of a warning sign on the roof of a front pilot vehicle.



Note: Pilot warning signs may be displayed only when escorting an overdimension vehicle or load.

Letter size and stroke width

The diagram below illustrates the specified letter size and stroke width for pilot warning signs.

Full specifications for the wording, size and colour of pilot warning signs are set out in the table on the next page.



Continued on next page

C4.3 Pilot warning sign specifications continued

Specifications The table below sets out the wording, size and colour specifications for pilot warning signs.

Legislation reference: VDAM Rule schedule 7, part 3, table 7.1.

Wording of warning sign	Letter size and stroke width (all upper case)	Size of sign	Colour of background		Colour of wording	Size and colour of border
			Day	Night	Day or night	Day or night
'DANGER SLOW DOWN'	200mm/28mm 150mm/21mm	1100mm x 600mm	Fluorescent yellow-green	Fluorescent yellow-green retro-reflective	Matt black	None
'WIDE LOAD FOLLOWS' or 'WIDE LOAD AHEAD'	150mm/21mm 150mm/21mm	1100mm x 520mm	Fluorescent yellow-green	Fluorescent yellow-green retro-reflective	Matt black	Black 12mm
'HOUSE FOLLOWS' or 'HOUSE AHEAD'	150mm/21mm 150mm/21mm	1100mm x 520mm	Fluorescent yellow-green	Fluorescent yellow-green retro-reflective	Matt black	Black 12mm
'LONG LOAD FOLLOWS' or 'LONG LOAD AHEAD'	150mm/21mm 150mm/21mm	1100mm x 520mm	Fluorescent yellow-green	Fluorescent yellow-green retro-reflective	Matt black	Black 12mm
'PILOT VEHICLE' To be displayed on the reverse side of all the above signs	150mm/21mm 150mm/21mm	1100mm x 520/600mm	Matt black		White during the day; White retro-reflective at night	White 12mm during the day; White retro-reflective at night

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C4.3 Pilot warning sign specifications continued

Order of display

The table below shows the order in which pilot signs must be displayed for various size loads.

Legislation reference: VDAM Rule schedule 7, part 3, table 7.2.

Pilot vehicle	Load width		
	Greater than 3.1m up to and including 5m	Greater than 5m	Less than 3.1m, but requires pilot because of excess rear overhang or because it is longer than 25m overall
First pilot	'WIDE LOAD FOLLOWS'	'DANGER SLOW DOWN'	'LONG LOAD FOLLOWS'
Second pilot (if required)	'WIDE LOAD FOLLOWS'	'WIDE LOAD FOLLOWS' or 'HOUSE FOLLOWS' as appropriate	'LONG LOAD FOLLOWS'
Rear pilot (if required)	'WIDE LOAD AHEAD'	'WIDE LOAD AHEAD' or 'HOUSE AHEAD' as appropriate	'LONG LOAD AHEAD'

C4.4 Pilot vehicle lighting requirements

Lighting during daylight

All pilot vehicles must have their headlamps on low beam when escorting an overdimension vehicle during daylight hours.

A Class 2 pilot vehicle must have one or two flashing or revolving amber beacons fitted to its roof or in a position where it is clearly visible to traffic from behind.

Illumination of roof signs

In darkness, roof-mounted warning signs on pilot vehicles must be illuminated with one or two lamps emitting a white light. The light from those lamps must not be directly visible from behind.

Width exceeding 5m

For pilot vehicles escorting overdimension vehicles that are wider than 5 metres, the lighting requirements are as follows:

- Each pilot vehicle must have fitted to its roof (or in a position where it is clearly visible to traffic approaching from the rear):
 - during daylight hours, two amber flashing or revolving beacons on the right, and two purple flashing or revolving beacons on the left, and
 - during the hours of darkness, one amber flashing or revolving beacon on the right, and two purple flashing or revolving beacons on the left.

Additional beacons may need to be fitted to the rear of pilot vehicles to ensure adequate warning to traffic approaching from the rear of the overdimension vehicle or load.

- In addition to the beacons above, the pilot vehicle that is furthest ahead must display a pair of alternately flashing auxiliary lamps that emit a purple light clearly visible to oncoming traffic.
- The pilot vehicle furthest ahead may also operate with a pair of alternately flashing headlamps on low beam during daylight hours.

Exceptions

If an enforcement officer pilots an overdimension vehicle or load, the vehicle must display blue and red flashing lights but is otherwise exempt from the lighting requirements above.

Use of sound warning device

Pilots may also use a sound warning device if they consider it necessary to alert other road users to the overdimension vehicle or load.

Chapter C5: How to apply for an overdimension permit

Overview

About this chapter

This chapter describes how to apply for an overdimension permit, including prerequisite tasks and documentation that may be required with an application.

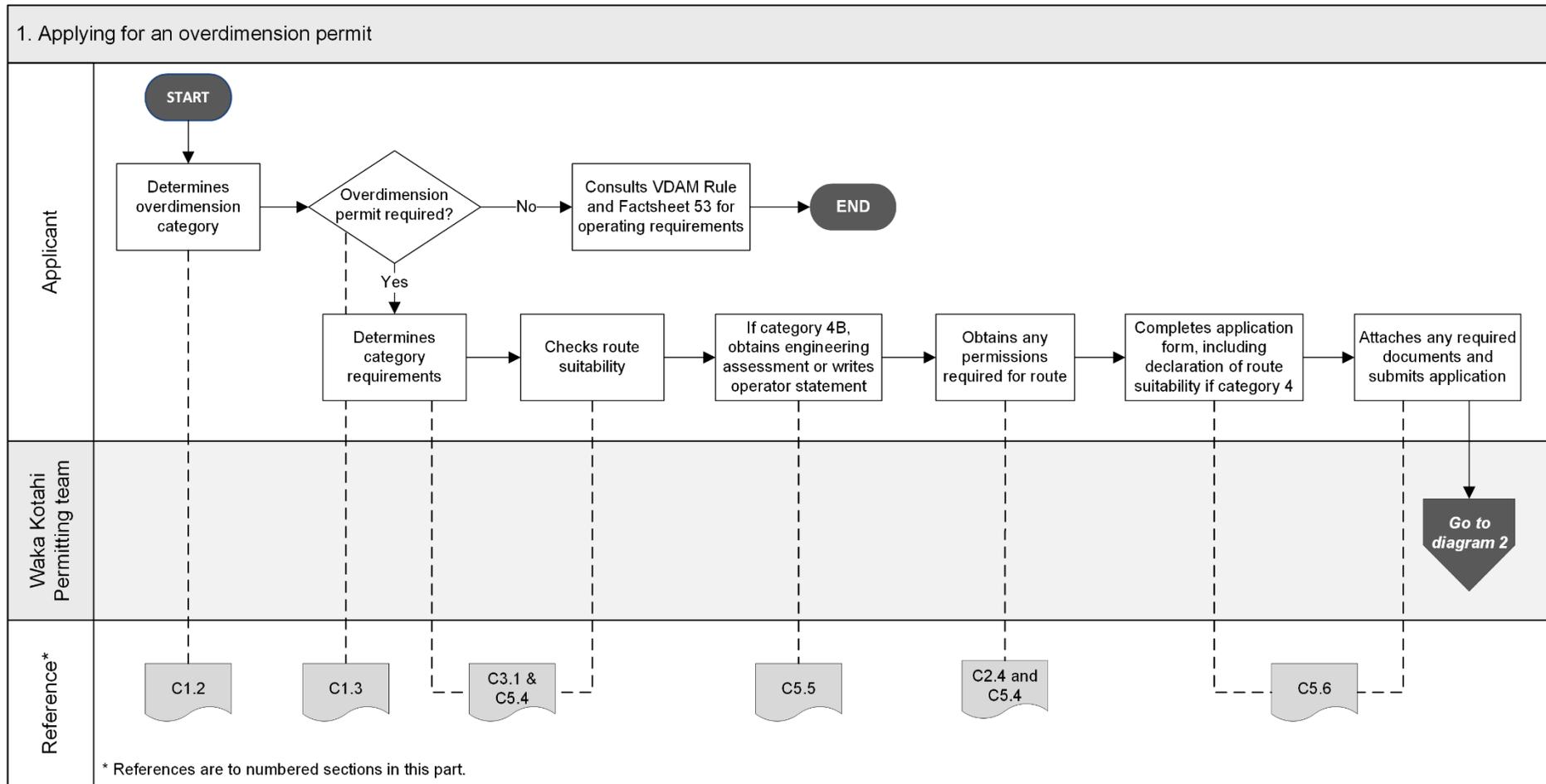
In this chapter

This chapter contains the following sections:

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C5.2 Do you need an overdimension permit?	C5-4
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C5.4 Prerequisites to completing the application form	C5-6
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C5.1 Overview diagrams of the overdimension permitting process

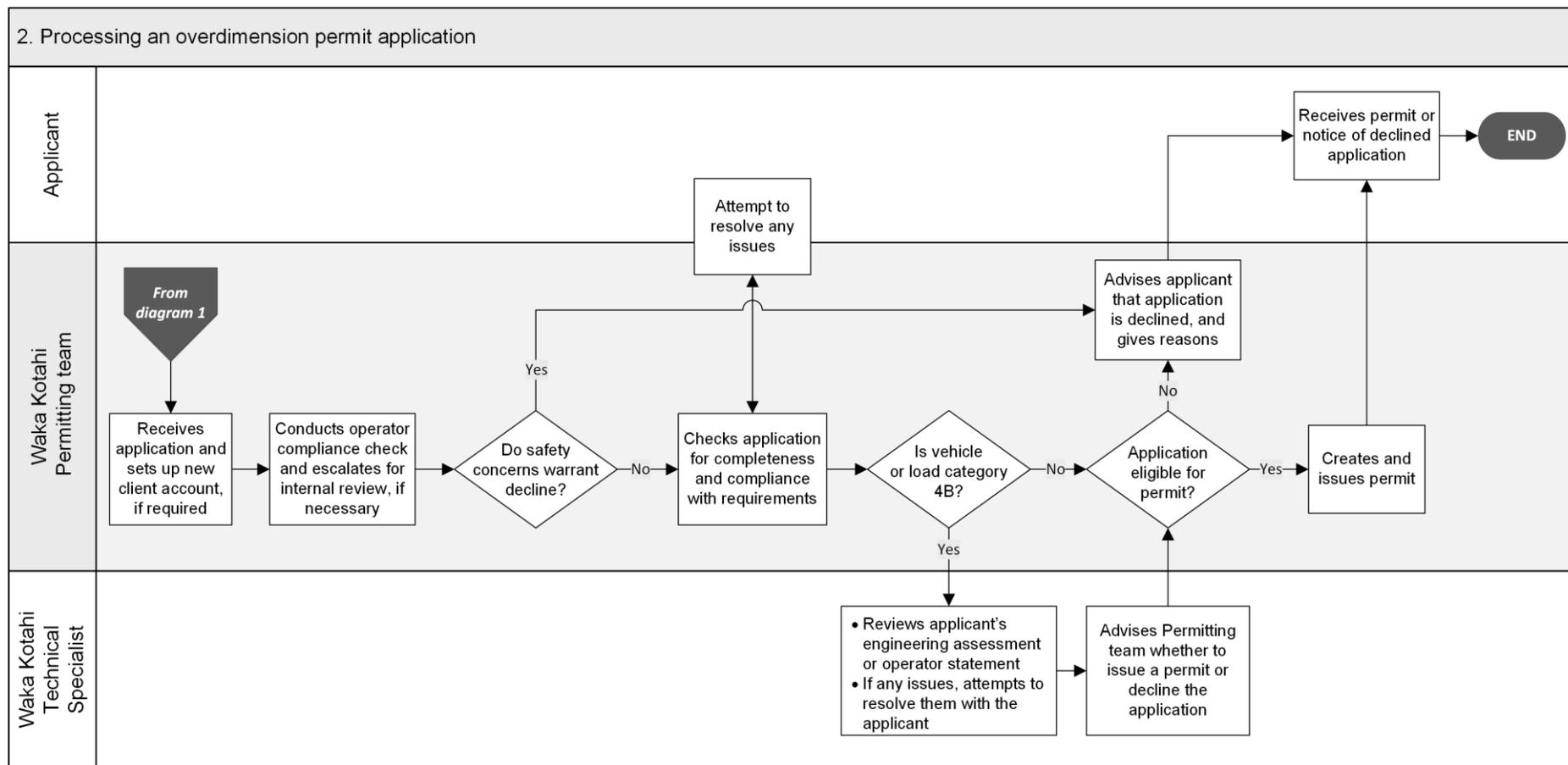
Diagram 1 The diagram below illustrates the steps involved when applying for an overdimension permit.



Continued on next page

C5.1 Overview diagrams of the overdimension permitting process continued

Diagram 2 The diagram below gives a high-level overview of the steps involved in processing an overdimension permit application.



C5.2 Do you need an overdimension permit?

When you need an overdimension permit

You need to apply for an overdimension permit if your vehicle or load:

- has a category 3 or category 4 width and forward distance combination (see section *C1.2 Overdimension categories*)
 - is higher than 5 metres
 - is longer than 25 metres
 - has a front or rear overhang exceeding 7 metres, or
 - is in any category (including categories 1 and 2) and is unable to comply with the operating requirements that apply to its category.
-

Criteria for issuing a permit

When processing an application for an overdimension permit, Waka Kotahi permitting staff may consider:

- the suitability of the route
- the potential for causing congestion and impeding other road users
- how the operator proposes to manage any risks, and
- any safety concerns arising from breaches of previous permits or an operator's traffic offending history (for details see the next section *C5.3 Operator compliance check*).

If permitting staff have any concerns about issuing an overdimension permit, they will work with the operator to resolve any issues. A permit application is rarely declined, and only if issues cannot be resolved.

Permit must be carried in vehicle

If you have been issued with an overdimension permit, you must carry it in a readable format in the vehicle for the period of travel covered by the permit.

You must produce the permit for inspection by a pilot or an enforcement officer.

C5.3 Operator compliance check

Legal basis When assessing an overdimension permit application, Waka Kotahi permitting staff may, among other criteria, consider an applicant's compliance history. Breaches of conditions on previously issued permits or an applicant's traffic offending history may therefore be investigated during the permitting process. For more details see section *A2.4 Operator compliance checks* in part A of this volume.

Review process If an investigation into an operator's compliance record raises any concerns, it undergoes an internal review process before Waka Kotahi decides whether to process the permit application or decline it on safety grounds.

Appeals Operators may appeal against a decision to decline a permit application. An appeal must be made to the District Court within 28 days.

C5.4 Prerequisites to completing the application form

Introduction	This section describes prerequisites to applying for an overdimension permit.
Overweight permit must be issued first	<p>If you also need an overweight permit for your overdimension load or vehicle, you should apply to Waka Kotahi (for state highways) or the relevant local road controlling authorities (for local roads) before you apply for an overdimension permit.</p> <p>Under the VDAM Rule, Waka Kotahi must not issue an overdimension permit if the vehicle or load would exceed design mass limits.</p>
Checking the route	<p>Your overdimension vehicle or load must not cause any damage on its route. You should therefore ensure your vehicle or load can safely fit along the route you wish to travel on by doing the following:</p> <ol style="list-style-type: none">1. Checking for designated overdimension routes<p>An overdimension vehicle must use a designated overdimension route if one is available.</p><p>Contact Waka Kotahi or relevant local road controlling authorities for information about designated overdimension routes.</p>2. Checking for specific route restrictions<p>If your route is in the Auckland region, Wellington or includes the Lyttelton Tunnel or toll roads, see section <i>C2.3 Specific route restrictions for overdimension vehicles</i>.</p>3. Conducting a route survey<p>You should satisfy yourself that there are no obstructions (for example, road signs, overhanging wires, trees or foliage) on the route. Waka Kotahi advises operators to drive along the route in daylight in a standard-sized vehicle to check for places that the overdimension vehicle may find difficult to pass.</p>4. Determining risk management measures<p>If you have a category 4 vehicle or load, you may need to determine measures to manage any risks along the route or parts of the route, and provide details of such measures on the application form – see <i>Category 4: Declaration of route suitability</i> below.</p>

Continued on next page

C5.4 Prerequisites to completing the application form continued

Obtaining permissions

Specific route permissions

You may need to get specific permissions if your route includes:

- the Auckland Harbour Bridge
- Auckland or Wellington motorways
- the Lyttelton Tunnel, or
- toll routes.

For details see section *C2.3 Specific route restrictions for overdimension vehicles*.

Permissions for excess height

If your vehicle is higher than 4.3 metres, you may need written permission from the asset owner to pass under overhead obstructions or electrical lines. For details see section *C2.5 Overheight requirements*.

Permissions for crossing railway level crossings

If your vehicle is longer than 25 metres and your route includes railway level crossings, you must obtain written permission from the access provider.

Some level crossings may also have height, weight or width restrictions, and a permit from KiwiRail or another access provider may be required to cross those safely.

For more detailed information about KiwiRail's requirements, refer to www.kiwirail.co.nz, or contact KiwiRail at crossingpermits@kiwirail.co.nz.

Category 4: Declaration of route suitability

If your vehicle or load is within category 4, you must declare on the permit application form that your route has been assessed and the load can be safely managed by:

- meeting the piloting requirements specified in the VDAM Rule, or
- having necessary risk management measures in place in addition to the requirements of the rule for particular sections of the route.

If you declare that you have risk management measures in place, you must provide details on the application form.

Note: The declaration of route suitability is a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.

Legislation reference: Land Transport Act 1998 section 44.

Continued on next page

C5.4 Prerequisites to completing the application form continued

**Category 4B:
Engineering
assessment or
operator
statement**

If your load dimensions are within category 4B, you must also provide an engineering assessment together with your permit application.

Legislation reference: VDAM Rule sections 6.51(3) and (4).

Depending on whether the load type is 'long and low' or 'general', Waka Kotahi may accept a written operator statement instead of an engineering assessment for some of the information required to be covered for a category 4B load.

For details see the next section *C5.5 Engineering assessment requirements for category 4B loads*.

C5.5 Engineering assessment requirements for category 4B loads

Introduction For category 4B overdimension loads, the VDAM Rule requires operators to submit an engineering assessment together with a permit application.

This section describes what must be covered in an engineering assessment and how the information must be provided to Waka Kotahi.

This section gives effect to the requirement in the VDAM Rule for the Director of Land Transport to determine and publish the details that must be assessed.

Legislation reference: VDAM Rule sections 6.51(3) and (4).

Where to get an engineering assessment Where the table below indicates that an engineering assessment is required, Waka Kotahi accepts an engineering assessment from a chartered professional engineer (CPEng).

Operator statement Where the table below indicates that an operator statement is acceptable instead of an engineering assessment, this must be made in writing (and signed) by a person in control. Waka Kotahi can refuse to accept an operator statement if it has evidence of previous issues or non-compliance. In that situation, Waka Kotahi may request an engineering assessment instead of an operator statement.

False statements may incur penalties

An operator statement submitted as part of a permit application is a formal confirmation of information known to the person providing it. False statements could be subject to prosecution and may incur penalties of up to \$10,000.

Legislation reference: Land Transport Act 1998 section 44.

'Long and low' or 'general' load type? Whether Waka Kotahi requires an engineering assessment or accepts an operator statement largely depends on the load type. The engineering assessment requirements table below distinguishes between two load types, as follows:

Load type	Description
L – Long and low	<ul style="list-style-type: none"> • No wider than 3.1 metres, and • No higher than 4.3 metres
G – General	All loads other than type L

Continued on next page

C5.5 Engineering assessment requirements for category 4B loads continued

One engineering assessment for repeat applications

For multiple permit applications for repeated overdimension movements, the applicant may provide a reference to an existing engineering assessment rather than supply a new analysis with each application.

This only applies to permit applications with:

- the same load, with **identical (or lesser) dimensions** to the load on the original application
- the same route, and
- the same start and end points.

Engineering assessment requirements

The table below describes the information that must be covered in an engineering assessment or, optionally, by a written statement from the operator as applicable.

Required information	Description	Required document
1. Verification of load origin, destination and route	<ul style="list-style-type: none"> • Verification of the origin and destination of the load • Route details, and • Distance from journey origin to destination. 	Load type L: Operator statement
		Load type G: Operator statement

Continued on next page

C5.5 Engineering assessment requirements for category 4B loads continued

Engineering assessment requirements (continued)

Required information	Description	Required document
2. Verification of maximum load dimensions	<p>Maximum dimensions</p> <p>The following maximum dimensions must be stated to the nearest 0.1 m:</p> <ul style="list-style-type: none"> • overall width • overall height, and • overall length. <p>Note: Overall width for a building includes bay/garden windows, door and window frames and any other protrusions, but does not include any temporary supports used to brace the eaves/soffits.</p> <p>These temporary supports must be at least 2m from the ground level while the trailer is in its operating height of between 1.0 and 1.2m.</p> <p>Reasons for dimensions</p> <p>The report must also provide the reason(s) for exceeding 50m in length, 6.5m in height or 11m in width, and why the load cannot be reduced to smaller dimensions.</p>	<p>Load type L:</p> <p>Operator statement</p>
		<p>Load type G:</p> <p>Engineering assessment</p>
3. Verification of route suitability	<p>Verification that the proposed route can be safely negotiated by the load, including:</p> <ul style="list-style-type: none"> • A brief description of how traffic will be managed at choke points (critical areas of road geometry). This may include working with local road controlling authorities to ensure the traffic management plan is acceptable. • Identification of any permanent structures needing removal. • Identification of any sections of critical road geometry where problems are likely to occur and may result in delays to other traffic. 	<p>Load type L or G:</p> <p>Engineering assessment OR Operator statement</p>

Continued on next page

C5.5 Engineering assessment requirements for category 4B loads continued

Engineering assessment requirements (continued)

Required information	Description	Required document
4. Hauling limitations	Load type G: Specification of the following limitations: <ul style="list-style-type: none"> • maximum haul speed (in km/h) • maximum allowable wind speed (three-second gust) that the load can be transported in (in km/h), and • maximum allowable tilt angle, which must be significantly lower than the tilt at which the load would become unstable, particularly in areas where transverse slopes are likely to be excessive or the trailer needs to be tilted to avoid permanent obstacles that cannot be removed. 	Load type G: Engineering assessment
	Load type L: Static roll threshold (SRT) rating for the load	Load type L: Engineering assessment
5. Verification of contingency plan	Evidence that the operator has a contingency plan in place, for example, to manage problems such as vehicle breakdown or the load getting stuck.	Load type L or G: Engineering assessment OR Operator statement

C5.6 Completing and submitting an application for an overdimension permit

Accessing the application form

The overdimension permit application form is accessible on Waka Kotahi's website at

www.nzta.govt.nz/commercial-driving/permits/overweight-permits/application-for-an-overdimension-permit/.

The application form may be completed and submitted online, or you can download a PDF version, complete it and email it to OPIA@nzta.govt.nz.

Tips for completing the application form

Transport service licence (TSL) number

If you provide freight, vehicle recovery and passenger transport services, you require a transport service licence (TSL) to operate.

You must provide your TSL number on the application form if you have one, even if the vehicle you are applying for is exempt and does not require a TSL to be operated. Vehicles for which no TSL is required include:

- mobile cranes
- mobile plant and machinery
- special purpose vehicles, and
- agricultural vehicles.

Plate numbers

You only need to provide the vehicle plate numbers on the application form if the permit is for an overdimension vehicle. If you are transporting an overdimension load on a standard vehicle, you do not need to provide the plate numbers on the form.

Route details

Before you complete the route details, ensure you have done a route check. If you have a category 4 vehicle or load, you may also need to determine risk mitigation measures to complete the declaration of route suitability on the application form. For details see section *C5.4 Prerequisites to completing the application form*.

Dimension measurements for certain vehicle configurations

Note that there are specific forward distance measurement requirements if your vehicle includes a manned steering jinker or a load-sharing trailer. For details see *Forward distance calculations* in section C1.2.

If an overdimension vehicle is operated with a manned steering jinker or a pole trailer, the rear overhang is measured between the centre of the rear turntable load support and the rearmost part of the load.

Continued on next page

C5.6 Completing and submitting an application for an overdimension permit continued

Electronic copies of required documents

If you need to submit required documents with your application, such as an engineering assessment or a written operator statement, ensure you have electronic copies of these documents. You must attach electronic copies to the online application form or to your email application.

Submitting the application

Before you click **Submit** or **Send**, do a final check to confirm that you:

- are satisfied that all information on the application form is complete and correct
- have completed the declaration of route suitability on the application form if you have a category 4 vehicle or load
- have attached any required documents, and
- have signed and dated the declaration at the end of the application form.

Waka Kotahi only processes complete permit applications and will return incomplete applications.

Confirmation email

If you have successfully submitted your application online or by email, you will receive a confirmation email.

Note: If you do not receive a confirmation email, Waka Kotahi will not have received your application.

Help

If you need help with applying for an overdimension permit, contact Waka Kotahi's Overdimension Permit Issuing Agency (OPIA) by:

- telephoning 0800 OVERSIZE (0800 683 774), or
 - emailing OPIA@nzta.govt.nz.
-

C5.7 Processing time and permit fee

Processing time

Waka Kotahi aims to process overdimension permit applications within three working days.

Overdimension permit fee

The fee for an overdimension permit is \$32.20 (including GST).
Applicants are invoiced to the address listed on the application form unless they have set up Waka Kotahi with a direct debit authority.

Vehicle dimensions and mass permitting manual (volume 1)

Part D

HPMV higher mass permits

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of heavy commercial vehicles. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to this manual, please refer to the 'Record of amendments' at the start of volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Revisions reflect legislation changes from the Land Transport (NZTA) Legislation Amendment Act 2020 and the Land Transport Rule: Omnibus Amendments 2020, plus a new pro-forma design approved for HPMV permits.</p> <p>Updated sections:</p> <p>D1.1 Definitions and general principles: Information added about the Director of Land Transport role, delegations of authority, and the terminology used in the manual.</p> <p>D1.3 General access mass limits: New mass limits for standard-tired tri-axle sets added.</p> <p>D2.2 Ten-axle B-train (B1243) added to the list of vehicle designs eligible for an HPMV permit, plus RUC information.</p>	1 May 2021
Amendment 4	<p>D3.11 Permit processing times revised. Due to increased volumes and the requirement for more in-depth operator compliance checks, the target time for processing HPMV higher mass permits has been extended to 20 days.</p>	1 February 2021
Amendment 2	<p>Updates reflect the following changes:</p> <ul style="list-style-type: none"> • Amendments to various land transport rules from the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2018, which took effect on 1 June 2019, and • New performance based standards (PBS) introduced by the Transport Agency in May 2019. <p>Updates also include minor clarifications and additional information. For example, maximum RUC weights have been added to the diagrams of vehicles eligible for HPMV higher mass permits.</p> <p>The following sections have been updated:</p> <p>D1.1 General principles: Clarification added that, unlike overweight permits, HPMV permits cannot specify speed, travel time or bridge crossing restrictions.</p> <p>D1.2 Axle weight flexibility (AWF): Requirements for general access AWF clarified.</p> <p>D1.3 Mass limits tables: Table layout changed to enable easier comparison of general access and HPMV mass limits and axle and tyre type specifications.</p>	1 June 2020

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Record of amendments in this part continued

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 2 (continued)	<p>D1.4 'H' sign: Reference to standard for retroreflective signs updated.</p> <p>D2.2 Eligible vehicles and maximum RUC weights: Road user charges (RUC) information added to diagrams of vehicles eligible for HPMV permits. Diagram of R12T23 added.</p> <p>D2.4 Vehicle attributes check: Two types of attributes check sheets explained.</p> <p>D3.5 Required documents with permit application: Note added that, if an overlength permit is also required, non pro-forma vehicle designs are only eligible for a permit in exceptional circumstances.</p> <p>D3.9 Declaration on the application form: Note added that false statements may incur penalties.</p>	1 June 2020

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Part D: HPMV higher mass permits

Introduction

About this part This part of the *Vehicle dimensions and mass permitting manual* provides guidance for transport operators who:

- operate a high productivity motor vehicle (HPMV), and
- require a higher mass permit to exceed general access gross mass or axle mass limits.

Audience The intended audience for this part is:

- transport operators who require an HPMV higher mass permit
- Waka Kotahi NZ Transport Agency staff and contractors involved in processing higher mass permit applications
- local road controlling authorities
- designers and manufacturers of vehicles who might operate under an HPMV higher mass permit, and
- enforcement agents such as the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.

Terminology and abbreviations Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, see *Part I: Definitions and glossary* in this volume of the manual.

Related information For general information about permits to exceed mass limits, refer to part A in this volume, specifically to sections:

- *A1.3 Permits for exceeding prescribed mass limits, and*
- *A1.4 Higher mass limits without a permit (45,000 or 46,000kg).*

Information on other HPMV permit types can be found in:

- *Part E: HPMV overlength permits, and*
- *Part F: HPMV 50MAX permits.*

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Chapter D1: General information about HPMV higher mass permits

Overview

About this chapter

This chapter explains when an HPMV higher mass permit is required. It also gives an overview of axle weight flexibility options with a higher mass permit.

The mass limits prescribed in the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule) can also be found in this chapter.

In this chapter

This chapter contains the following sections:

Section	See page
D1.1 Definitions and general principles about HPMV higher mass permits	D1-2
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D1.3 General access and HPMV permit mass limits tables	D1-7
D1.4 'H' sign requirements and specifications	D1-22

D1.1 Definitions and general principles about HPMV higher mass permits

What is an HPMV?	<p>A high productivity motor vehicle is a heavy vehicle or vehicle combination that is used for regular freight movements and is no wider or higher than standard vehicles but operates under a permit to exceed:</p> <ul style="list-style-type: none"> • a gross mass of 44,000kg and general access mass limits specified in the VDAM Rule, and/or • standard vehicle length limits.
Legal basis for HPMV permits and Director role	<p>HPMV permits are issued under section 5.9 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule).</p> <p>Under the VDAM rule, Waka Kotahi's Director of Land Transport is responsible for issuing HPMV permits in accordance with the requirements of the rule.</p> <p>The Director has delegated the authority to issue permits to Waka Kotahi's permitting staff and their contractors. References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be interpreted as references to the Director if the reference relates to a Director function under the VDAM Rule.</p>
Route specific	<p>HPMV higher mass permits are route specific, ie operators are permitted to travel only on the routes specified on the permit.</p>
'Higher mass' versus 'overweight' permits	<p>Higher mass permits are distinguished from 'overweight' permits, which are specifically for indivisible loads that exceed the general access mass limits prescribed in the VDAM Rule.</p> <p>HPMV higher mass permits are available for both divisible and indivisible loads.</p>
No speed or bridge restrictions	<p>Unlike overweight permits, HPMV permits cannot specify speed or travel time restrictions, or special bridge crossing requirements. This is because HPMVs are intended for regular freight movements and are meant to operate largely as standard vehicles.</p> <p>For further details, see section <i>A3.2 Permit conditions</i> in part A of this volume.</p>

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D1.1 Definitions and general principles about HPMV higher mass permits continued

Vehicles must be registered

A prerequisite for an HPMV higher mass permit is that all vehicle units applied for must be registered.

Vehicle identification numbers (VINs) are not accepted for higher mass permit applications.

'H' sign

Vehicles operating under an HPMV higher mass permit must display an 'H' sign on the front and rear of the vehicle – see section *D1.4 'H' sign requirements and specifications*.

45/46t without a permit

The VDAM Rule allows for gross mass limits above 44,000kg without a permit as follows:

- 45,000kg (45 tonnes) for 7-axle combinations with a minimum wheelbase of 16.8m, and
- 46,000kg (46 tonnes) for 8-axle combinations with a minimum wheelbase of 17.4m.

Eligible vehicles operating at these limits have general access on all local roads and state highways, except where restrictions are posted.

Legislation reference: VDAM Rule section 4.3(1 1) and schedule 3, part 2, table 2.2.

Permits for local roads

If part of the route you require is on local roads, you need a separate permit from the local road controlling authority (RCA), unless the local RCA has delegated authority to Waka Kotahi to include its roads on a Waka Kotahi permit.

If your route involves both state highways and local roads, apply for a permit through Waka Kotahi, and permit issuing officers (PIOs) will help you coordinate acquiring permits for the local roads included in your route.

If, on the other hand, the whole of your proposed route is on local roads, contact the relevant local RCAs directly and find out how to apply for the local road permit(s) that you need.

Continued on next page

D1.1 Definitions and general principles about HPMV higher mass permits continued

Overlength permit

An HPMV that exceeds standard mass limits as well as standard length requirements (generally if it is longer than 20 metres) needs an overlength permit in addition to a higher mass permit.

The higher mass permit and the overlength permit must both be carried in the vehicle and are viewed together as a single permit.

You can apply for both a higher mass permit and an overlength permit at the same time – see *Chapter D3: How to apply for an HPMV higher mass permit*.

D1.2 Axle weight flexibility

Why AWF?

Axle weight flexibility (AWF) gives operators of HPMVs more loading options while still ensuring the safety of road structures. It allows operators to manage loads that are difficult to distribute uniformly and precisely across all axles.

Axle weight flexibility reduces the risk of an operator receiving an infringement for a minor error in the accurate distribution of the load. Axle weight infringements account for a large proportion of all infringements issued.

Two types of AWF

When applying for an HPMV higher mass permit, operators can choose between two types of AWF:

- General access limits, or
- HPMV limits.

For guidance on which option to apply for, see section *D3.6 Determining axle weight flexibility type, total mass and individual axle masses*.

General access AWF requirements

These requirements apply to general access AWF:

- Individual axle masses and axle sets must not exceed the general access mass limits prescribed in the VDAM Rule schedule 3, part 1.
- Adjacent pairs of axle sets are limited to the general access mass limits prescribed in the VDAM Rule schedule 3, part 2.
- Groups of three or more axle sets are limited to the HPMV mass limits prescribed in the VDAM Rule schedule 3, part 4, and the total mass for the group must equal the sum of the individual axle weights applied for.
- The vehicle gross mass on the permit is restricted to the total mass the applicant has applied for, which must equal the sum of the individual axle masses applied for.

See *Example of general access AWF permit masses* in section D3.6.

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D1.2 Axle weight flexibility continued

HPMV AWF requirements

These requirements apply to HPMV AWF:

- Individual axle weights must not exceed the HPMV mass limits prescribed in the VDAM Rule schedule 3, part 3.
- Adjacent pairs of axle sets and groups of axle sets are limited to the HPMV mass limits prescribed in the VDAM Rule schedule 3, part 4.
- The vehicle gross mass on the permit is restricted to the total mass the applicant has applied for, which must equal the sum of the individual axle masses applied for.

See *Example of HPMV AWF permit masses* in section D3.6 below.

Permit limits may be reduced

The mass limits on your permit may be less than the maximum general access or HPMV mass limits. During the permitting process, permitting staff may need to reduce the maximum limits to accommodate weak structures on your chosen route.

Reduced gross mass

AWF increases the load effects of vehicles on pavements and structures. The higher the masses for individual axles, the greater the load effects, particularly on short-span bridges.

If a route has restricted bridges, AWF may therefore result in a reduction in permitted gross mass to offset the increased load effects. However, if a route is unrestricted, AWF may not result in any reduction in gross mass.

D1.3 General access and HPMV permit mass limits tables

Introduction

The tables in this section show the general access and the HPMV permit mass limits that the in the VDAM Rule.

The tables from the VDAM Rule are reproduced side by side in this section to enable easy comparison of the different mass limits for individual axles, axle sets and axle groups as well as of the different axle and tyre type specifications.

Not a one-for-one match

General access and HPMV permit mass limits are not a one-for-one match.

Axle and tyre type specifications often differ between general access and HPMV permit mass limits. Some specifications and mass limits that apply to general access do not have an equivalent HPMV specification and mass limit, and vice versa.

It is therefore important to note the precise axle and tyre type specifications that apply to different mass limits.

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

**Table 1:
Maximum
mass on
individual
axles**

This table shows the maximum general access and HPMV permit mass limits on individual axles according to tyre type. A set of two axles less than 1 metre from the centre of the first to the centre of the last axle is counted as one axle.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.1B (general access limits), and part 3, table 3.1 (HPMV limits).

GENERAL ACCESS		HPMV	
Type of axle	Mass limit	Type of axle	Mass limit
<i>Single standard tyres</i>	<i>kg</i>	<i>Single standard tyres</i>	<i>kg</i>
In a twin-steer axle set, or in a tandem axle set with a single large-tyred axle	5500	In a twin-steer axle set, or in a tandem axle set with a twin or single large-tyred axle	5500
In a tandem axle set with a twin-tyred axle:			
• in a passenger service vehicle	5800		
• in any other vehicle	5500		
In a tri-axle set	3000		
In any other axle set	6000	In any other axle set	6000
<i>Single large-tyred</i>	<i>kg</i>	<i>Single large-tyred</i>	<i>kg</i>
In a twin-steer axle set or a quad-axle set	5500	In a twin-steer axle set	5500
		In a quad-axle set	6000
In a tandem set with a single large-tyred axle or a single standard-tyred axle or in a tri-axle set	6600	In a tandem axle set with two single large-tyred axles or in a tandem axle set with a single standard-tyred axle or in a tri-axle set	6600
In any other axle set	7200	In any other axle set	7200

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 1: Maximum mass on individual axles (continued)

GENERAL ACCESS		HPMV	
Type of axle	Mass limit	Type of axle	Mass limit
<i>Single mega-tyred</i>		<i>Single mega-tyred</i>	
In a twin-steer axle set	5500	In a twin-steer axle set	5500
In a single-steer axle set	7200	In a single-steer axle set	7200
In a quad-axle set	6000	In a quad-axle set	6000
In a tri-axle set	7000	In a tri-axle set	7000
In any other axle set	7600	In any other axle set	7600
<i>Twin-tyred</i>		<i>Twin-tyred</i>	
In a quad-axle set	6000	In a quad-axle set	6000
In a tri-axle set	7000	In a tri-axle set	7000
In a tandem axle set with a single standard-tyred axle:			
• in a passenger service vehicle	8700		
• in any other vehicle	8200		
In any other axle set:			
• in a public transport service bus	9000		
• in any other vehicle	8200	In any other axle set	8800

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 1: Maximum mass on individual axles (continued)

GENERAL ACCESS		HPMV	
Type of axle	Mass limit	Type of axle	Mass limit
<i>Oscillating axle</i>	<i>kg</i>	<i>Oscillating axle</i>	
In any axle set	9500	In any axle set	9500

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 2:
Maximum sum
of axle mass on
two axles in a
tandem axle
set

The tables below show the maximum general access and HPMV permit sums of axle mass on two axles in a tandem axle set.

A tandem axle set consists of two axles that are at least 1 metre but no more than 2 metres from the centre of the first to the centre of the last axle.

The 2-metre maximum does not apply to twin-steer axle sets.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.2 (general access limits), and part 3, table 3.2 (HPMV limits).

GENERAL ACCESS	
Type of axles	Mass limit (kg)
Two single standard-tyred axles	11,000
<i>Two single large-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	13,000
<i>Two single mega-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	14,000

HPMV	
Type of axles	Mass limit (kg)
Two single standard-tyred axles	11,000
<i>Two single large-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	13,000
<i>Two single mega-tyred axles</i>	
In a twin-steer axle set	11,000
Not in a twin-steer axle set	14,000

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 2: Maximum sum of axle mass on two axles in a tandem axle set (continued)

GENERAL ACCESS		HPMV	
Type of axles	Mass limit	Type of axles	Mass limit
<i>Two twin-tyred axles</i>		<i>Two twin-tyred axles</i>	
Spaced less than 1.3m from the first axle to the last axle	14,500	Spaced less than 1.3m from the first axle to the last axle	15,000
Spaced 1.3m or more but less than 1.8m from the first axle to the last axle	15,000	Spaced 1.3m or more from the first axle to the last axle	16,000
Spaced 1.8m or more from the first axle to the last axle	15,500		
<i>Twin-tyred axle</i>		<i>Twin-tyred axle</i>	
For a passenger service vehicle:			
<ul style="list-style-type: none"> with a single standard-tyred axle and load share of 60/40, or with a single large-tyred axle or single mega-tyred axle and load share between 60/40 and 55/45 	14,500		
For any other vehicle:			
<ul style="list-style-type: none"> with a single large-tyred axle or single mega-tyred axle and load share of 60/40 with a single large-tyred axle or a single mega-tyred axle and load share of 55/45 	13,600	With a single large-tyred axle or a single mega-tyred axle and load share of 60/40	13,600
	14,500	With a single large-tyred axle or a single mega-tyred axle and load share of 55/45	14,500

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 2: Maximum sum of axle mass on two axles in a tandem axle set (continued)

GENERAL ACCESS		HPMV	
Type of axles	Mass limit	Type of axles	Mass limit
<i>Single standard-tyred axle</i>	<i>kg</i>	<i>Single standard-tyred axle</i>	<i>kg</i>
With an oscillating axle	13,000	With an oscillating axle	13,000
With a single large-tyred axle or a twin-tyred axle or a single mega-tyred axle	12,000	With a single large-tyred or a single mega-tyred axle	12,000
		With a twin-tyred axle	13,300
<i>Other combinations</i>	<i>kg</i>	<i>Two oscillating axles</i>	<i>kg</i>
Two oscillating axles	15,000	Spaced less than 1.3m from the first axle to the last axle	15,000
		Spaced 1.3m or more from the first axle to the last axle	16,000

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 3:
Maximum sum
of axle mass on
a tri-axle set

This table shows the maximum general access and HPMV permit sum of axle mass on a tri-axle set.

A tri-axle set consists of three axles where:

- the axles are spaced at least 2 metres (or 1.8 metres in the case of a single standard-tyred axle) but no more than 3 metres from the centre of the first to the centre of the last axle, and
- all axles contain an equal number of tyres.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.3 (general access limits), and part 3, table 3.3 (HPMV limits).

GENERAL ACCESS		HPMV	
Type of axles	Mass limit	Type of axles	Mass limit
<i>Three oscillating axles, three twin-tyred axles, three single large-tyred axles, or three single mega-tyred axles</i>	<i>kg</i>	<i>Three oscillating axles, three twin-tyred axles, three single large-tyred axles, or three single mega-tyred axles</i>	<i>kg</i>
Spaced 2m or more but less than 2.4m from the first axle to the last axle	16,000	Spaced 2m or more but less than 2.4m from the first axle to the last axle	16,000
Spaced 2.4m or more but less than 2.5m from the first axle to the last axle	17,500	Spaced 2.4m or more but less than 2.5m from the first axle to the last axle	18,000
Spaced 2.5m or more from the first axle to the last axle	18,000	Spaced 2.5m or more from the first axle to the last axle	19,000
<i>Three single standard-tyred axles</i>	<i>kg</i>		
Spaced 1.8m or more and less than 3m from the first axle to the last axle	8200		

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D1.3 General access and HPMV permit mass limits tables continued

Table 4:
Maximum sum of axle mass on a quad-axle set

This table shows the maximum general access and HPMV permit sum of axle mass on a quad-axle set.

A quad-axle set consists of four axles where:

- the axles are spaced at least 3.75 metres and no more than 4 metres from the centre of the first to the centre of the last axle
- all axles contain an equal number of tyres, and
- none of the axles is a single standard-tyred axle.

Legislation reference: VDAM Rule schedule 3, part 1, table 1.4 (general access limits), and part 3, table 3.4 (HPMV limits).

GENERAL ACCESS	
Type of axles	Mass limit
<i>Quad-axle set with...</i>	<i>kg</i>
Four twin-tyred axles	20,000
Four single large-tyred axles	
Four single mega-tyred axles	

HPMV	
Type of axles	Mass limit
<i>Quad-axle set with...</i>	<i>kg</i>
Twin-tyred axles	22,000
Single large-tyred axles	
Single mega-tyred axles	
Oscillating axles with at least one steering axle	

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 5:
Maximum sum of axle mass on any two or more axles not otherwise described

This table shows the maximum general access and HPMV permit sum of mass on any two or more axles that together do not constitute a single tandem axle set, a single tri-axle set or a single quad-axle set, where the distance from the centre of the first axle to the centre of the last axle is 1.0 metre or more but less than 1.8 metres (including maximum gross mass).

Legislation reference: VDAM Rule schedule 3, part 1, table 1.5 (general access limits), and part 3, table 3.5 (HPMV limits).

GENERAL ACCESS		HPMV	
Type of axles	Mass limit (kg)	Type of axles	Mass limit (kg)
Two single standard-tyred axles	11,000	Two single standard-tyred axles	11,000
Two single large-tyred axles	12,000	Two single large-tyred axles	12,000
		Two single mega-tyred axles	13,000
A single standard-tyred axle with a single large-tyred axle, single mega-tyred axle or a twin-tyred axle	12,000	A single standard-tyred axle with a single large-tyred axle, single mega-tyred axle or a twin-tyred axle	12,000
Any other two or more axles	14,500	Any other two or more axles	14,500

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

**Table 6:
Maximum total
mass limits**

This table shows the maximum sum of mass allowed for general access and under an HPMV higher mass permit on any two or more axles that together do not constitute a single tandem axle set, single tri-axle set or single quad-axle set, where the distance from the centre of the first axle to the centre of the last axle is 1.8 metres or more (including maximum gross mass).

Legislation reference: VDAM Rule schedule 3, part 2, table 2.1 (general access limits) and part 4 (HPMV limits).

GENERAL ACCESS		HPMV	
Distance from the centre of the first to the centre of the last axle	Mass limit (kg)	Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
1.8m but less than 2.5m	15,500	1.8m but less than 2.0m	15,500
		2.0m but less than 2.5m	16,000
2.5m but less than 3.0m	17,500	2.5m but less than 3.0m	17,500
3.0m but less than 3.3m	19,000	3.0m but less than 3.3m	19,000
3.3m but less than 3.6m	20,000	3.3m but less than 3.6m	20,000
3.6m but less than 4.0m	21,000	3.6m but less than 4.0m	21,000
4.0m but less than 4.4m	22,000	4.0m but less than 4.4m	22,000
4.4m but less than 4.7m	23,000	4.4m but less than 4.5m	23,000
		4.5m but less than 4.7m	23,500
4.7m but less than 5.1m	24,000	4.7m but less than 5.0m	24,000
5.1m but less than 5.4m	25,000	5.0m but less than 5.4m	25,000

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D1.3 General access and HPMV permit mass limits tables continued

Table 6: Maximum total mass limits (continued)

GENERAL ACCESS		HPMV	
Distance from the centre of the first to the centre of the last axle	Mass limit (kg)	Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
5.4m but less than 5.8m	26,000	5.4m but less than 5.5m	26,000
		5.5m but less than 5.8m	26,500
5.8m but less than 6.4m	27,000	5.8m but less than 6.0m	27,000
6.4m but less than 7.0m	28,000	6.0m but less than 6.5m	28,000
7.0m but less than 7.6m	29,000	6.5m but less than 7.0m	29,500
7.6m but less than 8.2m	30,000		
8.2m but less than 8.8m	31,000	7.0m but less than 7.5m	31,000
8.8m but less than 9.4m	32,000	7.5m but less than 8.0m	32,500
9.4m but less than 10.0m	33,000		
10.0m but less than 10.8m	34,000	8.0m but less than 8.5m	34,000
10.8m but less than 11.6m	35,000	8.5m but less than 9.0m	35,000
11.6m but less than 12.0m	36,000	9.0m but less than 9.5m	36,000
12.0m but less than 12.5m	37,000	9.5m but less than 10.0m	37,000
12.5m but less than 13.2m	38,000	10.0m but less than 10.5m	38,000
13.2m but less than 14.0m	39,000	10.5m but less than 11.0m	39,000

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D1.3 General access and HPMV permit mass limits tables continued

Table 6: Maximum total mass limits (continued)

GENERAL ACCESS		HPMV	
Distance from the centre of the first to the centre of the last axle	Mass limit (kg)	Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
14.0m but less than 14.8m	40,000	11.0m but less than 11.5m	40,000
14.8m but less than 15.2m	41,000	11.5m but less than 12.0m	41,000
15.2m but less than 15.6m	42,000	12.0m but less than 12.5m	42,000
15.6m but less than 16.0m	43,000	12.5m but less than 13.0m	43,000
16.0m or more	44,000	13.0m but less than 13.5m	44,000
Note: For 45/46t general access mass limits for heavy motor vehicles with at least seven axles and a minimum wheelbase of 16.8 metres, see Table 7 below.		13.5m but less than 14.0m	45,000
		14.0m but less than 14.5m	46,000
		14.5m but less than 15.0m	47,000
		15.0m but less than 15.5m	48,000
		15.5m but less than 16.0m	49,000
		16.0m but less than 16.5m	50,000
		16.5m but less than 17.0m	51,000
		17.0m but less than 17.5m	52,000
		17.5m but less than 18.0m	53,000

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

Table 6: Maximum total mass limits (continued)

GENERAL ACCESS	
Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
N/A	

HPMV	
Distance from the centre of the first to the centre of the last axle	Mass limit (kg)
18.0m but less than 18.5m	54,000
18.5m but less than 19.0m	55,000
19.0m but less than 19.5m	56,000
19.5m but less than 20.0m	57,000
20.0m but less than 20.5m	58,000
20.5m but less than 21.0m	59,000
21.0m but less than 21.5m	60,000
21.5m but less than 22.0m	61,000
22.0m or more ¹	62,000 or more ¹

Note:

1. For distances of more than 22 metres, the maximum allowed mass for a vehicle combination above 62,000kg increases by 1000kg for each 0.5 metre in distance.

Continued on next page

D1.3 General access and HPMV permit mass limits tables continued

**Table 7:
45/46t general
access mass
limits**

This table shows the maximum general access gross mass limits for heavy motor vehicles with at least seven axles and a minimum wheelbase of 16.8 metres.

Legislation reference: VDAM Rule schedule 3, part 2, table 2.2.

Axle requirements	Mass limit (kg)
<i>Distance from the centre of the first axle to the centre of the last axle:</i>	
16.8m or more, and a minimum of 7 axles	45,000
17.4m or more, and a minimum of 8 axles	46,000

D1.4 'H' sign requirements and specifications

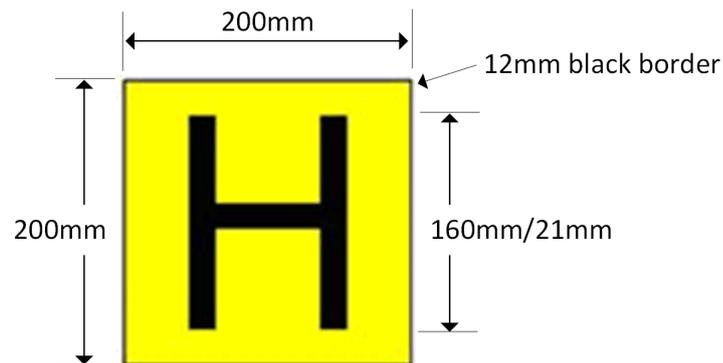
When an 'H' sign must be displayed

While operating under an HPMV permit that specifies particular roads on which the vehicle may operate, the vehicle must display the high-productivity motor vehicle sign (the 'H' sign).

A vehicle that does not have an HPMV permit must not display the 'H' sign.

'H' sign specifications

Required size



Specifications

The 'H' sign must comply with *AS/NZS 1906.1:2017, Retroreflective materials and devices for road traffic control purposes, Part 1: Retroreflective sheeting*. Existing or older signs must comply with a previous version of this standard.

Placement of 'H' sign

The 'H' sign must be mounted on the front and rear of an HPMV so that it can be clearly seen by other drivers.

It should not be displayed in the windscreen.

Signage when load is reduced

If an HPMV with a higher mass permit carries a load within general access mass limits, then the 'H' sign may be removed but does not have to be.

However, if the vehicle is a non pro-forma overlength vehicle and operates on a route-specific permit, the sign must remain in place at all times.

Not required to display 'H' sign

Overlength HPMVs on a general access permit are not required to display the 'H' sign unless they are also operating on a higher mass permit.

Chapter D2: Vehicle requirements for HPMV higher mass permits

Overview

About this chapter

This chapter describes eligible and ineligible vehicle designs for HPMV higher mass permits. It also explains vehicle stability requirements and how Waka Kotahi assesses vehicle safety as part of the higher mass permitting process.

In this chapter

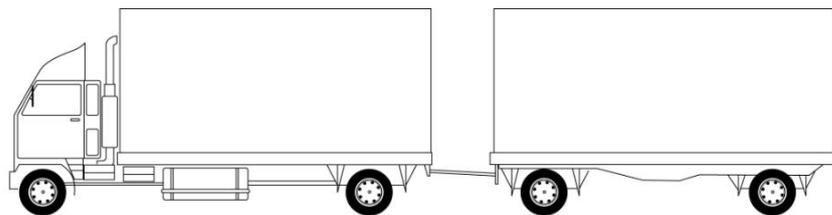
This chapter contains the following sections:

Section	See page
D2.1 Ineligible vehicle designs for HPMV higher mass permits	D2-2
D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights)	D2-4
D2.3 HPMV roll stability requirements	D2-11
D2.4 Vehicle attributes check	D2-12

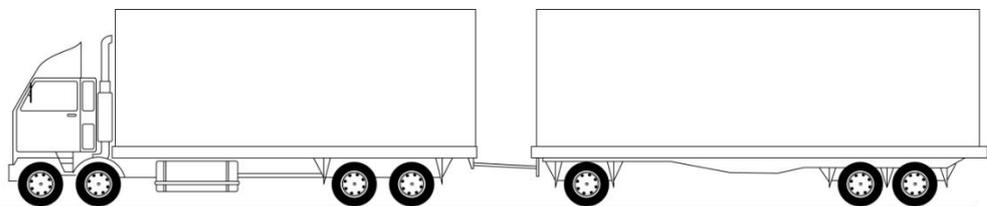
D2.1 Ineligible vehicle designs for HPMV higher mass permits

Introduction This section shows vehicle designs that are **ineligible** for HPMV higher mass permits.

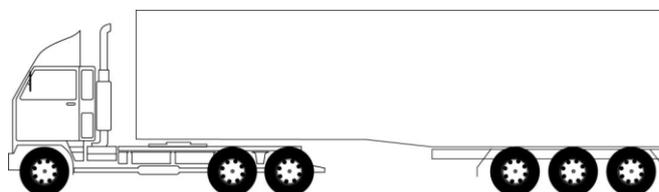
R11T11 ineligible This vehicle design (R11T11) is ineligible for an HPMV higher mass permit because it has an insufficient number of axles to exceed 44,000kg.



R22T12 ineligible This vehicle design (R22T12) is ineligible for an HPMV higher mass permit because it has an insufficient number of axles on the trailer.



A123 ineligible This vehicle design (A123) is ineligible for an HPMV because it has an insufficient number of axles to exceed 44,000kg.

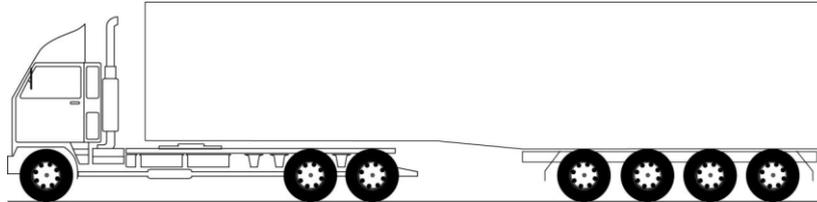


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D2.1 Ineligible vehicle designs for HPMV higher mass permits continued

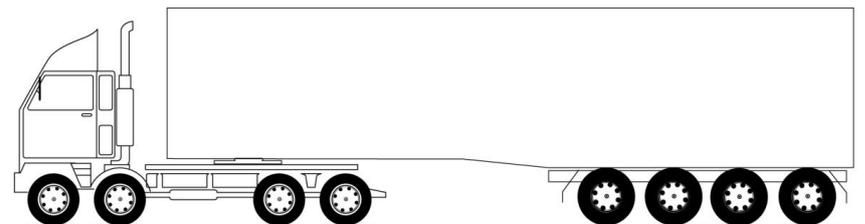
A124 may be ineligible

This vehicle design (A124) is ineligible for an HPMV higher mass permit if there are **two** steer axles in the quad set.



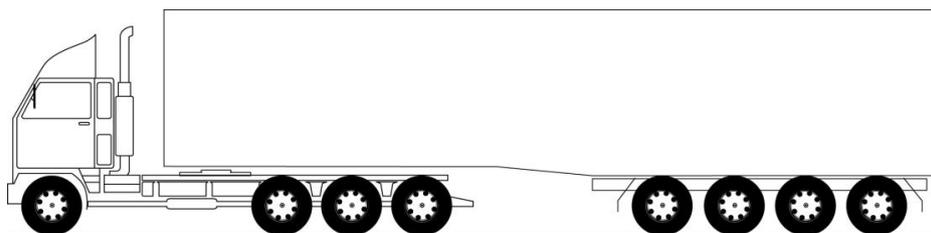
A224 may be ineligible

This vehicle design (A224) is ineligible for an HPMV higher mass permit if there are **two** steer axles in the quad set.



A134 may be ineligible

This vehicle design (A134) is ineligible for an HPMV higher mass permit if there are **two** steer axles in the quad set.



D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights)

Introduction This section shows the common designs for heavy vehicle combinations that are eligible for HPMV higher mass and/or non pro-forma overlength permits.

Note: Non pro-forma overlength designs have specific requirements and are only granted permits in exceptional circumstances. For details see *Part E: HPMV overlength permits* in this volume.

RUC information

The diagrams in this section also show the maximum road user charges (RUC) weight limits for H type RUC licences for the combinations shown.

Legislation references:

- Road User Charges Regulations 2012, schedule, part 1 and part 2, and
- Road User Charges Rates Regulations 2015, schedule 4.

Note: In addition to the rates specified in the regulations, Waka Kotahi as the RUC collector may assess vehicles for special rates under section 90A of the Road User Charges Act 2012.

Overlength and 50MAX pro-formas

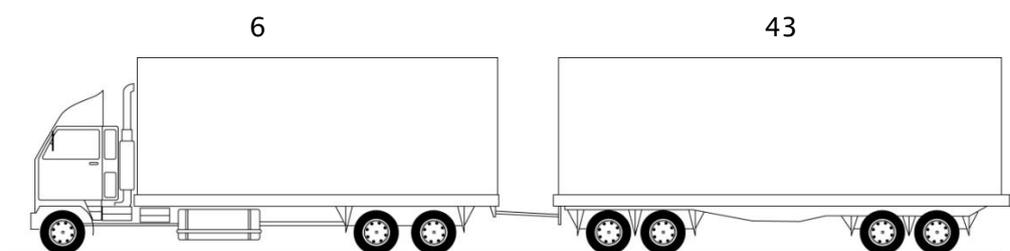
See also in this volume:

- section *E1.2 Pro-forma overlength designs*, and
- section *F1.1 HPMV 50MAX vehicle requirements*.

R12T22

7 axles

RUC vehicle type numbers:



Type H vehicle type number	Maximum RUC weight
H74	53,000kg

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D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights) continued

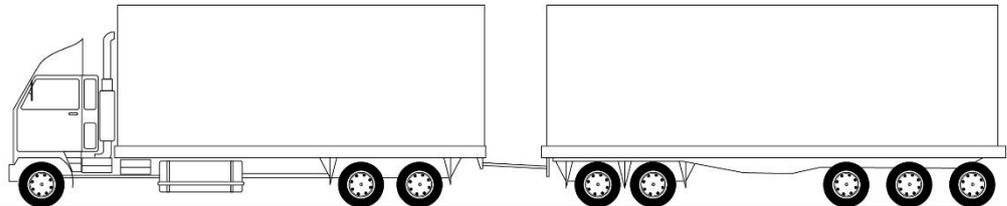
R12T23

8 axles

RUC vehicle type numbers:

6

951



Type H vehicle type number	Maximum RUC weight
H76	53,000kg

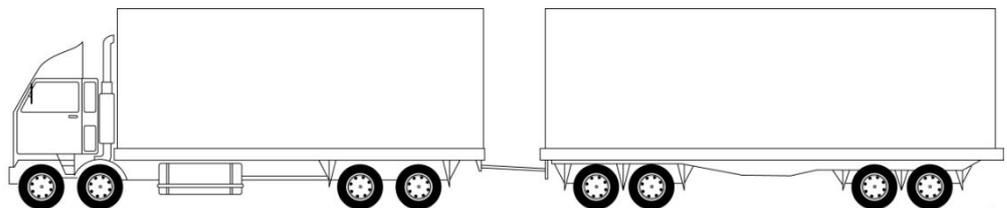
R22T22

8 axles

RUC vehicle type numbers:

14

43



Type H vehicle type number	Maximum RUC weight
H83	58,000kg

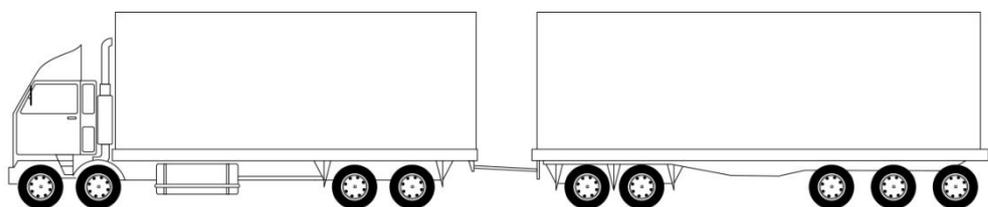
R22T23

9 axles

RUC vehicle type numbers:

14

951



Type H vehicle type number	Maximum RUC weight
H63	62,000kg

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D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights) continued

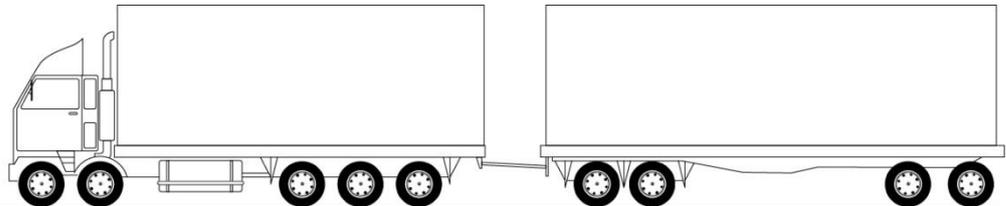
R23T22

9 axles

RUC vehicle type numbers:

19

43



Type H vehicle type number	Maximum RUC weight
H93	58,000kg

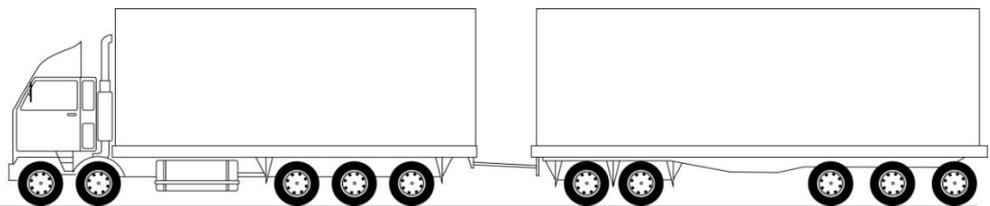
R23T23

10 axles

RUC vehicle type numbers:

19

951



Type H vehicle type number	Maximum RUC weight
H38	63,000kg

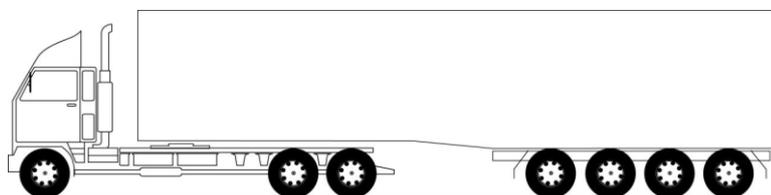
A124

7 axles

RUC vehicle type numbers:

6

43



Note: This design is eligible if there is only one steering axle in the quad set.

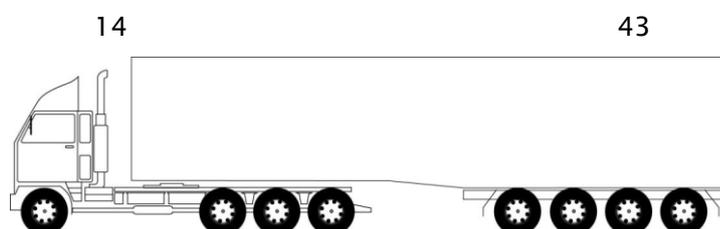
Type H vehicle type number	Maximum RUC weight
H74	53,000kg

Continued on next page

D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights) continued

A134

8 axles

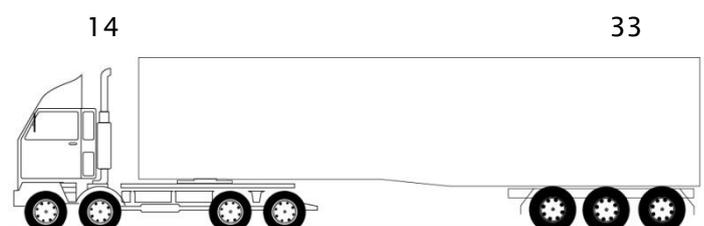
RUC vehicle type numbers:

Note: This design is eligible if there is only one steering axle in the quad set.

Type H vehicle type number	Maximum RUC weight
H83	58,000kg

A223

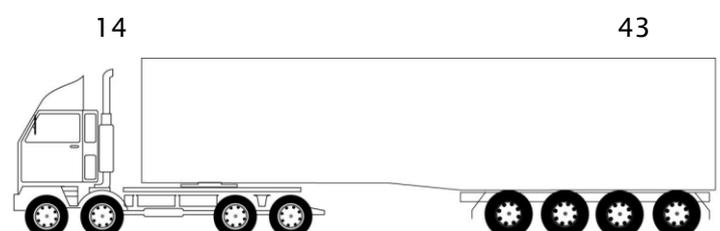
7 axles

RUC vehicle type numbers:

Type H vehicle type number	Maximum RUC weight
H77	48,000kg

A224

8 axles

RUC vehicle type numbers:

Note: This design is eligible if there is only one steering axle in the quad set.

Type H vehicle type number	Maximum RUC weight
H83	58,000kg

Continued on next page

D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights) continued

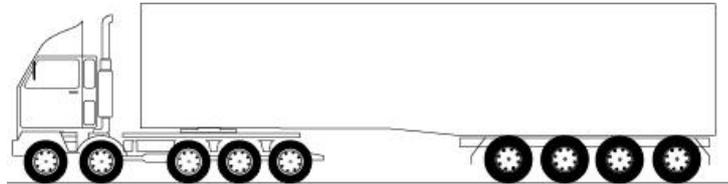
A234

9 axles

RUC vehicle type numbers:

19

43



Note: This design is eligible if there is only one steering axle in the quad set.

Type H vehicle type number	Maximum RUC weight
H93	58,000kg

B1222

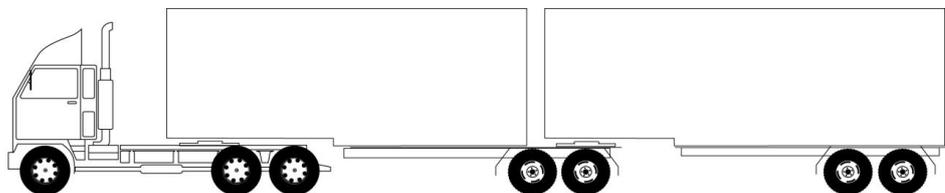
7 axles

RUC vehicle type numbers:

6

929

29



Type H vehicle type number	Maximum RUC weight
H79	52,000kg

B1232

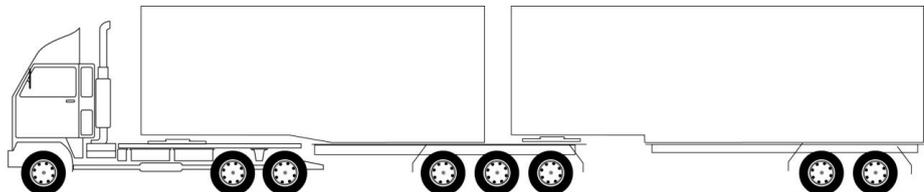
8 axles

RUC vehicle type numbers:

6

939

29



Type H vehicle type number	Maximum RUC weight
H85	53,000kg

Continued on next page

D2.2 Eligible vehicle designs for HPMV higher mass permits (and their maximum RUC weights) continued

B2232

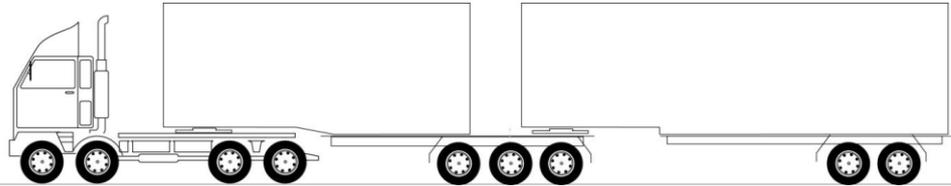
9 axles

RUC vehicle type numbers:

14

939

29



Type H vehicle type number	Maximum RUC weight
H35	58,000kg

B2233

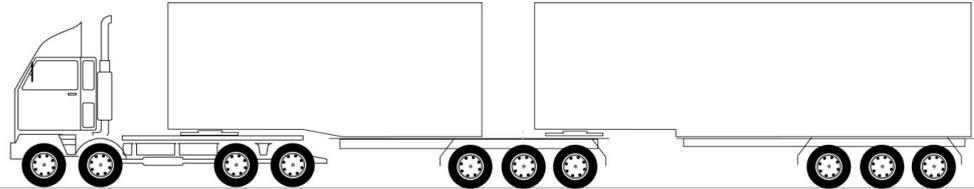
10 axles

RUC vehicle type numbers:

14

939

33



Type H vehicle type number	Maximum RUC weight
H13	62,000kg ¹

Note: The maximum RUC weight for this combination is 63,000kg, but a permit may only be issued for that weight in exceptional cases and depending on the specific vehicle configuration.

D2.3 HPMV roll stability requirements

Roll stability and SRT requirements

HPMV's must have roll stability control fitted and activated on trailers:

- fitted with EBS brakes, or
- first registered after 1 May 2010.

Trailers with activated roll stability control must meet a minimum static roll threshold (SRT) of 0.35g.

Trailers that do not have EBS and roll stability control may be eligible for HPMV permits if they have a minimum SRT of 0.4g and were first registered:

- before 1 May 2010, or
- before 1 April 2016 if they are log trailers carting round wood.

If the load is a closed container, the SRT compliance certificate must specify uniform density.

Mixed freight may be used only if the load is visible and the status can be verified.

SRT certification requirements

Trailers with a gross vehicle mass above 10 tonnes (class TD) and a body or load height of more than 2.8 metres must have an SRT compliance certificate. The SRT compliance certificate must be:

- carried together with the HPMV permit, and
 - shown to enforcement officers on request.
-

SRT certificate with permit application

An SRT compliance certificate must be submitted together with an HPMV permit application for any vehicle units with an attributes check sheet pre-dating version 5 or 5A (see the next section *D2.4 Vehicle attributes check*).

D2.4 Vehicle attributes check

Introduction This section describes how Waka Kotahi assesses vehicle safety for HPMV higher mass permits.

Road controlling authorities are required by the VDAM Rule to consider (among other factors) the safety of vehicles before issuing permits for exceeding mass limits.

Attributes check sheets As part of the permit application process, operators must have their vehicles assessed by an approved heavy vehicle specialist certifier (see *Approved certifiers* below).

Certifiers must complete and sign an 'attributes check sheet' issued by Waka Kotahi. There are two types of attributes check sheet:

- a 'High Productivity Motor Vehicle/ISO Permit Attributes Check Sheet', which must be completed for each unit of the vehicle combination applied for, or
- a '50MAX High Productivity Combination Motor Vehicle Attributes Check Sheet', which covers all vehicle units in a combination.

Certifiers must ensure they use the current and correct attributes check sheet template issued by Waka Kotahi.

Permit applicants must submit the attributes check sheets together with the application (see *Chapter D3: How to apply for an HPMV higher mass permit*).

What do certifiers assess?

When completing the HPMV attributes check sheet, certifiers assess whether a vehicle is technically capable of carrying a heavier load within its certifications or manufacturer's design limits. They check that a vehicle meets requirements for the following:

- gross vehicle mass
 - gross combination mass (where applicable)
 - brake capacity
 - draw bar rating and draw beam rating (where applicable)
 - 5th wheel mount rating (where applicable)
 - maximum front axle group mass (or rating at kingpin)
 - maximum rear axle group mass
 - maximum towed mass braked (where applicable)
-

Continued on next page

D2.4 Vehicle attributes check continued

What do certifiers assess?

(continued)

- tyre sizes and ratings
- roll stability control, and
- any modifications made to the truck frontal protection (or whether modifications are approved by the original truck manufacturer).

Note: The certifier signing the attributes check sheet is responsible for ensuring that all required information is included.

What does Waka Kotahi check?

When processing a permit application, Waka Kotahi checks that the mass applied for does not exceed the lowest of any of the vehicle's safe design limits, as stated on the vehicle's attributes check sheet.

Static roll threshold (SRT)

The attributes check also assesses whether the vehicle is required to have a static roll threshold (SRT) of 0.35g or 0.4g (trailers without EBS and roll stability control – see section *D2.3 HPMV roll stability requirements*).

If the load is a closed container, the SRT compliance certificate must specify uniform density.

Mixed freight may be used only if the load is visible and the status can be verified.

Dimensional accuracy

Dimensional accuracy is the operator's responsibility. You must therefore ensure you provide accurate vehicle dimensions on the permit application form.

Also see sections *D3.2 Applying for multiple identical vehicles* and *D3.3 How to measure axle spacings*.

Approved certifiers

The vehicle attributes checks must be carried out by a Waka Kotahi approved heavy vehicle specialist certifier. Approved certifiers are listed on Waka Kotahi's website at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers.

Chapter D3: How to apply for an HPMV higher mass permit

Overview

About this chapter

This chapter describes how to apply for an HPMV higher mass permit.

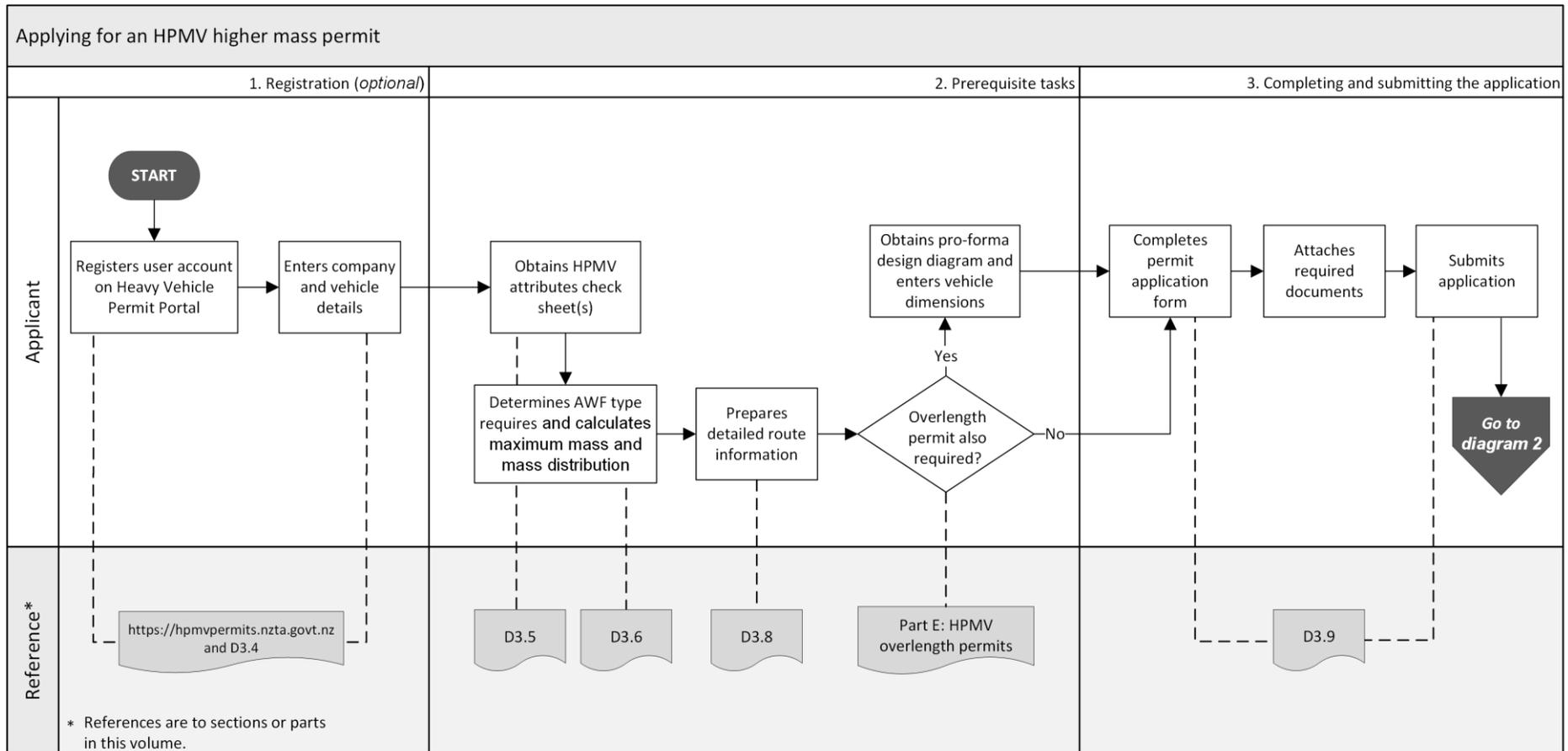
In this chapter

This chapter contains the following sections:

Section	See page
B8.2 Overview diagrams of the overweight permitting process	D3-2
D3.2 Applying for multiple identical vehicles	D3-4
D3.3 How to measure axle spacings	D3-5
D3.4 Before you apply for an HPMV higher mass permit	D3-7
D3.5 Obtaining required documents	D3-8
D3.6 Determining axle weight flexibility type, total mass and individual axle masses	D3-10
D3.7 Gathering required company and vehicle information	D3-16
D3.8 Preparing route information	D3-17
D3.9 Completing and submitting the application form	D3-18
D3.10 Renewing an HPMV higher mass permit	D3-20
D3.11 Permit fee and processing time	D3-22

D3.1 Overview diagrams of the higher mass permitting process

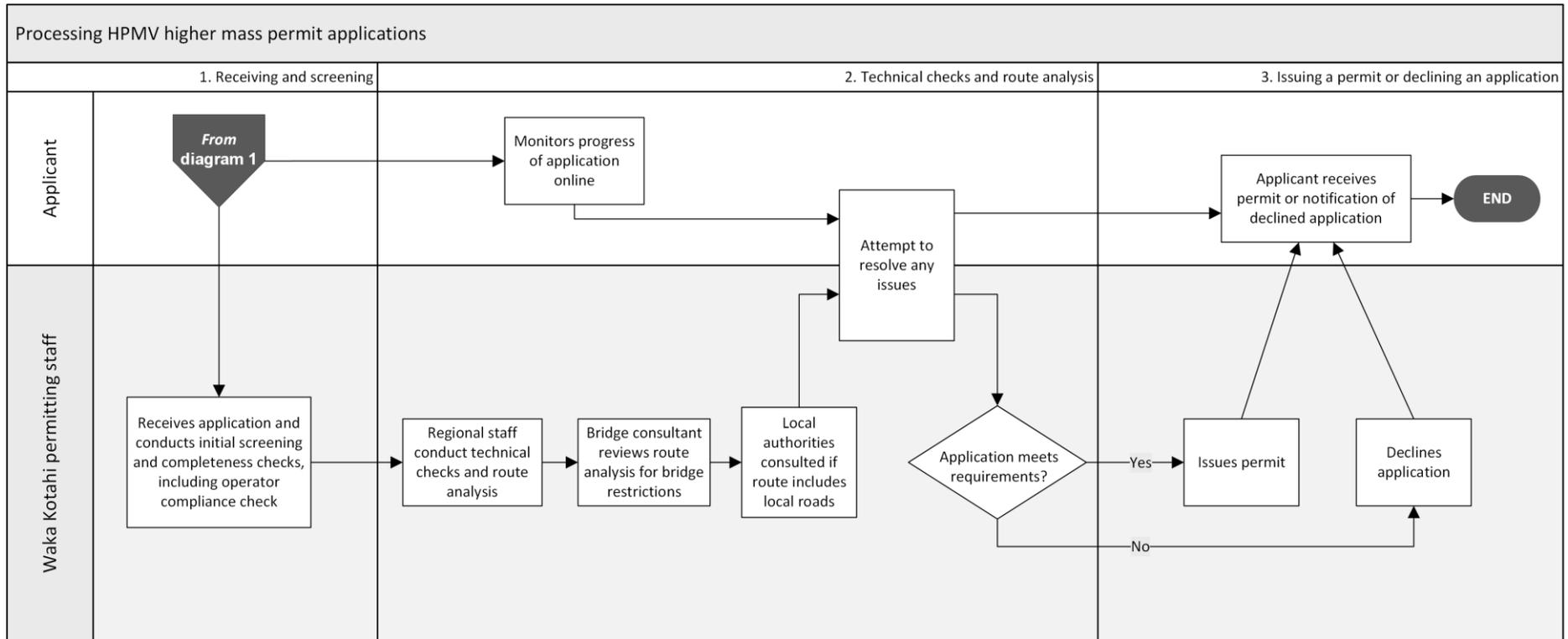
Diagram 1 This diagram shows the steps involved in applying for an HPMV higher mass permit.



Continued on next page

B8.2 Overview diagrams of the overweight permitting process continued

Diagram 2 This diagram gives a high level overview of how an HPMV higher mass permit application is processed.



D3.2 Applying for multiple identical vehicles

Introduction You may apply for an HPMV higher mass permit for multiple **identical** vehicles on the same application form. This section explains the requirements that must be met for vehicles to be considered identical.

Number of vehicles per application You can apply for one prime mover per application, and for up to five identical trailer units per application.

Requirements To be considered identical, units must meet the following requirements:

- Units must have:
 - identical axle spacings
 - the same tyre size, and
 - identical inner and outer wheel tracks.
- All units in the combination (including the prime mover) must have, for the load applied for, sufficient:
 - GVM
 - axle ratings
 - maximum towed mass (MTM), GCM, 5th wheel, tow ball ratings, etc, where applicable*, and
 - brake capacity.

* For example, if there is no 5th wheel fitted, there is no reason to have a 5th wheel rating.

Enforcement of identical vehicle criteria Axle spacings on a permit will be enforced by the Commercial Vehicle Safety Team (CVST) of the New Zealand Police. Breaches may result in fines. It is therefore important that you provide accurate measurements on your permit application. See section *D3.3 How to measure axle spacings*.

D3.3 How to measure axle spacings

Introduction This section describes how to measure the distances between axles (axle spacings) as recommended by Waka Kotahi and the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.

It is critical to correctly measure axle spacings when applying for a permit.

The axle spacings for a vehicle combination are recorded in permits for exceeding mass limits and enforced by the CVST.

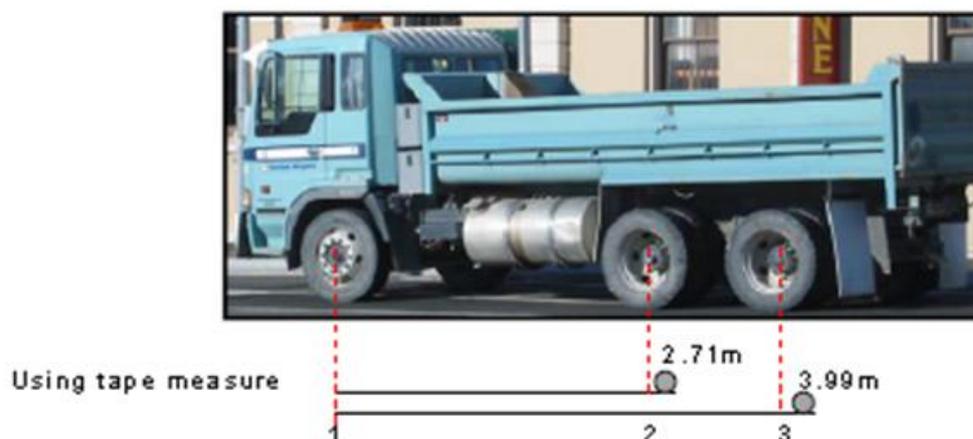
Measure laden vehicle Axle spacings may differ depending on the load of the vehicle because of changes in suspension travel.

Because enforcement scrutiny will be on the laden vehicle, Waka Kotahi advises operators to measure axle spacings on a fully laden vehicle.

Guidelines for measuring To ensure accurate measurements, follow these guidelines when measuring axle spacings:

1. Arrange to have two people available for measuring.
2. Measure from the centre of the first axle to the centre of the last axle.
3. Measure down the left-hand side of the vehicle or vehicle combination (this is standard CVST practice).
4. Record the distance measured in metres to **two** decimal places (eg 14.32m).
5. You may derive spacings by calculation, as explained in the example below.

Example This image illustrates the measured axle spacings of a three-axle truck.



Continued on next page

D3.3 How to measure axle spacings continued

Example

(continued)

Measured spacings

Distance from first to second axle: 2.71 m

Distance from first to third axle: 3.99 m

Derived spacing

With the above measured values, you can derive the spacing between the second and the third axle by calculation, as follows:

Distance from second to third axle: $3.99\text{m} - 2.71\text{m} = 1.28\text{m}$

D3.4 Before you apply for an HPMV higher mass permit

Introduction This section gives an overview of the information you need to gather and the tasks you need to do before you complete the application form for an HPMV higher mass permit.

Do you have an eligible vehicle? Not all heavy vehicle designs are eligible for an HPMV permit. For eligible designs and other vehicle requirements, see *Chapter D2: Vehicle requirements for HPMV higher mass permits*.

Registering on the permit portal It is not mandatory to register a user account on Waka Kotahi's 'Heavy Vehicle Permit Portal' to apply for HPMV permits. But if you regularly need permits, then registration on the portal will streamline the application process and save you time.

As a registered user, you can:

- reuse company and vehicle information
- complete applications in stages and save drafts
- monitor the progress of your applications, and
- look up previous applications.

For help with using the permit portal, refer to the portal user guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

Prerequisite tasks before you apply It is advisable to have all required information and documents at hand when completing the application form. Unless you are a registered user (see above), you will not be able to save drafts of your application if you have missing information.

It is therefore recommended you complete the following prerequisite tasks:

1. Obtain the required documents.
2. Determine the axle weight flexibility (AWF) type, total mass and individual axle masses to apply for.
3. Gather the required company and vehicle information.
4. Prepare route information.

These tasks are described in more detail in the following sections.

D3.5 Obtaining required documents

Required documentation

The following documents are required with an HPMV higher mass permit application:

1. an HPMV attributes check sheet **for each vehicle unit**, or a 50MAX combination attributes check sheet
 2. Electronic copies of SRT compliance certificates (if required)
 3. A pro-forma design diagram for your vehicle if you are also applying for an overlength permit.
-

1. Obtaining HPMV attributes check sheets

You must attach a separate HPMV attributes check sheet for each vehicle unit with your application.

A 50MAX combination attributes check sheet is also acceptable.

Where to get HPMV attributes check sheets

You can obtain attributes check sheets from Waka Kotahi approved heavy vehicle specialist certifiers. The sheets must be completed and signed by a specialist certifier to demonstrate that all vehicle units meet safety requirements.

A list of Waka Kotahi approved heavy vehicle specialist certifiers can be found at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers/.

For details on what certifiers assess, see section *D2.4 Vehicle attributes check*.

2. Obtaining electronic copies of SRT compliance certificates

If you are using the 'High Productivity Motor Vehicle/ISO Permit' attributes check sheets for individual vehicle units with your permit application, refer to the version number on the attributes check sheets.

If the version is older than version 5 or 5A, you must also submit electronic copies of the SRT compliance certificates for the trailer(s) with your HPMV permit application in addition to the attributes check sheets.

This is required because older attributes check sheets do not contain SRT information.

Continued on next page

D3.5 Obtaining required documents continued

3. Obtaining a pro-forma design diagram

You generally need an HPMV overlength permit as well as a higher mass permit if your vehicle is longer than 20 metres.

You can apply for the overlength permit at the same time as applying for the higher mass permit.

If you are also applying for an overlength permit, you must attach a diagram of the relevant overlength pro-forma design with the dimensions of your vehicle to your application.

Overlength pro-forma vehicle design diagrams can be downloaded from www.nzta.govt.nz/commercial-driving/high-productivity/proforma-designs-for-high-productivity-motor-vehicles.

Note: Overlength vehicles that do not conform to an approved pro-forma design are only eligible for a permit in exceptional circumstances and are assessed on a case-by-case basis. For details see section *Part E: HPMV overlength permits* in this volume.

D3.6 Determining axle weight flexibility type, total mass and individual axle masses

Introduction

This section describes what to consider when:

- determining which axle weight flexibility (AWF) option to choose, and
- calculating the total mass and individual axle masses to apply for.

Two AWF options

When applying for an HPMV higher mass permit, operators must choose between two options of axle weight flexibility (AWF):

- general access mass limits, or
- HPMV permit mass limits.

Refer to this table for guidance on which AWF option to choose:

If...	Then you should apply for...
<ul style="list-style-type: none"> • your load can be distributed relatively accurately, and • you want to maximise gross mass 	general access AWF
<ul style="list-style-type: none"> • you need maximum loading flexibility, and/or • there are no restricted bridges on your route (which may reduce the gross mass you wish to carry) 	HPMV AWF

Note: Axle weight flexibility is not available for the first axle set of the prime mover.

Determining total mass and axle masses

On the application form for an HPMV higher mass permit, you must enter the total gross mass you wish to apply for as well as the actual operational weights on individual axles.

The individual axle masses you enter on the application form must add up to the total gross mass you apply for.

Note: The mass limits on the permit for groups of three or more axle sets will also be limited to the sum of the application weights for the individual axles in the group.

Continued on next page

D3.6 Determining axle weight flexibility type, total mass and individual axle masses continued

Determining total mass and axle masses (continued)

Refer to the table below for the applicable mass limits depending on the AWF option you select.

Also see the examples of application and permit masses on the following pages.

AWF option	Applies to...	Applicable limits in VDAM Rule schedule 3	Or see section...
General access	<ul style="list-style-type: none"> Individual axles Axle sets Pairs of axle sets 	Parts 1 and 2 (General access limits)	<i>D1.3 General access and HPMV permit mass limits tables</i> Tables 1 to 5 (General access limits)
	<ul style="list-style-type: none"> Groups of 3 or more axle sets 	Part 4 (HPMV limits)	<i>D1.3 General access and HPMV permit mass limits tables</i> Table 6 (HPMV limits)
HPMV	<ul style="list-style-type: none"> Individual axles Axle sets Groups of axle sets 	Parts 3 and 4 (HPMV limits)	<i>D1.3 General access and HPMV permit mass limits tables</i> Tables 1 to 6 (HPMV limits)

Permit versus application masses

With the exception of the first axle set on the prime mover, the individual axle mass limits on the permit will be higher than the operational mass limits applied for to provide loading flexibility.

However, the total gross mass on the permit may be less than the mass applied for if there are restricted bridges on the route (see *Reduced gross mass* in section D1.2).

The permit issuing officer will generally contact the applicant and discuss options to find the most suitable solution before issuing the permit.

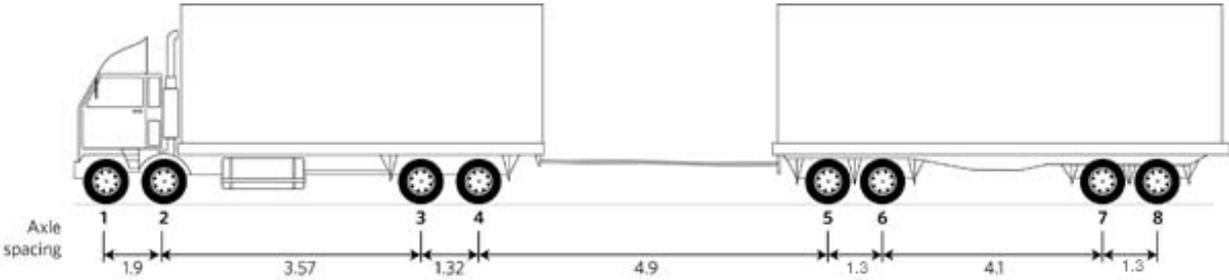
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D3.6 Determining axle weight flexibility type, total mass and individual axle masses continued

Examples

The examples on the following pages illustrate the difference in loading flexibility between general access AWF or HPMV AWF on an HPMV higher mass permit application.

The examples are based on an R22T22 with the following axle spacings:



Continued on next page

D3.6 Determining axle weight flexibility type, total mass and individual axle masses continued

Masses applied for

The example below shows individual axle masses on an HPMV higher mass permit application.

The individual axle masses applied for are operational weights. They must add up to the total mass applied for, which is 53,000kg in this example.

Mass applied for on prime mover

Steering	#	Axle*	Axle Set*	Axle Type*	Tyre Size*	Suspension Type*	Track Outer (m)*	Mass (kg)*	Spacing from prev (m)*
<input checked="" type="checkbox"/>	1		(IN) Individual	(S) Single Tyred Axle	Standarc	(L) Leaf Spring	2.04	5500.00	(m)
<input checked="" type="checkbox"/>	2		(IN) Individual	(T) Twin Tyred Axle	Standarc	(L) Leaf Spring	2.04	5500.00	1.90
<input type="checkbox"/>	3		(IN) Individual	(T) Twin Tyred Axle	Standarc	(AD) Air Bag - Drive Ax	1.86	7500.00	3.57
<input type="checkbox"/>	4		(IN) Individual	(T) Twin Tyred Axle	Standarc	(AD) Air Bag - Drive Ax	1.86	7500.00	1.32

Mass applied for on trailer

Steering	#	Axle*	Axle Set*	Axle Type*	Tyre Size*	Suspension Type*	Track Outer (m)*	Mass (kg)*	Spacing from prev (m)*
<input type="checkbox"/>	5		(T) Tandem	(T) Twin Tyred Axle	Standarc	(L) Leaf Spring	1.88	6750.00	5.14
<input type="checkbox"/>	6		(T) Tandem	(T) Twin Tyred Axle	Standarc	(L) Leaf Spring	1.88	6750.00	1.27
<input type="checkbox"/>	7		(T) Tandem	(T) Twin Tyred Axle	Standarc	(L) Leaf Spring	1.88	6750.00	3.60
<input type="checkbox"/>	8		(T) Tandem	(T) Twin Tyred Axle	Standarc	(L) Leaf Spring	1.88	6750.00	1.27

Continued on next page

D3.6 Determining axle weight flexibility type, total mass and individual axle masses

continued

Example of general access AWF permit masses

The example below shows the axle masses on the permit for the above application if the applicant has selected the general access AWF option.

The maximum permitted gross mass is 53,000kg.

Note: The gross mass on the permit may be less than the mass applied for if there are restricted bridges on the route.

Example of general access AWF permit mass limits								
Note: Permitted gross mass is 53,000kg								
Axle number	1	2	3	4	5	6	7	8
Axle type	S	T	T	T	T	T	T	T
Individual Axle Mass Limit (kg)	5500	5500	8200	8200	8200	8200	8200	8200
Axle Set Mass Limit (kg)	11,000		15,000		15,000		15,000	
Axle Group Mass Limit (kg)	28,000 over axles 1 - 4 (prime mover)				28,000 over axles 5 - 8 (trailer)			
Axle Group Mass Limit (kg)			29,000 over axles 3 - 6					
Axle Group Mass Limit (kg)			42,000 over axles 3 - 8 (sum of application masses and within HPMV mass limit)					
Spacing from previous axle (m)	0.00	1.90	3.57	1.32	4.90	1.30	4.10	1.30
Tyre Size	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard

General access mass limits

HPMV mass limit on group of 3 or more axle sets

* S=Single tyred axle, T=Twin tyred axle

Continued on next page

D3.6 Determining axle weight flexibility type, total mass and individual axle masses

continued

Example of HPMV AWF permit masses

The example below shows the axle masses on the permit for the above application if the applicant has selected the HPMV AWF option. Note the higher individual and axle set mass limits, which provide a greater degree of loading flexibility.

The maximum permitted gross mass is 53,000kg.

Note: The total gross mass on the permit may be less than the mass applied for if there are restricted bridges on the route.

Example of HPMV AWF permit mass limits								
Note: Permitted gross mass is 53,000kg								
Axle number	1	2	3	4	5	6	7	8
Axle type	S	T	T	T	T	T	T	T
Individual Axle Mass Limit (kg)	5500	5500	8800	8800	8800	8800	8800	8800
Axle Set Mass Limit (kg)	11,000		16,000		16,000		16,000	
Axle Group Mass Limit (kg)	28,000 over axles 1 – 4 (prime mover)				28,000 over axles 5 – 8 (trailer)			
Axle Group Mass Limit (kg)			29,000 over axles 3 – 6					
Axle Group Mass Limit (kg)			42,000 over axles 3 – 8 (sum of application masses and within HPMV mass limit)					
Spacing from previous axle (m)	0.00	1.90	3.57	1.32	4.90	1.30	4.10	1.30
Tyre Size	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard

} Within HPMV mass limits

* S=Single tyred axle, T=Twin tyred axle

D3.7 Gathering required company and vehicle information

Applying as an unregistered user

When you apply for an HPMV higher mass permit on Waka Kotahi's Heavy Vehicle Permit Portal as an unregistered user, it is advisable to have all required information at hand because you will not be able to save your application and return to it later.

Applying as a registered user

If you register a user account and company and vehicle details on the permit portal, then you will only need to enter the information described in this section once during the registration process. The permit application form will then be automatically populated with relevant details when you select a registered company and vehicle unit.

For help with using the permit portal, refer to the User Guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

Company information

You must provide the following company information:

- legally registered name of the company (or partnership)
 - company contact details, and
 - transport service licence (TSL) number.
-

Required vehicle details

You must provide the following vehicle details:

- vehicle registration numbers (VINs are not accepted)
 - vehicle dimensions (total width, height and length)
 - the total unit mass you wish to carry, and GCM and GVM ratings
 - axle details, including:
 - number of axles and types of axle and axle sets
 - tyre sizes
 - suspension types
 - track outer distances
 - individual axle masses (operational weights), and
 - axle spacings (see section *D3.3 How to measure axle spacings*).
-

D3.8 Preparing route information

Single or multiple routes

You may apply for a single route or for multiple routes on one application. In both cases, you must specify all roads and highways between the starting point of the journey and the final destination.

Postal codes

You must provide the postal codes for the starting point and the final destination of your main or most frequently travelled route on the permit application form.

Format of route information

An acceptable format for the route information is a list of **all** roads and highways between the starting point of the journey and your destination.

If you are applying for multiple routes, you must specify all roads and highways separately for each route.

You may wish to use directions information from Google Maps (or a similar map tool) for help in collating your route details. Alternatively, you may submit a map with the route clearly marked and the road names clearly visible.

Separate document

You must attach the route information as a separate document with your permit application.

Acceptable file types to attach to your application are MS Word documents, or PDF or image files.

The maximum file size of an attachment is 20MB.

D3.9 Completing and submitting the application form

Online application form

You can access the application form for HPMV higher mass and overlength permits on Waka Kotahi's Heavy Vehicle Permit Portal at <https://hpmvpermits.nzta.govt.nz>.

Checklist

Use this checklist to ensure you have all required information and documents available when you complete the application form:

- An electronic copy of detailed route information
- Electronic copies of the HPMV attributes check sheets for each vehicle unit, or a combination attributes check sheet
- The total mass and individual axle masses you wish to apply for
- If you have older attributes check sheets that do not include SRT information, electronic copies of SRT compliance certificates for each trailer on the application, and
- If you are also applying for an overlength permit, an electronic copy of a pro-forma design diagram with your vehicle's measurements.

Trouble-shooting when completing the form

If the system does not advance to the next page when you are completing the form, then one or more fields have either missing or incomplete information.

To identify the error, scroll through the page and correct any errors until the red outlines around fields disappear.

Tip:

A common error is not entering numbers in the required format. You must enter numerical values to **two decimal places** and without commas, as shown in the example below:

Vehicle Type *	R22T22	
Total Height (max 4.30m) *	3.50	Two decimal places
Width to Outside Tyres (m) *	2.48	
Total Mass Applied For (kg) *	52000.00	No comma

Continued on next page

D3.9 Completing and submitting the application form

continued

Completeness check To ensure your application can be processed quickly, check and confirm that you have completed all required fields marked with an asterisk (*) and attached all required documents.

Declaration By selecting the tick box in step 6 of the application form, you declare that the information you provided in the application is true and correct.

Note: By selecting the tick box you are making a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.

Legislation reference: Land Transport Act 1998 section 44.

Obligations of third party applicants Third party applicants applying for a permit on behalf of a transport operator are bound by the declaration on the application form. They must ensure that they are duly authorised to make the application and that the particulars on the application are complete, true and correct to the best of their knowledge.

Third party applicants must forward all relevant information and terms and conditions to the eventual user of the permit.

Summary email After submitting a permit application, you will receive an automatic email confirming that Waka Kotahi has received your application.

The email includes a reference number that allows you to track the progress of your application if you are a registered permit portal user.

The email also has:

- copies of all attachments you submitted with your permit application, and
- a PDF file with the information you provided on the application form for your records.

Note: If you do not receive the confirmation email, Waka Kotahi has not received your application.

Help For assistance contact Waka Kotahi on 0800 699 000.

D3.10 Renewing an HPMV higher mass permit

Renewal or new application?

You can renew an HPMV higher mass permit if:

- you are using the same vehicle combination specified in the original permit
- there have been no modifications to the vehicle units since the original permit was issued
- the total mass, individual axle masses and axle spacings are the same as on the original permit, and
- you will travel on the same route(s) specified on the original permit.

If any of the above details has changed, you need to lodge a new permit application.

Renewing a permit in the permit portal

If you applied for the permit that needs to be renewed on Waka Kotahi's Heavy Vehicle Permit Portal, then the renewal process is quick and easy. You will need your previous application reference number OR your permit number (which will be the same).

Note: You do not need to submit HPMV attributes check sheets when you renew a permit on the portal.

Follow these steps to renew your permit:

Step	Action
1	Access the permit portal at https://hpmvpermits.nzta.govt.nz and log in if you are a registered user.
2	Click on Permits and open a new Online HPMV Permit Application form.
3	In Step 1 – Permit Information on the application form, enter either your: <ul style="list-style-type: none"> • previous application reference number, OR • the number of the permit you wish to renew. <p>Result: The application form will automatically be populated with the required information.</p>
4	Edit the 'Date Permit Required' field in Step 2 – General Information and then click through to Step 6 – Submit.
5	Select the tick box in Step 6 next to the declaration and click Submit Application . You will receive an automatic email confirming that Waka Kotahi has received your renewal application.

Continued on next page

D3.10 Renewing an HPMV higher mass permit continued

When you need to reapply

If you did not apply in the permit portal for the permit you wish to renew, then the permit details are not stored in the portal database. This means that you cannot use the renewal option in the portal and need to reapply by entering all required information in the application form.

You must also attach all required documents, such as HPMV attributes check sheets and route information, to the new application.

Once your new permit has been issued from the portal, you will be able to use the portal renewal option for future renewals.

D3.11 Permit fee and processing time

Permit fees

For the standard permit fees, see section A2.5 in *Part A: Introduction to VDAM permits* in this volume of the manual.

Permit processing time

Waka Kotahi makes every effort to process HPMV higher mass permit applications as quickly as possible.

In general, higher mass permits are issued within 20 working days if there are no operator compliance issues, and no specialist input or complex route analysis is required.

However, some aspects of the permitting process are outside the control of Waka Kotahi and may result in a longer processing time, for example, if approvals from local road controlling authorities are required.

Vehicle dimensions and mass permitting manual (volume 1)

Part E

HPMV overlength permits

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to this manual, please refer to the 'Record of amendments' at the start of volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Revisions reflect policy and legislation changes from the Land Transport (NZTA) Legislation Amendment Act 2020 and the Land Transport Rule: Omnibus Amendments 2020. Updated sections:</p> <p>Introduction: Information added about the Director of Land Transport role, delegations of authority, and the terminology used in the manual.</p> <p>E2.3 Entry certification requirements: New and current pro-forma design diagrams may now be used at entry certification for dimension compliance verification. Previously, a temporary permit issued with the vehicle identification number (VIN) was needed at entry certification.</p>	1 May 2021
Amendment 4	<p>Permit processing times revised. Due to increased volumes and the requirement for more in-depth operator compliance checks, the target time for processing HPMV higher mass permits has been extended to 20 days.</p> <p>Amended sections: E2.7 and E3.6.</p>	1 February 2021
Amendment 2	<p>Part revised to reflect the new performance based standards (PBS) adopted and published by Waka Kotahi in May 2019, as well as associated changes to the management and permitting of pro-forma and non pro-forma (one-off) vehicle designs.</p> <p>Main changes in amendment 2:</p> <p>Chapter E1: Vehicle requirements for HPMV overlength permits:</p> <ul style="list-style-type: none"> • Information added about performance based standards (PBS). • New criteria for permit eligibility of non pro-forma (one-off) vehicle designs explained. • New section added with three types of pro-forma vehicle designs (new, current and superseded). Previous list of pro-forma designs removed (a full list is published on Waka Kotahi's website). • Transition arrangement for superseded pro-forma designs explained. <p>Chapter E3: How to apply for a non pro-forma (one-off) HPVM overlength permit:</p> <p>New chapter added describing the permitting process for non pro-forma (one-off) overlength HPMVs. It explains the requirements that must be met to obtain initial approval for a one-off design and how to apply for a permit for a one-off design.</p>	1 June 2020

Continued on next page

Record of amendments in this part continued

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 1	Notes added about the Transport Agency developing new performance based standards (PBS) and permits for non pro-forma vehicles being on hold until the new PBS and related processes are in place.	8 February 2018

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Part E: HPMV overlength permits

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* provides guidance for transport operators who require approval from Waka Kotahi NZ Transport Agency to exceed length limits for a high productivity motor vehicle (HPMV).

Note: Approvals to exceed length limits are widely referred to as ‘overlength permits’, including in this manual. Vehicles that operate under such a permit are referred to as ‘overlength’ vehicles.

Audience

The intended audience for this part is:

- transport operators who require an HPMV overlength permit
- Waka Kotahi staff involved in processing overlength permit applications
- designers and manufacturers of vehicles that may operate under an HPMV overlength permit, and
- enforcement agents such as the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.

Legal basis and Director role

HPMV overlength permits (legally ‘approvals’) are issued under section 5.9 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule).

Waka Kotahi’s Director of Land Transport is responsible for approving a variation from a standard dimension requirement and issuing HPMV permits in accordance with the requirements of the VDAM Rule.

The Director has delegated the authority to issue permits to Waka Kotahi’s permitting staff and their contractors. References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be interpreted as references to the Director if the reference relates to a Director function under the VDAM Rule.

When to apply for an HPMV overlength permit

You should apply to Waka Kotahi for an HPMV overlength permit if:

- your vehicle is an HPMV that exceeds standard length limits (see section *E1.1 What is an overlength HPMV?*), or
- you want to test the feasibility of operating a vehicle under an overlength permit.

Continued on next page

Introduction continued

Overlength versus overdimension permits

HPMV overlength permits are different from ‘overdimension’ permits. Overdimension permits are specifically for **indivisible** loads that exceed vehicle dimension limits specified in the VDAM Rule.

HPMV overlength permits are available for both divisible and indivisible loads, but unlike vehicles operating under an overdimension limit, HPMVs cannot exceed standard height and width restrictions.

Local roads

Waka Kotahi has authority to issue HPMV overlength permits for both state highways and local roads. However, it liaises closely with local road controlling authorities (RCAs) and generally seeks their approval before issuing an overlength permit involving local roads. If a local RCA raises serious concerns about a route applied for or about the use of particular roads, Waka Kotahi may:

- specify a route as a condition on the permit, or
 - decline an overlength permit application if no suitable route can be agreed.
-

Permits to exceed mass limits

An overlength vehicle that is to carry loads exceeding standard mass limits requires either an HPMV higher mass or an HPMV 50MAX permit **in addition** to an overlength permit.

Waka Kotahi permitting staff must approve an overlength permit first before they can assess a permit application for exceeding mass limits.

Operators can apply for both permit types separately or at the same time.

Overlength permits and HPMV higher mass or 50MAX permits are issued as separate documents, but both types of permit must be carried together in the vehicle during travel.

For details on HPMV permits to exceed mass limits see:

- *Part D: HPMV higher mass permits*, and
 - *Part F: HPMV 50MAX permits*.
-

Terminology and abbreviations

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, see *Part I: Definitions and glossary* in this volume of the manual.

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Introduction continued

In this part

This part contains the following chapters:

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Chapter E1: Vehicle requirements for HPMV overlength permits

Overview

About this chapter

This chapter describes which vehicle designs are eligible for HPMV overlength permits, and how Waka Kotahi assesses vehicle safety as part of the overlength permitting process.

In this chapter

This chapter contains the following sections:

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E1.1 What is an overlength HPMV?

Introduction

Standard length requirements for vehicles and vehicle combinations are specified in the VDAM Rule.

Vehicle combinations may exceed standard length requirements under an overlength permit but still have acceptable performance on New Zealand roads. For example, a vehicle may be longer overall to increase deck space, or the truck and trailer may have non-standard lengths within the standard overall length.

This section describes the standard length requirements that may be exceeded under an HPMV overlength permit.

Permitted variations of length requirements

Provided the vehicle meets Waka Kotahi's performance standards (see *Safety performance requirements* below), the following length requirements can be exceeded under an HPMV overlength permit:

- overall length (up to 23 metres **steel to steel** for pro-forma designs)
- forward distance
- front and/or rear overhang
- rear trailing unit distance
- articulated vehicle point of attachment
- tow coupling position
- coupling point distance
- inter-vehicle spacing, and
- outside turning circle in either direction for a 360-degree turn.

Legislation reference: VDAM Rule schedule 2.

Safety performance requirements

Under the VDAM Rule, an HPMV that exceeds standard length limits must have the equivalent safety performance of a standard vehicle for the roads it operates on to be eligible for an overlength permit.

Legislation reference: VDAM Rule section 5.9(6).

Waka Kotahi applies performance based standards (PBS) to assess the safety of non-standard vehicles. It has approved a range of pro-forma designs that meet safety performance requirements and are eligible for overlength permits – see the next section *E1.2 Pro-forma overlength HPMV designs*.

Vehicle designs that do not conform to an approved pro-forma design may be eligible for an overlength permit in specific circumstances – see section *E1.5 Non pro-forma (one-off) overlength HPMVs*.

E1.2 Pro-forma overlength HPMV designs

Pre-approved designs

Pro-forma overlength HPMV designs are vehicle designs that Waka Kotahi has tested against performance based standards (PBS) and found to achieve satisfactory performance.

To be approved as a pro-forma, a design must:

- fully meet all PBS requirements
- not exceed 23 metres in length steel to steel, and
- be suitable to carry general freight and safely travel on the wider road network.

If your vehicle conforms to a pre-approved pro-forma design, your overlength permit application will be processed and approved quickly.

Performance based standards (PBS)

PBS are a set of performance measures used to evaluate the safety of non-standard vehicle designs, particularly in regard to their stability and how well they track within a lane.

In the past, PBS in New Zealand were largely based on overseas standards, which were not always suitable for New Zealand roads. After conducting an extensive review and consulting with industry groups, Waka Kotahi issued improved PBS in May 2019, together with new pro-forma vehicle designs that meet the new PBS.

More information about PBS can be found at www.nzta.govt.nz/commercial-driving/high-productivity/performance-based-standards/.

Operator responsible for 'fit to network'

Pro-forma overlength permits are not route-constrained. However, the VDAM Rule still requires operators to avoid using long vehicles on roads where they cannot be easily or safely driven. Operators must ensure that their vehicle is manoeuvrable, fits safely on the road and interacts safely with road users at all points of the journey.

Legislation reference: VDAM Rule section 3.1(2).

Note: An overlength vehicle that also operates under a permit to exceed mass limits is subject to the route restrictions specified in the higher mass permit.

Entry certification

Diagrams of current pro-forma designs may be used at entry certification for dimension compliance and verification.

For details see section *E2.3 Entry certification requirements*.

Continued on next page

E1.2 Pro-forma overlength HPMV designs continued

Three categories of pro-forma designs

With the adoption of a new set of PBS, the pro-forma designs assessed against the previous PBS measures will gradually be replaced over time.

This means that there are three categories of pro-forma designs:

Category	Means that the pro-forma design...
New	<ul style="list-style-type: none"> was assessed against the 2019 PBS and approved by Waka Kotahi, and is available for entry certification and eligible for permits.
Current	<ul style="list-style-type: none"> was assessed against pre-2019 PBS has not yet been replaced by a new design, and remains available for entry certification and eligible for permits until a replacement design takes effect.
Superseded	<ul style="list-style-type: none"> was assessed against pre-2019 PBS has been replaced by a new design, and remains available for entry certification and eligible for permits until the expiry date specified on Waka Kotahi's website (usually 12-months after publication of a replacement design). <p>Note: Superseded designs remain valid for existing permits and permit renewals.</p>

For more information and examples of the different pro-forma design categories, see section *E1.4 Sample diagrams of pro-forma overlength designs*.

Where to find pro-forma diagrams

A full set of HPMV overlength pro-forma designs can be found on Waka Kotahi's website at the following links:

Designs eligible for...	Link
HPMV higher mass permits	www.nzta.govt.nz/commercial-driving/high-productivity/proforma-designs-for-high-productivity-motor-vehicles/
HPMV 50MAX permits	www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/50max-proforma-designs/

E1.3 Approval process for new pro-forma designs

New pro-forma designs

Waka Kotahi and industry plan to introduce new and updated pro-forma designs from time to time by agreement.

Waka Kotahi will consider approving a new design proposal if the industry demonstrates that the design:

- is likely to have widespread uptake
- is designed to carry general freight
- meets all the safety performance requirements in the PBS, and
- is suitable for general access to the wider road network.

Approval process for new designs

The approval process for new pro-forma designs would typically run through the following stages:

Stage	Description
1	The operator requiring a new pro-forma design discusses the proposed design with other operators first and obtains the backing of an industry group.
2	The operator or industry group applies to Waka Kotahi for initial approval in principle by: <ul style="list-style-type: none"> • emailing a schematic drawing of the proposed new pro-forma design with its dimensions to proforma@nzta.govt.nz, and • outlining the reasons why an existing pro-forma design is not suitable and a new design is needed.
3	If Waka Kotahi approves the new design in principle, it directs the operator or industry group to obtain a PBS report from an engineering consultancy for the new design. The report must assess the design for both high-speed stability and low-speed manoeuvring and confirm that the proposed design has the equivalent safety performance of a standard vehicle.
4	On receipt of the PBS report, Waka Kotahi reviews the report in detail and, if acceptable, approves the new design as a pro-forma.
5	A diagram of the new pro-forma design is published on Waka Kotahi's website and the new design becomes available for entry certification and permit applications.

Continued on next page

E1.3 Approval process for new pro-forma designs continued

Transition from old to new pro-forma designs

When Waka Kotahi approves a new pro-forma design that replaces an existing design, the new design will be phased in over a 12-month transition period. In some cases, the transition period may be extended.

New vehicles based on the superseded design remain eligible for entry certification and HPMV permits within 12 months of the new design being published on Waka Kotahi's website or until the expiry date specified on the website.

Existing permits remain valid

Existing overlength permits for superseded pro-forma designs remain valid for the life of the vehicle, or the duration of the permit and permit renewals.

E1.4 Sample diagrams of pro-forma overlength designs

Introduction

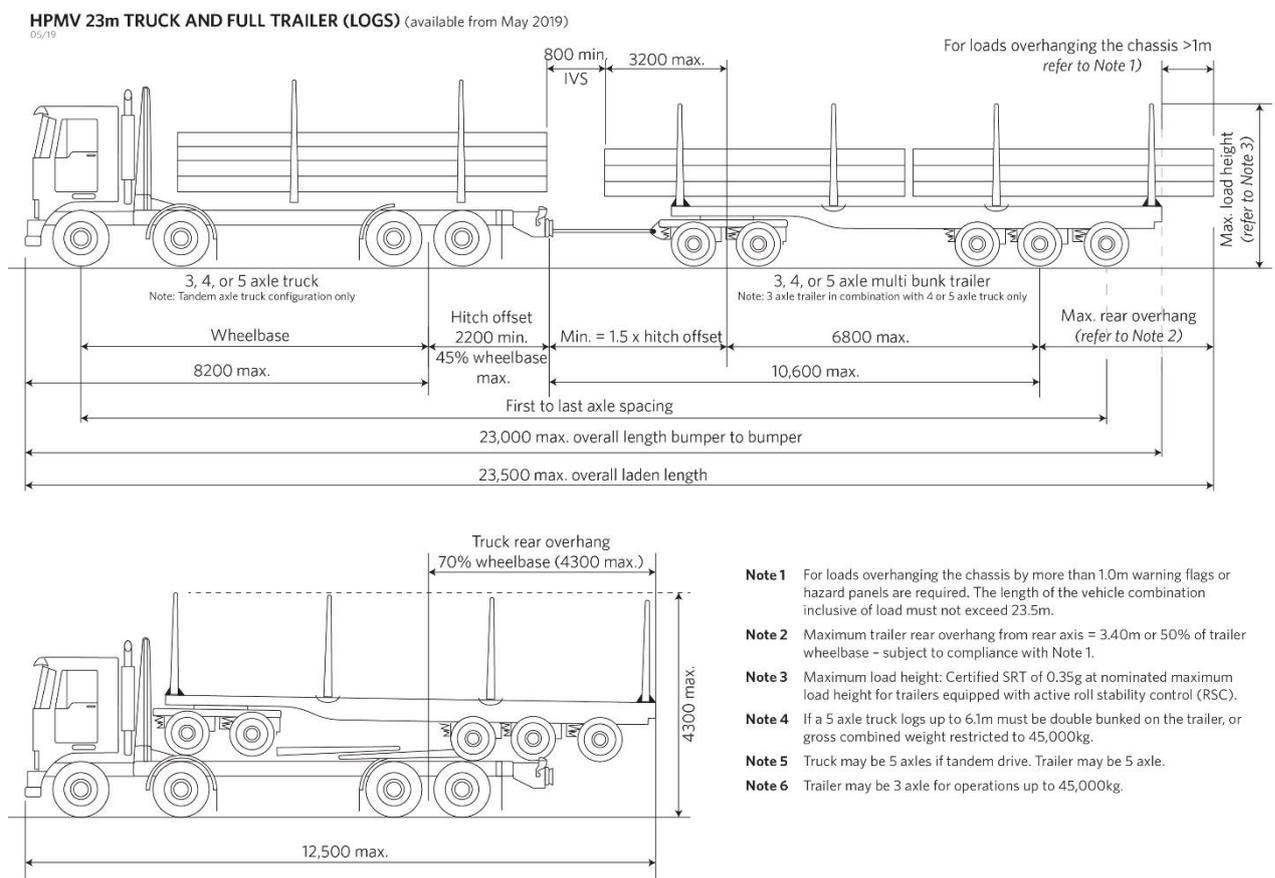
This section shows examples of the three different categories of pro-forma designs (new, current and superseded) and explains what the categories mean for entry certification and permit eligibility.

Sample 'new' design

The design below is an example of a **new** overlength pro-forma design, which means that it:

- was assessed as meeting the 2019 PBS and approved by Waka Kotahi, and
- is available for entry certification and eligible for permits.

23-metre log truck and full trailer (available from May 2019)



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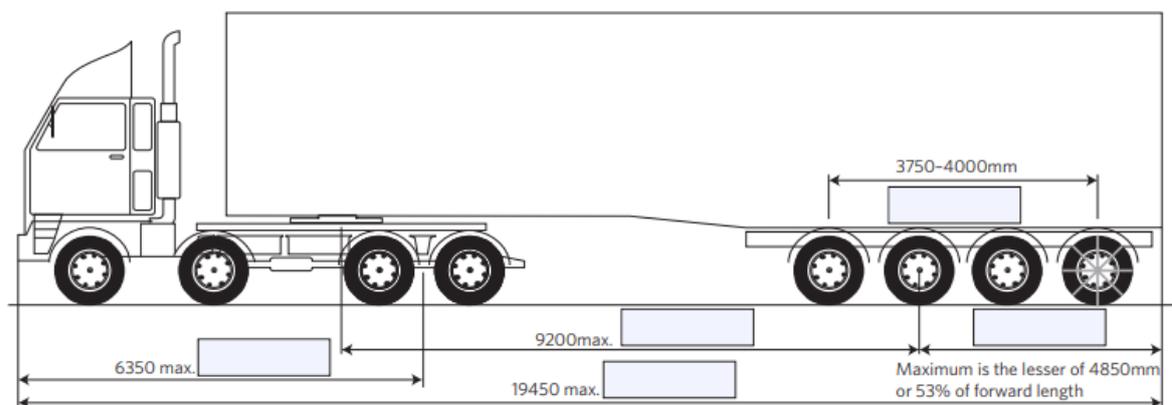
E1.4 Sample diagrams of pro-forma overlength designs continued

Sample 'current' design

The design below is an example of a **current** overlength pro-forma design, which means that it:

- was assessed against pre-2019 PBS
- has not yet been replaced by a new design, and
- remains available for entry certification and eligible for permits until a replacement design takes effect.

19.45-metre quad semi



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E1.4 Sample diagrams of pro-forma overlength designs continued

Sample 'superseded' design

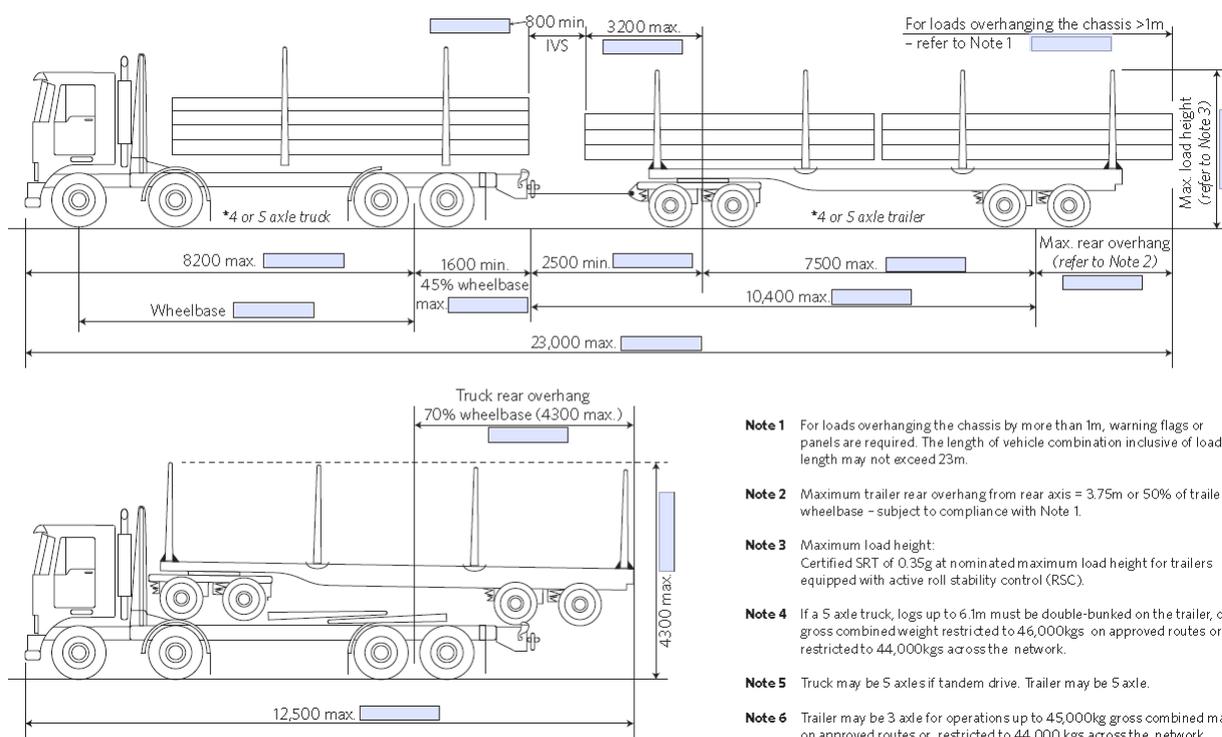
The design below is an example of a **superseded** overlength pro-forma design, which means that it:

- was assessed against pre-2019 PBS
- has been replaced by a new design, and
- was available for entry certification and eligible for permits for **12 months** after notification of the replacement design and until the published expiry date.

Note: Superseded designs remain valid for existing permits and permit renewals.

23-metre log truck and full trailer

Note: This design is not available for entry certification after 1 June 2020.



E1.5 Non pro-forma (one-off) overlength HPMVs

What are 'non pro-forma' designs?

'Non pro-forma' vehicle designs are one-off heavy vehicles designed for a specific freight task, for example customised designs for carrying a specialist load on a restricted route. These unique designs neither meet:

- the standard dimension requirements in the VDAM Rule, nor
 - a Waka Kotahi approved pro-forma overlength design.
-

Eligible for one-off approval

Waka Kotahi may approve a one-off non pro-forma vehicle design for an overlength permit if it meets the following requirements:

- the design meets all or most PBS measures (see *Performance based standards (PBS)* in section E1.2 above)
- the vehicle is intended for a specialised freight task
- it operates on a short, highly constrained route (eg 5–10km between a port and a nearby storage site, or to move a specific product for manufacturing from one factory to another in close proximity), AND
- the individual vehicle units that make up the combination, when broken down:
 - have standard vehicle dimensions, or
 - conform to an existing pro-forma design.

The last requirement ensures the continued viability of a vehicle unit if a freight contract changes or the unit is sold.

For details on how to apply for one-off approval, see *Chapter E3: How to apply for a non pro-forma (one-off) HPMV overlength permit*.

Not eligible for one-off approval

Designs intended for general freight, long-distance travel and access to the wider road network are **not** eligible for one-off approval for overlength permits. However, they may be considered as new pro-forma designs if there is wider industry support – see section *E1.3 Approval process for new pro-forma designs*.

Continued on next page

E1.5 Non pro-forma (one-off) overlength HPMVs continued

Trials and permit periods

Waka Kotahi may issue a permit for a non pro-forma design for a limited period on a trial basis to confirm the design's modelled performance in the PBS report.

If no trial is required, or if a trial demonstrates that the performance of the vehicle on the specified route is satisfactory, overlength permits are usually granted for an unlimited period or the life of the vehicle.

Identical vehicles

If a non pro-forma design is approved for an overlength permit, other vehicles with an identical design are also eligible for a permit.

Additional permits issued for identical vehicles will be subject to the same route restrictions as the original permit.

Only one PBS report is required in support of permit applications for identical non pro-forma vehicle designs.

Existing non pro-forma permits remain valid

Overlength permits for non pro-forma vehicles that were issued before the release of the new PBS in May 2019 remain valid for the duration of the permit or for renewal provided there are no changes to the route (if specified in the permit) and no modifications to the vehicle.

If there are any changes to the vehicle or route, then the operator must apply for a new non pro-forma overlength permit – see *Chapter E3: How to apply for a non pro-forma (one-off) HPMV overlength permit*.

E1.6 Vehicle attributes check

Introduction

Waka Kotahi is required under the VDAM Rule to consider, among other factors, the safety of a vehicle as part of the HPMV permitting process.

This section describes how Waka Kotahi assesses vehicle safety for HPMV overlength permits.

Certifier must assess vehicle suitability

When applying for an HPMV permit, operators must have their vehicles assessed by a Waka Kotahi approved heavy vehicle specialist certifier.

Certifiers must complete and sign a prescribed HPMV attributes check sheet for each unit in the vehicle combination applied for. The attributes check sheets must be submitted together with the permit application.

What does the certifier assess?

For an overlength permit application, the certifier checks that the vehicle has:

- lights of the light emitting diode (LED) type at the rear of the combination
- repeater side indicator lights placed approximately midway along the side of the trailer
- conspicuity (reflective) tape displaying the DOT-C2 mark (minimum width) outlining the shape of the vehicle from the side and rear, OR
- LED side marker lamps spaced not more than three metres apart along the side of the vehicle as close as practical to the load bed or, for a log truck and trailer, on each bolster, and
- only original equipment manufacturer (OEM) approved modifications (if any) that may affect the vehicle's frontal impact protection system (SRS/FUPS).

The certifier also checks that the trailer meets stability requirements – see *Static roll threshold (SRT)* below.

The certifier signing the attributes check sheet is responsible for ensuring that all required information is included on the attributes check sheet.

Continued on next page

E1.6 Vehicle attributes check continued

Static roll threshold (SRT)

HPMVs must have roll stability control fitted and activated on trailers:

- fitted with EBS brakes, or
- first registered after 1 May 2010.

Trailers with activated roll stability control must meet a minimum static roll threshold (SRT) of 0.35g.

Trailers that do not have EBS and roll stability control may be eligible for HPMV permits if they have a minimum SRT of 0.4g and were first registered:

- before 1 May 2010, or
- before 1 April 2016 if they are log trailers carting round wood.

If the load is a closed container, the SRT compliance certificate must specify uniform density.

Mixed freight may be used only if the load is visible and the status can be verified.

The attributes check sheet must confirm that the trailer meets the stability requirements for an HPMV permit.

What does Waka Kotahi check?

When processing an overlength permit application, Waka Kotahi checks that the relevant sections of the attributes check sheets accompanying the permit application have been completed, and that the check sheets have been signed by a Waka Kotahi approved specialist certifier.

Dimensional accuracy

When completing the application form for an overlength permit, applicants must provide the dimensions of their vehicle (see *E2.5 Prerequisite tasks before you apply*).

Dimensional accuracy is the responsibility of the operator.

More information

For more information on vehicle attributes checks, see section *D2.4 Vehicle attributes check* in part D of this volume.

Chapter E2: How to apply for a pro-forma HPMV overlength permit

Overview

About this chapter

This chapter describes how to apply for an HPMV overlength permit for a pro-forma vehicle. It includes an overview of the permitting process and gives guidance on obtaining the required documents and completing the application form.

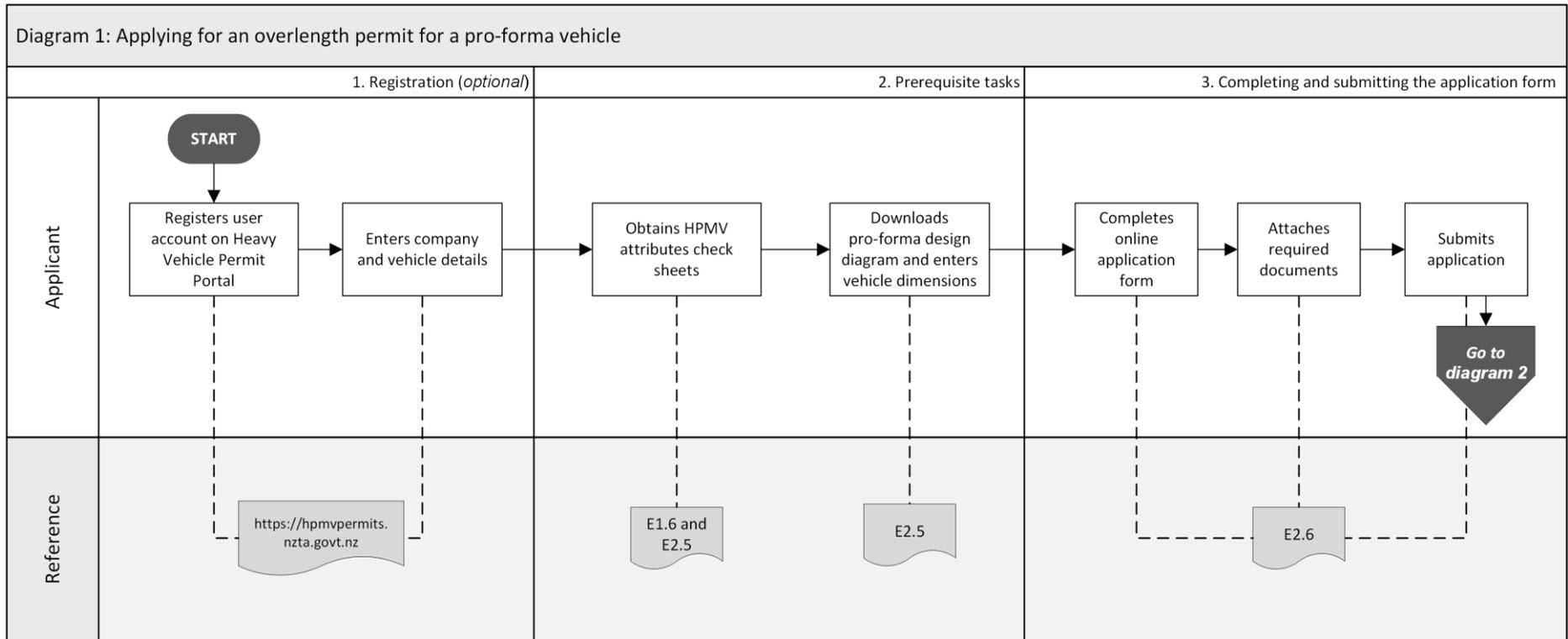
In this chapter

This chapter contains the following sections:

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E2.1 Overview diagrams of the pro-forma overlength permitting process	E2-2
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E2.1 Overview diagrams of the pro-forma overlength permitting process

Applying for a pro-forma overlength permit This diagram shows the steps involved in applying for an HPMV overlength permit for a pro-forma vehicle.



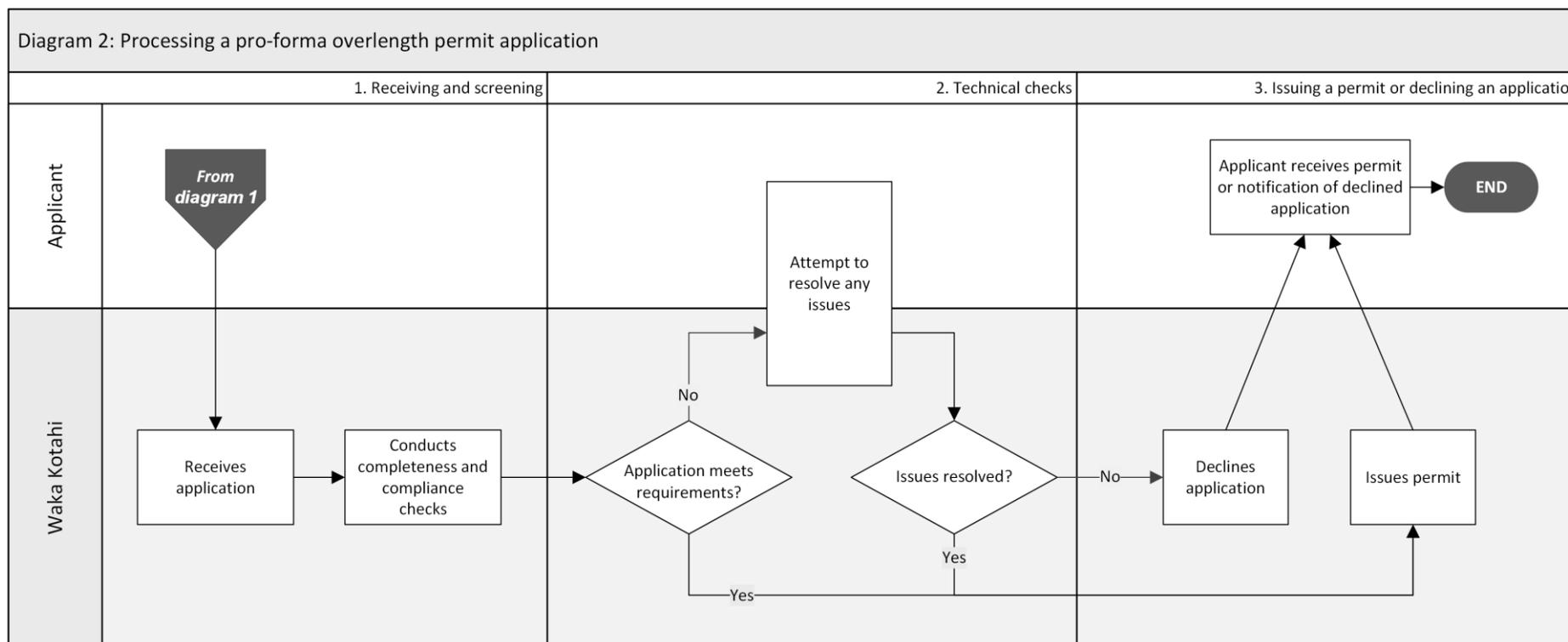
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E2.1 Overview diagrams of the pro-forma overlength permitting process continued

Processing a pro-forma permit application

This diagram gives an overview of how Waka Kotahi processes a pro-forma overlength permit application.

Full details can be found in *Part E: Processing HPMV overlength permit applications* in volume 2 of this manual.



E2.2 About the online application process

Where to apply To apply for an HPMV overlength permit, go to Waka Kotahi's Heavy Vehicle Permit Portal at <https://hpmvpermits.nzta.govt.nz>.

Features of the Heavy Vehicle Permit Portal You can use the permit portal either as a registered or unregistered user. Registration is not compulsory but is recommended if you regularly apply for permits.

As a registered permit portal user you can:

- register company and vehicle details in the system and reuse the information every time you apply
 - save draft applications and complete them in stages, and
 - monitor the status of submitted applications.
-

Help For detailed help with using the permit portal, refer to the permit portal user guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

E2.3 Entry certification requirements

Certification of dimension limits

As part of the entry certification process, heavy vehicle specialist certifiers must validate and certify the dimensions of new, non-registered HPMVs.

Vehicle manufacturers or importers must use one of the following documents to provide dimension information to certifiers at entry certification:

- a completed pro-forma design diagram form available from Waka Kotahi’s website, or
- a temporary overlength permit issued with the vehicle identification number (VIN).

When you can use a pro-forma design diagram

Pro-forma design diagram forms may be used at entry certification if the vehicle is a new or current pro-forma design.

For details about new, current and superseded pro-forma designs, see section *E1.2 Pro-forma overlength HPMV designs*.

For links to pro-forma diagrams on the Waka Kotahi website, see *Where to find pro-forma diagrams* in section E1.2.

Sample form:

HPMV PROFORMA ENTRY CERTIFICATION AND PERMIT APPLICATION DECLARATION 02/21

HPMV 23M TRUCK AND FULL TRAILER

Note 1 The nominal forward distance is measured from the rear axis to two points at 1200mm off the vehicle centreline. The front of the vehicle must lie with the bound of a symmetric triangle based on the two points with a height of 1200mm as illustrated in the diagram.

Note 2 Minimum of 1600mm and maximum of 45% of wheelbase.

Note 3 Maximum rear overhang is the lesser of 4000mm or 50% of the trailer wheelbase.

Note 4 Axle sets can be replaced with alternate sets at the same axis points.

The information requested is required to confirm that the vehicle meets the dimension thresholds provided in Waka Kotahi NZ Transport Agency-approved proforma designs for high productivity motor vehicles and to support an application for a High Productivity Motor Vehicle Permit under the Land Transport Rule: Vehicle Dimensions and Mass 2016. Waka Kotahi (and its agents) will hold, store, use and disclose any personal information collected on this form in accordance with the Privacy Act and the Land Transport Act. You are entitled to access, and request the correction of, any readily retrievable personal information held about you by Waka Kotahi. You can do so by writing to us at Private Bag 11777, Palmerston North 4442 or by emailing: info@nzta.govt.nz

Truck/Tractor	Plate number <input type="text"/>	VIN/chassis number <input type="text"/>	Make <input type="text"/>	Model <input type="text"/>	Year <input type="text"/>
Trailer 1	Plate number <input type="text"/>	VIN/chassis number <input type="text"/>	Make <input type="text"/>	Model <input type="text"/>	Year <input type="text"/>

Name of heavy vehicle specialist certifier Signature of heavy vehicle specialist certifier Date

I state that, to the best of my knowledge and belief, all the information given for this application is true and correct.
 Warning: It is an offence under the Land Transport Act 1998 to provide information that is known to be false or misleading.

E2.3 Entry certification requirements continued

When you need a temporary permit

Pro-forma design diagram forms are **not** available for use at entry certification for designs that were assessed against pre-2019 PBS and will be discontinued at a specified date.

Such designs require a temporary overlength permit issued with VINs during the 12-month transition period in which the discontinued design remains eligible for entry certification.

Permit needed after entry certification

Once a vehicle has been entry-certified and registered, you must apply for an overlength permit with the vehicle's registration numbers.

E2.4 Applying for multiple identical vehicles

Multiple trailers

You may apply for an HPMV overlength permit for one prime mover and up to five identical trailers on the same application form.

Criteria for identical vehicles

To be considered identical, trailers must meet the following requirements:

- They must have:
 - identical axle spacings
 - the same tyre size, and
 - identical inner and outer wheel tracks.
 - All units in the combination (including the prime mover) must have, for the load applied for, sufficient:
 - GVM
 - axle ratings
 - maximum towed mass (MTM), GCM, 5th wheel, tow ball ratings, etc, where applicable, and
 - brake capacity.
-

Accurate measurements

Axle spacings on a permit will be enforced by the Commercial Vehicle Safety Team (CVST) of the New Zealand Police. Breaches may result in fines.

It is therefore important that you provide accurate measurements on your permit application. See section *D3.3 How to measure axle spacings* in part D of this volume.

E2.5 Prerequisite tasks before you apply

Prerequisite documents

Before submitting an application for a pro-forma overlength permit, you must obtain and prepare the following prerequisite documents:

1. a completed and signed HPMV attributes check sheet for each vehicle unit you are applying for
2. copies of SRT compliance certificates (if required), and
3. a pro-forma vehicle design diagram that matches your vehicle and shows the dimensions of your vehicle.

You need electronic copies of these required documents to attach to your permit application.

1. HPMV attributes check sheets

Every HPMV permit application must be accompanied by a separate HPMV attributes check sheet for each vehicle unit applied for.

Alternatively, a 50MAX combination attributes check sheet for the vehicle combination is also acceptable with an overlength permit application.

You can obtain attributes check sheets from Waka Kotahi approved heavy vehicle specialist certifiers. The sheets must be completed and signed by a specialist certifier to demonstrate that the vehicle meets safety requirements.

Waka Kotahi approved heavy vehicle specialist certifiers are listed at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers/.

2. SRT compliance certificates

Refer to the version number on the attributes check sheets you intend to submit with the permit application. If you are using an HPMV/ISO permit attributes check sheet that is older than version 5 or 5A, you must obtain electronic copies of the SRT compliance certificates and submit them with your HPMV overlength permit application **in addition** to the attributes check sheet.

This is required because older attributes check sheets do not contain SRT information.

Note: You do not need to check the version number of 50MAX combination attributes check sheets. All 50MAX attributes check sheets contain SRT information.

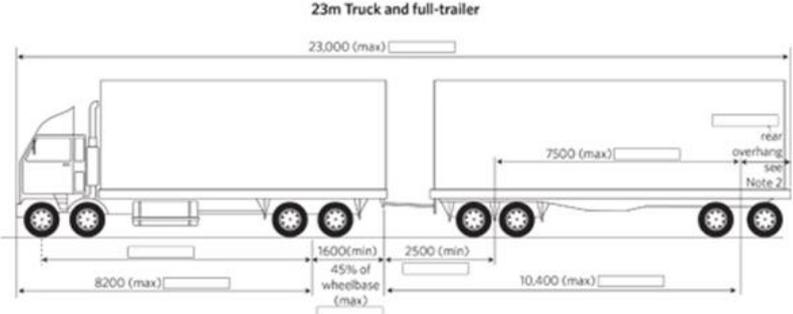
Continued on next page

E2.5 Prerequisite tasks before you apply continued

3. Pro-forma vehicle design diagrams

You must attach a matching pro-forma design diagram with the dimensions of your vehicle to the application.

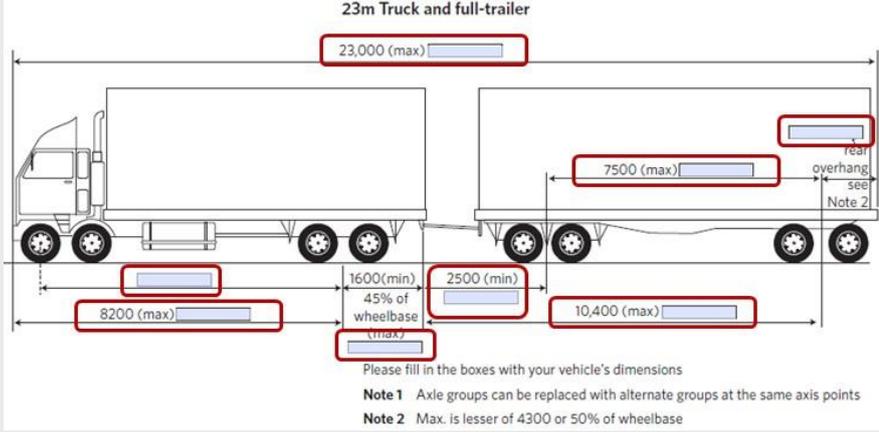
Follow the steps below to obtain and complete a pro-forma vehicle design diagram.

Step	Action
1	Go to Waka Kotahi's website at: <ul style="list-style-type: none"> • www.nzta.govt.nz/vehicle/your/hpmv/proforma.html, or • for 50MAX pro-forma designs, www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/50max-proforma-designs/
2	Scroll down the page until you find the diagram that matches your vehicle design.
3	Click on the download link below the diagram for your vehicle (outlined in red in the example below). <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>The HPMV pro-forma designs 23.0 metre truck and full trailer</p> <p style="text-align: center;">23m Truck and full-trailer</p>  <p style="text-align: center;">Please fill in the boxes with your vehicle's dimensions</p> <p>Note 1 Axle groups can be replaced with alternate groups at the same axis points</p> <p>Note 2 Max. is lesser of 4300 or 50% of wheelbase</p> <p style="text-align: center;">Download 23.0 metre truck and full trailer pro-forma (PDF, 89 KB, 1 page)</p> </div>
	Result: An interactive PDF document opens in your browser window.

Continued on next page

E2.5 Prerequisite tasks before you apply continued

3. Pro-forma vehicle design diagrams (continued)

Step	Action
4	<p>In the PDF document, complete the interactive fields (outlined in red in the example below) with the dimensions for your vehicle.</p>  <p>The diagram shows a side view of a truck and a full-trailer. Dimensions are indicated with arrows and boxes for completion. The truck has a wheelbase of 8200 (max) and a minimum wheelbase of 1600. The full-trailer has a wheelbase of 10,400 (max) and a minimum wheelbase of 2500. The total length of the truck and trailer is 23,000 (max). The trailer has a maximum length of 7500 and a rear overhang. A note indicates that the maximum length is the lesser of 4300 or 50% of the wheelbase.</p> <p>Please fill in the boxes with your vehicle's dimensions</p> <p>Note 1 Axle groups can be replaced with alternate groups at the same axis points Note 2 Max. is lesser of 4300 or 50% of wheelbase</p>
5	<p>Save the PDF document with your vehicle's dimensions to your local drive.</p> <p>Note: If you do not save the document to your local drive, you will lose any information you have entered in the diagram when you close the window.</p> <p>You need to attach the saved diagram with your vehicle's dimensions to your application (see <i>Attaching required documents</i> in section E2.6 below).</p>

E2.6 Tips for completing and submitting the online application form

Introduction

This section gives general guidance on completing and submitting the online application form for a pro-forma HPMV overlength permit.

For more help with using the permit portal, refer to the user guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

Route information not required for pro-forma applications

If you are applying only for a pro-forma overlength permit and you are not also applying for a higher mass permit at the same time, then you do **not** need to:

- complete any route details on the application form, or
- attach a route description to the application.

You can simply leave the fields shown below blank and advance to the next part of the application form.

Please include a road name and number for the "Route From" and "Route To" fields below.

Route From: [Text Box] Route To: [Text Box]

Route From Postal Code: [Text Box] Route To Postal Code: [Text Box]

Return Trip: Yes No

Route Description: [Text Area]

Route Description Attachment: [Text Box] Valid file types include: jpeg, png, gif, bmp, pdf, xls,xlsx, doc, docx. Files cannot be larger than 20 MB.

Note: You do need to **select a region** on top of the General Information page. If you are travelling through more than one region, select the region where your journey starts.

Step 2 - General Information

Select a Company: Good Trucking Company [Dropdown Arrow]

Region * Auckland [Dropdown Arrow]

If travelling through more than one region, please select the originating region.

Continued on next page

E2.6 Tips for completing and submitting the online application form continued

Attaching required documents

Waka Kotahi does not process incomplete applications.

Before submitting your application, use this checklist to confirm that you have attached all required documents:

- A separate HPMV attributes check sheet for each vehicle unit applied for (or a 50MAX combination attributes check sheet)
 - If you have older attributes check sheets that do not include SRT information, electronic copies of SRT compliance certificates for each trailer on the application, and
 - A pro-forma vehicle design diagram with the dimensions of your vehicle.
-

Submitting the form

Before you can submit the application, you must accept a privacy statement and declare that the details you have provided in the application are true and correct.

Check the relevant tick boxes and then click on **Submit**.

Note: By selecting the tick box you are making a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.

Legislation reference: Land Transport Act 1998, section 44.

Third party applicants

Third party applicants applying for an overlength permit on behalf of a transport operator are bound by the declaration on the application form. They must ensure that they are duly authorised to make the application and that the particulars on the application are complete, true and correct to the best of their knowledge.

Third party applicants must forward all relevant information, terms and conditions to the eventual user of the permit.

Help

If you need help with applying for an overlength permit, call Waka Kotahi's contact centre on (0800) 699 000 or email OPIA@nzta.govt.nz.

E2.7 Permit fee and processing times

Permit fee	For the standard permit fees, see section A2.5 in <i>Part A: Introduction to VDAM permits</i> in this volume.
Permit processing times	<p>Waka Kotahi makes every effort to expedite the processing of HPMV permit applications.</p> <p>In general, pro-forma overlength permits are issued within 10 working days. Multiple vehicle applications may take longer to process.</p> <p>For information on processing times for other HPMV permit types see section A2.6 in <i>Part A: Introduction to VDAM permits</i> in this volume of the manual.</p>

Chapter E3: How to apply for a non pro-forma (one-off) HPMV overlength permit

Overview

About this chapter

This chapter describes the permitting process for non pro-forma (one-off) overlength HPMVs. It explains the requirements that must be met to obtain initial approval for a one-off design and how to apply for a permit for such a design.

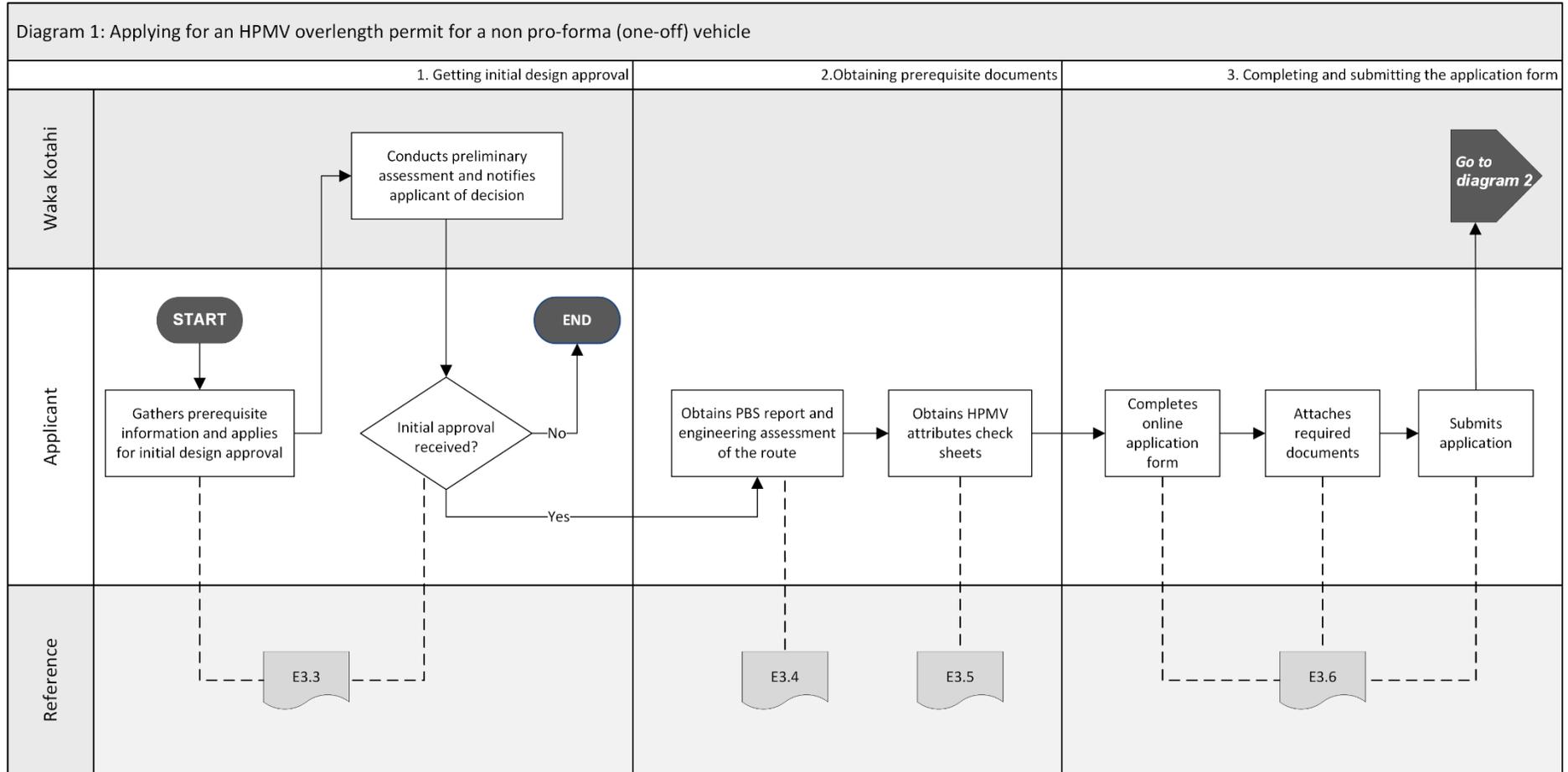
In this chapter

This chapter contains the following sections:

Section	See page
E3.1 Overview diagrams of the non pro-forma (one-off) permitting process	E3-2
E3.2 Requirements for non pro-forma (one-off) overlength HPMV designs	E3-4
E3.3 Applying for initial design approval in principle	E3-5
E3.4 Obtaining a PBS report and route assessment	E3-8
E3.5 Obtaining HPMV attributes check sheets	E3-9
E3.6 Completing and submitting a non pro-forma permit application	E3-10

E3.1 Overview diagrams of the non pro-forma (one-off) permitting process

Applying for a non pro-forma permit This diagram shows the steps involved in applying for an overlength permit for a non pro-forma vehicle with a one-off design.

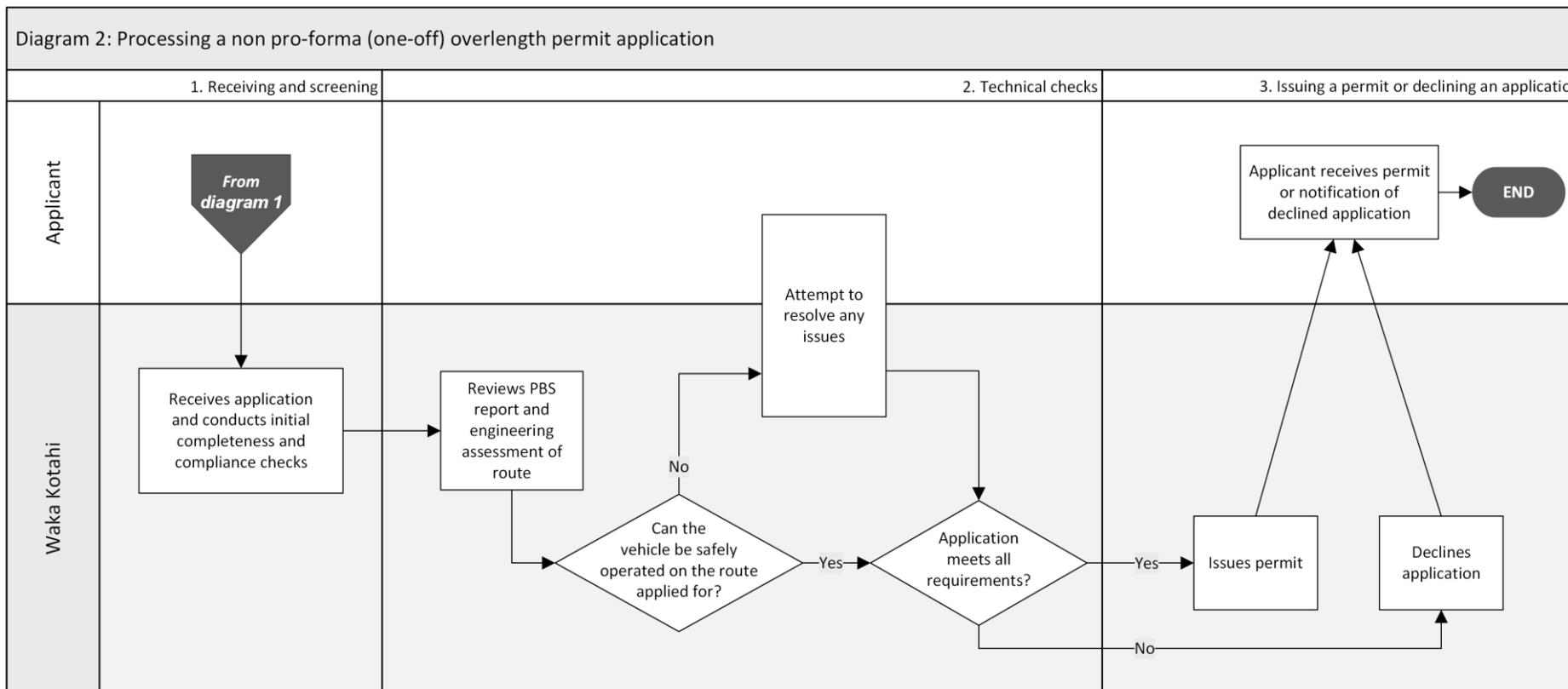


Continued on next page

E3.1 Overview diagrams of the non pro-forma (one-off) permitting process continued

Processing non pro-forma permit applications

This diagram gives an overview of how Waka Kotahi processes a non pro-forma overlength permit application. Full details can be found in *Part E: Processing HPMV overlength permit applications* in volume 2 of this manual.



E3.2 Requirements for non pro-forma (one-off) overlength HPMV designs

Permit eligibility of one-off designs

You may apply for a non pro-forma overlength permit if:

- you require a non-standard, customised, one-off design for a specific freight task, such as carrying a specialist load
- the existing pro-forma designs are not suitable and your vehicle design is too specialised for wider industry uptake
- the vehicle is intended to travel on a short and defined route (eg 5–10km between a port and a nearby storage site), and
- the individual vehicle units that make up the combination, when broken down, either have standard dimensions or conform to an existing pro-forma design.

If **all** the above requirements are met, Waka Kotahi may consider issuing an overlength permit for a one-off design.

Alternative: New pro-forma

Waka Kotahi will not consider non pro-forma permit applications for vehicles intended to carry general freight or have access to the wider network. In such cases, it may consider approval of a new pro-forma design if there is wider industry support for a new design. For details see section *E1.3 Approval process for new pro-forma designs*.

Four-stage application process

The process of applying for a non pro-forma overlength permit involves the following four stages:

5. Applying for initial design approval in principle
6. Obtaining a PBS report and route assessment
7. Obtaining HPMV attributes check sheets, and
8. Completing and submitting a permit application.

Stages 1 to 3 are prerequisites before completing and submitting a non pro-forma permit application.

Each of the four stages is described in detail in the following sections.

E3.3 Applying for initial design approval in principle

Criteria

In the first instance, an operator or manufacturer must submit their intended design to Waka Kotahi for initial approval in principle.

Waka Kotahi may grant design approval in principle if, after an initial assessment, it is satisfied that the proposed one-off design:

- is needed for a specific purpose
- is likely to meet all or most PBS
- can safely travel on the proposed route, and
- the individual vehicle units that make up the combination, when broken down, have standard dimensions or conform to an existing pro-forma design.

Note: An initial design approval is no guarantee that the design will be granted a permit. Even if a vehicle meets all or most PBS requirements, there are additional traffic engineering considerations that could mean that the vehicle cannot safely be operated on the intended route.

Prerequisite information

You need to gather the following information and documents before you can apply to Waka Kotahi for initial design approval:

Prerequisite information	Details required
General information	Provide the following details in an email or letter: <ul style="list-style-type: none"> <input type="checkbox"/> Operator details, including company name, contact person and contact details. <input type="checkbox"/> A description of the specific load the vehicle is to carry. <input type="checkbox"/> Reasons why a standard or pro-forma design is not suitable for the intended load.

Continued on next page

E3.3 Applying for initial design approval in principle

continued

Prerequisite information (continued)

Prerequisite information (cont'd)	Details required
Vehicle information	<p>Attach a schematic diagram of the proposed vehicle combination with the following details clearly indicated:</p> <ul style="list-style-type: none"> <input type="checkbox"/> overall length <input type="checkbox"/> forward distance <input type="checkbox"/> front and rear overhang <input type="checkbox"/> rear trailing unit distance <input type="checkbox"/> articulated vehicle point of attachment <input type="checkbox"/> tow coupling position <input type="checkbox"/> coupling point distance <input type="checkbox"/> inter-vehicle spacing <input type="checkbox"/> axle spacings <input type="checkbox"/> gross mass and individual axle masses, and <input type="checkbox"/> any special features, such as steering axles or bogies.
Route information	<p>Provide a detailed description of the intended route, specifying all roads plus entry and exit points.</p> <p>Alternatively, a large-scale map with the route clearly marked is acceptable.</p>

Applying for initial design approval

When you have gathered the prerequisite information above, follow the steps below to submit an application for initial design approval.

Step	Action
1	Write an email with the subject line Initial approval request for non pro-forma HPMV design
2	In the body of the email, cover the general information described in the table above.
3	Attach a diagram of the vehicle that includes all the required vehicle information.

Continued on next page

E3.3 Applying for initial design approval in principle

continued

Applying for initial design approval (continued)

Step	Action
4	Include the route information either in the email or in a separate attachment.
5	When you are satisfied that you have covered all the required information, send the email and attachments to proforma@nzta.govt.nz .

Next step

Waka Kotahi will endeavour to respond to your initial design approval application within 20 working days.

If you receive initial design approval, continue with the next section *E3.4 Obtaining a PBS report and route assessment*.

E3.4 Obtaining a PBS report and route assessment

Introduction

If you receive initial approval from Waka Kotahi for a one-off non pro-forma design, the approval notification will direct you to obtain a PBS report and route assessment from an engineering consultancy.

PBS report

A PBS report is a detailed analysis of the vehicle design against Waka Kotahi approved performance based standards (PBS).

For details see *Performance based standards (PBS)* in section E1.2.

Engineering assessment of the route

An engineering route assessment must consider the specific features of the route the non pro-forma design will travel on, including (but not limited to) factors such as:

- traffic density
- road geometry
- entry and exit points (eg turnouts)
- the layout of each intersection along the proposed route, and
- signal layouts and times.

The route assessment must confirm to Waka Kotahi's satisfaction that the vehicle fits on the path of a standard vehicle along the desired route. In other words, it must be able to stay in its lane without crossing the centre line.

Multiple identical vehicles

If you are applying for multiple permits for identical non pro-forma combinations that all travel on the same route, you need only one PBS report and one route assessment for the combination.

You can also apply for up to five identical trailers on the one application – see section *E2.4 Applying for multiple identical vehicles*.

E3.5 Obtaining HPMV attributes check sheets

Attributes check sheets required

A permit application for a non pro-forma HPMV must be accompanied by a separate HPMV attributes check sheet for each vehicle unit applied for.

Alternatively, a 50MAX combination attributes check sheet for the vehicle combination is also acceptable.

Where to obtain attributes check sheets

You can obtain attributes check sheets from Waka Kotahi approved heavy vehicle specialist certifiers. The sheets must be completed and signed by a specialist certifier to demonstrate that the vehicle meets safety requirements.

Waka Kotahi approved heavy vehicle specialist certifiers are listed at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers/.

SRT compliance certificates

If you are using HPMV/ISO permit attributes check sheets for each vehicle unit, refer to the version number on the attributes check sheets you intend to submit with the permit application.

If the version is older than version 5 or 5A, you must obtain electronic copies of the SRT compliance certificates and submit them with your HPMV overlength permit application **in addition** to the attributes check sheets.

This is required because older attributes check sheets do not contain SRT information.

Note: You do not need to check the version number of 50MAX combination attributes check sheets. All 50MAX attributes check sheets contain SRT information.

E3.6 Completing and submitting a non pro-forma permit application

Submitting a permit application

When you have completed the prerequisite tasks described in the previous sections, follow the steps below to complete and submit an application for an overlength permit for a non pro-forma (one-off) HPMV design.

Step	Action
1	<p>Ensure you have electronic copies on hand of the following required documents:</p> <ul style="list-style-type: none"> <input type="checkbox"/> detailed route description <input type="checkbox"/> HPMV attributes check sheets for each vehicle unit OR a 50MAX combination attributes check sheet for the combination <input type="checkbox"/> if you have older attributes check sheets that do not include SRT information, copies of SRT compliance certificates for each trailer on the application <input type="checkbox"/> a PBS report, and <input type="checkbox"/> an engineering assessment of the route.
2	<p>Go to Waka Kotahi's permit portal at https://hpmvpermits.nzta.govt.nz/home/permits.</p>
3	<p>Complete the Online HPMV Permit Application form on the portal with all the relevant details.</p> <p>Note: Route details are required for a non pro-forma permit application.</p>
4	<p>Attach all the required documents listed in step 1.</p>
5	<p>When you are satisfied that you have completed all required information, select the tick box to declare that the information in your application is true and correct and then click Submit.</p> <p>Result: You will receive an automatic email confirming that Waka Kotahi has received your application.</p> <p>If you do not receive a confirmation email, contact Waka Kotahi on the phone number below.</p>

Help

For assistance contact Waka Kotahi on 0800 699 000 or email OPIA@nzta.govt.nz.

Continued on next page

E3.6 Completing and submitting a non pro-forma permit application

continued

Permit fee and processing times

For the standard permit fees, see section A2.5 in *Part A: Introduction to VDAM permits* in this volume.

In general, non pro-forma overlength permit applications are processed within 20 working days. Multiple vehicle applications may take longer.

Note: This is in addition to the 20 working days you need to allow for obtaining initial design approval as explained in section E3.3 above. Also, some aspects of the permit issuing process are outside the control of Waka Kotahi, for example, when local council approvals for the use of local roads need to be obtained.

Vehicle dimensions and mass permitting manual (volume 1)

Part F

HPMV 50MAX permits

Current as at 1 February 2021

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For all amendments to volume 1, please refer to the 'Record of amendments' at the start of volume 1.

Edition/ Amendment	Description of changes in this part	Effective date
2nd edition, amendment 4	<p>F2.7 Permit processing time: Due to increased volumes and the requirement for more in-depth operator compliance checks, the target time for processing HPMV 50MAX permits has been extended to 10 days.</p>	1 February 2021
2nd edition, amendment 2	<p>Updates reflect changes from the introduction of new performance based standards (PBS) by the Transport Agency in May 2019.</p> <p>Revisions also include minor clarifications and removal of dated information.</p> <p>Updated sections in amendment 2:</p> <p>Overview – 45/46t without a permit: Dated information about route restrictions removed.</p> <p>F1.1 50MAX vehicle requirements</p> <ul style="list-style-type: none"> • <i>Non pro-forma designs:</i> The Transport Agency may consider new 50MAX pro-forma designs but one-off exceptions are no longer eligible for a 50MAX permit. • <i>Maximum gross mass available:</i> Weight bands for 44,000–46,000kg, which are now available for general access without a permit, have been removed from the table. <p>F2.5 Submitting a 50MAX permit application form:</p> <ul style="list-style-type: none"> • New Zealand business number (NZBN) added to application checklist • Clarification added that false statements on the application form may incur penalties. • Third party applicant responsibilities clarified. 	1 June 2020

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Part F: HPMV 50MAX permits

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* describes Waka Kotahi NZ Transport Agency's policy for issuing high productivity motor vehicle (HPMV) 50MAX permits. It includes information on:

- 50MAX permit requirements, and
 - how to apply for a 50MAX permit.
-

Audience

The intended audience for this part is:

- transport operators who require an HPMV 50MAX permit
 - third party applicants (eg vehicle manufacturers or consultants) applying for permits on behalf of transport operators
 - Transport Agency staff involved in processing 50MAX permit applications
 - designers and manufacturers of vehicles that might operate under an HPMV 50MAX permit, and
 - enforcement agents such as the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.
-

Related information

For general information about permits to exceed mass and dimension limits, refer to *Part A: Introduction to vehicle dimensions and mass permits* in this volume of the manual.

Detailed information on other HPMV permit types can be found in the following parts in this volume:

- *Part D: HPMV higher mass permits*, and
 - *Part E: HPMV overlength permits*.
-

Continued on next page

Introduction continued

Terminology and abbreviations

Specific terminology and abbreviations are used throughout this manual. For definitions and explanations, see *Part I: Definitions and glossary* in this volume of the manual.

In this part

This part contains the following chapters:

Chapter	See page
Chapter F1: HPMV 50MAX permit requirements	F1-1
Chapter F2: How to apply for an HPMV 50MAX permit	F2-1

Chapter F1: HPMV 50MAX permit requirements

Overview

About this chapter

This chapter describes the requirements for obtaining an HPMV 50MAX permit and for operating under such a permit.

What is an HPMV 50MAX permit?

An HPMV 50MAX permit is a permit to exceed standard mass limits for eligible high productivity motor vehicles (HPMVs).

To be eligible for a 50MAX permit, an HPMV must conform to a '50MAX ready' pro-forma design approved by the Transport Agency and carry no more than a total weight of 50 tonnes.

For details see section *F1.1 50MAX vehicle requirements*.

Legal basis

HPMV 50MAX permits are issued under section 5.9 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule).

45/46t without a permit

The VDAM Rule allows for gross mass limits above 44,000kg without a permit as follows:

- 45,000kg (45 tonne) for 7-axle combinations with a minimum wheelbase of 16.8m, and
- 46,000kg (46 tonne) for 8-axle combinations with a minimum wheelbase of 17.4m.

Until 30 November 2017, travel at the above limits was restricted to approved routes published on the Transport Agency's website.

From 1 December 2017, eligible vehicles operating at these limits have general access on all local roads and state highways, except where restrictions are posted.

Legislation reference: VDAM Rule section 4.3(11) and schedule 3, part 2, table 2.2.

Continued on next page

Overview continued

Overlength permit

In addition to a 50MAX permit for exceeding standard mass limits, 50MAX vehicles generally also require an HPMV overlength permit (ie a permit to exceed standard length limits). These two permits are issued as separate documents that must be carried together in the vehicle during travel.

Note: You can apply for an overlength permit and a 50MAX permit at the same time and on the same application form. For details see *Chapter F2: How to apply for an HPMV 50MAX permit*.

In this chapter

This chapter contains the following sections:

Section	See page
F1.1 50MAX vehicle requirements	F1-3
F1.2 50MAX route requirements	F1-6

F1.1 50MAX vehicle requirements

50MAX pro-forma designs	<p>The Transport Agency has approved a number of ‘50MAX ready’ pro-forma designs of vehicle combinations that meet the requirements for 50MAX permits.</p> <p>The 50MAX pro-forma designs are slightly longer than standard 44-tonne vehicles, have nine or ten axles and are capable of carrying a total weight of up to 50 tonnes.</p> <p>Because of the load distribution over more axles in a vehicle that conforms to a 50MAX pro-forma design, there is no additional wear on road pavements per tonne of freight compared with a standard 44-tonne vehicle. However, 50MAX HPMVs still require a permit to operate because they exceed standard mass limits.</p> <p>50MAX pro-forma designs can be found on the Transport Agency’s website at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/50max-proforma-designs/.</p>
Non pro-forma vehicles	<p>If you have a vehicle design that does not comply with a 50MAX pro-forma design, you may apply to the Transport Agency to get the design of your vehicle accepted as a new 50MAX pro-forma design.</p> <p>The Transport Agency may consider approving a new pro-forma design if there is wider industry support for the new design.</p> <p>Note: One-off exceptions to the 50MAX pro-forma designs are not eligible for a 50MAX permit.</p> <p>Contact the Transport Agency on info50MAX@nzta.govt.nz or call 0800 699 000 for more information.</p>
50MAX tyre requirement	<p>Drive axles on the prime mover and all trailer axles must be twin-tyred to meet the 50MAX requirement for neutral pavement wear.</p>
Vehicles must be registered	<p>A prerequisite for a 50MAX permit is that all vehicle units applied for must be registered.</p> <p>Vehicle identification numbers (VINs) are not accepted for 50MAX permit applications.</p>
Vehicle attributes check	<p>To ensure a 50MAX vehicle is capable of exceeding standard mass limits and can be operated safely, the Transport Agency requires a vehicle attributes check with every permit application.</p>

Continued on next page

F1.1 50MAX vehicle requirements continued

Vehicle attributes check

(continued)

The attributes check confirms that:

- the vehicle combination conforms to a 50MAX pro-forma design
- the vehicle combination has the required safety features to be operated safely (eg electronic braking systems and stability control), and
- all vehicle units are capable of carrying a heavier load within their certifications.

Approved certifiers

The checks must be carried out by a Transport Agency approved heavy vehicle specialist certifier. Approved certifiers are listed on the Transport Agency's website at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers.

Certifiers must complete a specified 50MAX combination attributes check sheet **for every vehicle combination applied for**.

Divisible and indivisible loads

Vehicles may carry divisible or indivisible loads under a 50MAX permit.

Maximum gross mass available

The maximum gross mass a vehicle can carry under a 50MAX permit depends on the spacing from its first to its last axle, as shown in this table:

Distance from the centre of the first axle to the centre of the last axle	Maximum gross mass (kg)
18.0m but less than 18.6m	47,000
18.6m but less than 19.4m	48,000
19.4m but less than 20.0m	49,000
20.0m or more	50,000

How to measure axle spacings

It is important to accurately measure axle spacings when applying for a 50MAX permit. Axle spacings are recorded on the permit and will be enforced by the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.

Axle spacings should be measured on the laden vehicle from the centre of the first axle to the centre of the last axle. For details see section *D3.3 How to measure axle spacings* in part D of this volume.

Continued on next page

F1.1 50MAX vehicle requirements continued

Retractable axles

Retractable axles (including suspensions that transfer load from one axle to others outside of load sharing requirements) must not be fitted on 50MAX vehicles, unless configured to only retract when the vehicle is unladen. Such axles must also comply with all other legal requirements for retractable axles.

'H' sign must be displayed

Vehicles operating under a 50MAX permit must display the yellow high productivity motor vehicle sign (the 'H' sign).

For details see section *D1.4 'H' sign requirements and specifications* in part D of this volume.

F1.2 50MAX route requirements

50MAX network

A 50MAX permit allows vehicles to travel on any road within the 50MAX networks **except** over structures and roads specifically listed as restricted in the 50MAX route maps issued by the Transport Agency.

50MAX route maps

The Transport Agency provides detailed maps on its website that show where 50MAX vehicles can safely travel. The maps also show which roads have restrictions and are not suitable for 50MAX vehicles.

The Transport Agency updates the maps monthly as more local road controlling authorities (RCAs) open up their networks and restricted structures are upgraded. New restricted structures may also be added from time to time.

The maps of 50MAX routes can be found on the Transport Agency's website at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/map-of-50max-routes/.

For guidance on how to use the maps, see section *F2.4 Checking for 50MAX route restrictions*.

Local roads

The majority of local road controlling authorities (RCAs) have delegated authority to issue 50MAX permits for roads under their control to the Transport Agency.

In areas where the local RCA has not delegated permit issuing authority to the Transport Agency, operators need to apply for HPMV higher mass permits from the relevant local RCAs if their route involves local roads.

To find out in which local RCAs you have to apply for a separate permit to use local roads, refer to the '50MAX Restricted Road Controlling Authorities' section in the **PDF versions** of the 50MAX maps on the Transport Agency's website.

Operator's responsibility

Under section 3.1(2) of VDAM Rule, vehicle operators must ensure that their vehicles and their loads:

- are manoeuvrable
- fit safely on a road, and
- interact safely with road users.

In addition to this general requirement, operators on a 50MAX permit must comply with any route restrictions listed in the current version of the 50MAX maps on the Transport Agency's website. This is specified as a set of conditions for routes and structures on the 50MAX permit.

Continued on next page

F1.2 50MAX route requirements continued

**Operator's
responsibility**
(continued)

Operators and their drivers must regularly check the Transport Agency's maps of 50MAX routes before travel to confirm that their intended route is open to 50MAX vehicles.

They must also comply with any restrictions imposed by a local RCA on roads or structures under its control (for example, individual bridge postings).

Chapter F2: How to apply for an HPMV 50MAX permit

Overview

About this chapter

This chapter explains how to apply for an HPMV 50MAX permit. It is intended to guide applicants through the process of:

- gathering prerequisite documentation
 - checking for any 50MAX route restrictions, and
 - submitting an application.
-

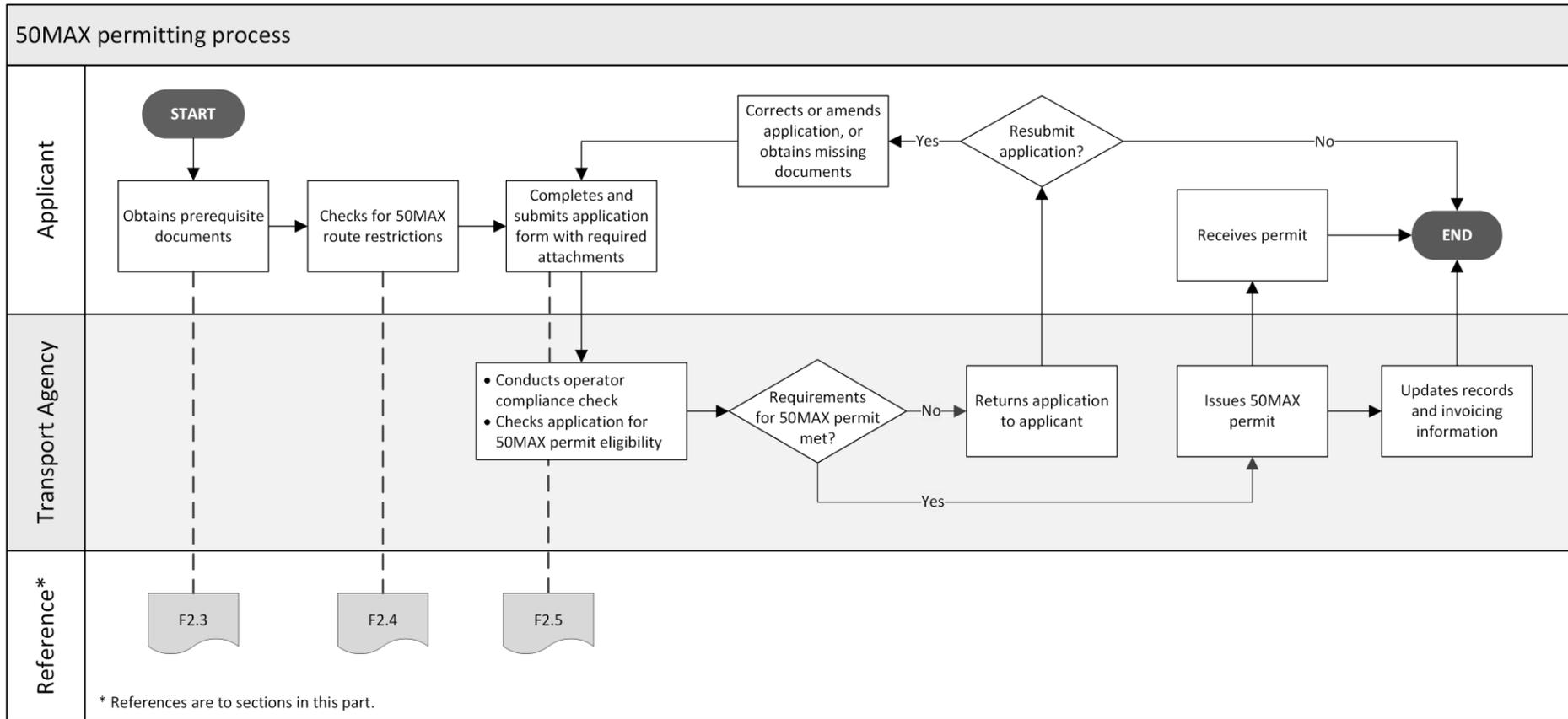
In this chapter

This chapter contains the following sections:

Section	See page
F2.1 Overview diagram of 50MAX permitting process	F2-2
F2.2 Applying for multiple identical vehicles	F2-3
F2.3 Obtaining prerequisite documents	F2-4
F2.4 Checking for 50MAX route restrictions	F2-6
F2.5 Completing and submitting the 50MAX application form	F2-10
F2.6 Renewing a 50MAX permit	F2-17
F2.7 Processing time and permit fee	F2-19

F2.1 Overview diagram of 50MAX permitting process

Diagram This diagram gives a high-level overview of the 50MAX permitting process.



F2.2 Applying for multiple identical vehicles

Multiple trailers	You may apply for a 50MAX permit for one prime mover and up to five identical trailers on the same application.
Criteria for identical vehicles	<p>To be considered identical, vehicles must meet the following requirements:</p> <ul style="list-style-type: none">• Trailers must have:<ul style="list-style-type: none">– identical axle spacings– the same tyre size, and– identical inner and outer wheel tracks.• All units in the combination (including the prime mover) must have, for the load applied for, sufficient:<ul style="list-style-type: none">– GVM– axle ratings– maximum towed mass (MTM), GCM, 5th wheel, tow ball ratings, etc, where applicable, and– brake capacity.
Accurate measurements	<p>Axle spacings on a permit will be enforced by the Commercial Vehicle Safety Team (CVST) of the New Zealand Police. Breaches may result in fines.</p> <p>It is therefore important that you provide accurate measurements on your permit application. See section <i>D3.3 How to measure axle spacings</i> in part D of this volume.</p>

F2.3 Obtaining prerequisite documents

Prerequisite documents

Before submitting an application for a 50MAX permit, you must obtain and prepare the following prerequisite documents:

1. a completed and signed 50MAX combination attributes check sheet for each vehicle combination you are applying for, and
2. a 50MAX ready pro-forma vehicle design that matches your vehicle combination and shows its dimensions.

The specific requirements for these documents are described below.

1. HPMV attributes check sheet for 50MAX

You must obtain a 50MAX combination attributes check sheet for your vehicle combination from a Transport Agency approved heavy vehicle specialist certifier. The attributes check sheet confirms that your vehicle can safely operate at up to 50 tonnes.

A list of Transport Agency approved heavy vehicle specialist certifiers can be found at www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers.

Note: The Transport Agency has issued a 50MAX-specific combination attributes check sheet to approved certifiers. You should confirm with certifiers that they have the correct attributes check sheet for 50MAX permits.

Only the correct 50MAX combination attributes check sheets will be accepted with your application.

Separate attributes check sheets for multiple combinations

When you apply for a 50MAX permit, you must submit a separate 50MAX combination attributes check sheet **for each vehicle combination** on your application form.

Each attributes check sheet must be completed and signed by a certifier.

2. 50MAX ready pro-forma vehicle designs

You must submit a Transport Agency approved 50MAX pro-forma design diagram that matches your vehicle combination and includes its dimensions together with your application.

Note: Only one pro-forma diagram is required per application because all trailers that are on the permit with the prime mover must be identical in design, performance and dimensions.

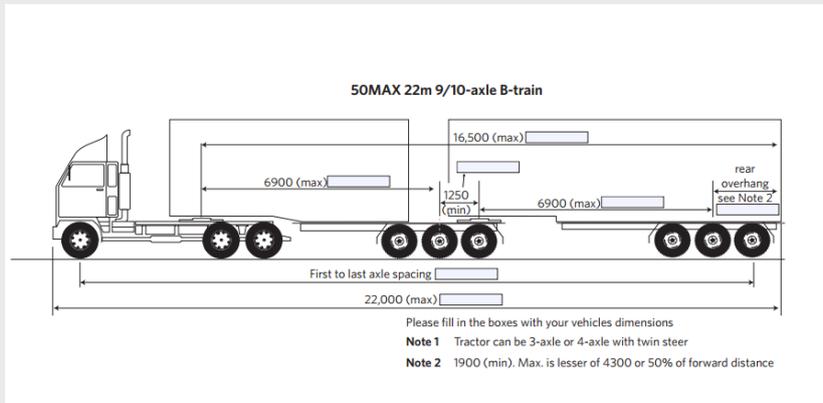
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F2.3 Obtaining prerequisite documents continued

2. 50MAX ready pro-forma vehicle designs

(continued)

Follow the steps below to download a 50MAX pro-forma design from the Transport Agency's website and complete it with your vehicle's dimensions.

Step	Action
1	Go to the 50MAX pro-forma designs page on the Transport Agency's website at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/50max-proforma-designs/ .
2	Scroll down the page and identify the design that matches your vehicle combination.
3	Click on the blue download link to a PDF file below the drawing. Result: A PDF document with the drawing and interactive fields opens in your browser.
4	Enter the relevant dimensions from your vehicle combination in the interactive fields (the grey fields in the image below).  <p>Please fill in the boxes with your vehicles dimensions Note 1 Tractor can be 3-axle or 4-axle with twin steer Note 2 1900 (min). Max. is lesser of 4300 or 50% of forward distance</p>
5	Save a copy of the PDF file on your computer or local network. Note: You need the saved version of the file with your vehicle combination's dimensions so you can attach it to your 50MAX permit application.

F2.4 Checking for 50MAX route restrictions

Two types of map

There are two types of map on the Transport Agency's website to check for route restrictions:

1. **The 50MAX interactive map:** This is a web-based map that allows you to search for destinations and zoom in and out to identify a suitable route around the displayed bridge restrictions.

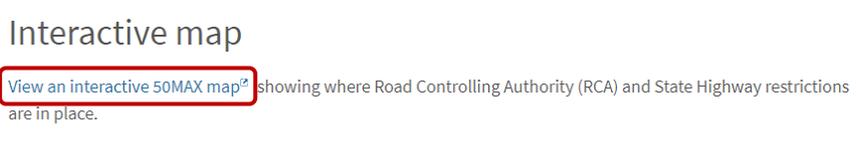
This map is the best tool for planning your route because it provides the greatest level of detail.

2. **The 50MAX 'book of maps':** These are PDF maps that you can print out. They include lists of restricted structures and roads as well as restricted local roads.

How to use these maps to check for route restrictions is described below.

1. How to use the 50MAX interactive map

Follow the steps below to check for route restrictions on the 50MAX interactive map.

Step	Action
1	Go to www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/map-of-50max-routes/ .
2	<p>Click on View an interactive 50MAX map:</p>  <p>Result: The 50MAX interactive map opens in a new window in your browser.</p>

Continued on next page

F2.4 Checking for 50MAX route restrictions continued

1. How to use the 50MAX interactive map (continued)

Step	Action
3	<p>In the interactive map, click on the Legend icon on the left:</p>  <p>Result: Explanations for the coloured symbols in the map are displayed.</p>
4	<p>Check your desired route on the map for any restricted structures or local roads.</p> <p>Tips:</p> <ul style="list-style-type: none"> You can quickly zoom to a location by typing the name in the search field. Click on the coloured symbols on the map for more details about restrictions. <p>Important: Remember that it is your responsibility to ensure you can complete your planned journey from origin to final destination on unrestricted roads.</p>

Continued on next page

F2.4 Checking for 50MAX route restrictions continued

2. How to use the 50MAX book of maps

Follow the steps below to check for route restrictions on the PDF 50MAX book of maps.

Note: It is recommended that you use the interactive 50MAX map for the detailed planning of your route and use the PDF maps primarily to print maps for the driver to carry in the cab.

Step	Action
1	Go to www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/map-of-50max-routes/ .
2	<p>Scroll down the page to the '50MAX book of maps' heading.</p> <div data-bbox="603 779 1082 1547" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">50MAX book of maps</p> <p style="text-align: center;">All maps last updated: 24 February 2020</p> <ul style="list-style-type: none"> • North Island [PDF, 10 MB] • South Island [PDF, 4.9 MB] <p>North Island maps</p> <ul style="list-style-type: none"> • Northland [PDF, 932 KB] • Auckland [PDF, 455 KB] • Waikato [PDF, 2.3 MB] • Bay of Plenty [PDF, 1.5 MB] • Gisborne [PDF, 340 KB] • Hawke's Bay [PDF, 1.1 MB] • Taranaki [PDF, 966 KB] • Manawatū and Whanganui [PDF, 2.1 MB] • Wellington [PDF, 1.8 MB] </div> <p>Note that in addition to maps for the entire North and South Islands, there are also smaller maps for specific regions.</p>
3	<p>Click on the region name that covers your planned journey.</p> <p>Result: A PDF file with maps and numbered route restrictions opens in your browser.</p>

Continued on next page

F2.4 Checking for 50MAX route restrictions continued

2. How to use the 50MAX book of maps (continued)

Step	Action
4	<p>Carefully check the map and identify any restrictions indicated by red crosses on your desired route.</p>  <p>Note: If you are unfamiliar with the route, look for the number next to the red cross and look it up in the tables in the PDF file that list the numbers and the name of the restricted bridge or road.</p>
5	<p>Scroll through the PDF file and carefully check the sections listing restrictions (if any):</p> <ul style="list-style-type: none"> – local road 50MAX bridge restrictions, and – state highway 50MAX restrictions.
6	<p>If your initial choice of route includes restrictions, find an alternative route without restrictions.</p> <p>Important: Remember that it is your responsibility to ensure you or your driver can complete your planned journey from origin to final destination on unrestricted roads.</p>
7	<p>Print the PDF file to give to your driver for reference, if necessary.</p>

F2.5 Completing and submitting the 50MAX application form

Online form

The 50MAX permit application form must be completed and submitted on the Transport Agency's website. The Transport Agency does not accept printed copies of the form.

Before you access the application form

You must complete the online application form **in one session**, or else you will lose information that you have entered. So before you access the application form, ensure you have the following information and documents at hand:

- Electronic copies of the completed and signed 50MAX HPMV combination attributes check sheets (one for each vehicle combination applied for).
 - An electronic copy of the relevant 50MAX pro-forma design completed with the dimensions of your vehicle combination.
 - Your TSL number, New Zealand business number (NZBN, if available) and company contact details.
 - The registration numbers of all vehicle units.
 - The overall length of your vehicle combination and distance from the first to the last axle (which determines the maximum gross mass you can apply for – see *Maximum gross mass available* in section F1.1).
 - The origin and the destination of the route you expect to use most frequently.
-

Continued on next page

F2.5 Completing and submitting the 50MAX application form continued

Accessing and completing the application form

Follow the steps below to access the online 50MAX application form.

Note: You cannot download or save the application form and must complete it in one session, or else you will lose any information you have entered.

Step	Action																								
1	Go to www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/application-form/ .																								
2	<p>Complete all required fields in the form, which are marked with a red asterisk (*).</p> <div data-bbox="568 797 1428 1350" data-label="Form"> <p>50MAX Application form</p> <p>Application for a 50MAX Permit to exceed mass limits</p> <p>This information request is required to process an application for a High Productivity Motor Vehicle Permit under the Land Transport Rule: Vehicle Dimensions and Mass 2016.</p> <p>If your application is successful a Permit will be issued for the specified vehicle combination to operate, subject to the Terms and Conditions of the Permit, as a High Productivity Motor Vehicle within a specified region at higher mass and if required a Permit to operate as over length nationwide.</p> <p>Note: All fields marked with (*) are mandatory.</p> <p>Company details</p> <table border="0"> <tr> <td>TSL no: *</td> <td><input type="text"/></td> <td>TSL company name: *</td> <td><input type="text"/></td> </tr> <tr> <td>New Zealand Business Number(NZBN):</td> <td><input type="text"/></td> <td>Contact name: *</td> <td><input type="text"/></td> </tr> <tr> <td>Email address: *</td> <td><input type="text"/></td> <td>Confirm email address: *</td> <td><input type="text"/></td> </tr> <tr> <td>Billing address: *</td> <td><input type="text"/></td> <td>Town/City: *</td> <td><input type="text"/></td> </tr> <tr> <td>Contact ph no: * (eg 04 801 1234)</td> <td><input type="text"/></td> <td>Contact ph no:</td> <td><input type="text"/></td> </tr> <tr> <td>Purchase order no. or reference: *</td> <td><input type="text"/></td> <td></td> <td></td> </tr> </table> <p><small>(this will appear on your invoice)</small></p> </div>	TSL no: *	<input type="text"/>	TSL company name: *	<input type="text"/>	New Zealand Business Number(NZBN):	<input type="text"/>	Contact name: *	<input type="text"/>	Email address: *	<input type="text"/>	Confirm email address: *	<input type="text"/>	Billing address: *	<input type="text"/>	Town/City: *	<input type="text"/>	Contact ph no: * (eg 04 801 1234)	<input type="text"/>	Contact ph no:	<input type="text"/>	Purchase order no. or reference: *	<input type="text"/>		
TSL no: *	<input type="text"/>	TSL company name: *	<input type="text"/>																						
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Contact ph no: * (eg 04 801 1234)	<input type="text"/>	Contact ph no:	<input type="text"/>																						
Purchase order no. or reference: *	<input type="text"/>																								
3	Follow the instructions in the form for attaching required documents (ie attributes check sheets and pro-forma design diagram – see <i>F2.3 Obtaining prerequisite documents</i>).																								

For more guidance on completing the application form refer to the rest of this section.

Continued on next page

F2.5 Completing and submitting the 50MAX application form continued

Applying for an overlength permit

Most vehicle combinations eligible for a 50MAX permit require an HPMV overlength permit (ie a permit to exceed length limits) in addition to the 50MAX permit.

If you already have an overlength permit for your vehicle, select the **I already have...** option in the 'Vehicle combination and mass details' section of the application form.

If you do not already have an overlength permit for your vehicle, select the **I do not have...** option. The Transport Agency will then issue an overlength permit together with the 50MAX permit.

Vehicle combination and mass details

You may apply for a single Prime Mover unit and up to 5 trailers.
Note: All trailer units must have identical dimensions and configuration.

You will require a HPMV Permit to Exceed Length Limits for each of the Vehicle Combinations you are applying for. If you already have this Permit for any of the vehicle combinations, you will not have to reapply. You need to apply for any of the vehicle combinations that do not have a HPMV Permit to Exceed Length Limits. (A HPMV Permit to Exceed Length Limits will be issued with your 50MAX Permit to Exceed Mass Limits)

Prime mover registration no: *
(Max 6 characters)

		Over Length HPMV Permits	
	Trailer 1 registration no: (Max 6 characters)	Trailer 2 (B train only) registration no: (Max 6 characters)	<input checked="" type="radio"/> I already have a HPMV permit to exceed length limits
			<input type="radio"/> I do not have a HPMV permit to exceed length limits

Vehicle combination 1: *

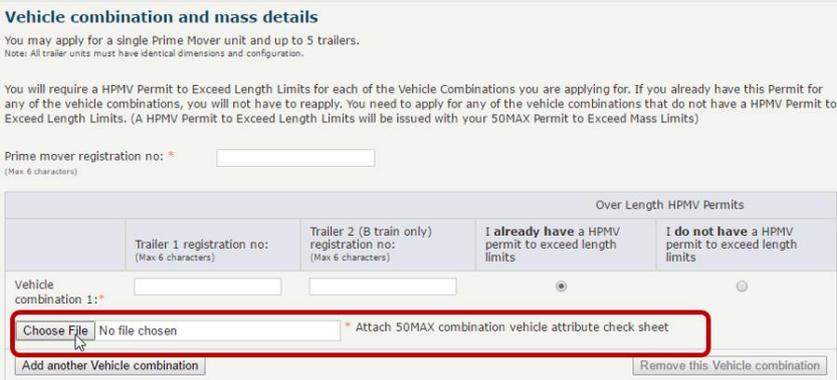
No file chosen * Attach 50MAX combination vehicle attribute check sheet

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F2.5 Completing and submitting the 50MAX application form continued

Attaching the 50MAX attributes check sheet(s)

Follow the steps below to attach the 50MAX combination attributes check sheet(s) to your application.

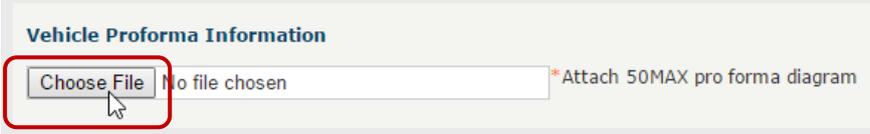
Step	Action
1	<p>In the 'Vehicle combination and mass details' section of the application form, click on Choose File (outlined in red below).</p>  <p>The screenshot shows the 'Vehicle combination and mass details' section. It includes a 'Prime mover registration no.' field, a table for 'Over Length HPMV Permits' with columns for 'Trailer 1 registration no.', 'Trailer 2 (B train only) registration no.', 'I already have a HPMV permit to exceed length limits', and 'I do not have a HPMV permit to exceed length limits'. Below this is a 'Vehicle combination 1' section with a 'Choose File' button, a 'No file chosen' text, and a '* Attach 50MAX combination vehicle attribute check sheet' label. There are also 'Add another Vehicle combination' and 'Remove this Vehicle combination' buttons.</p>
2	<p>In the dialog box that opens, select the attributes check sheet file from your system and click on Open.</p> <p>Result: The attributes check sheet will be uploaded and attached to your application when you submit it.</p>
3	<p>If you are applying for multiple vehicle combinations, click on Add another Vehicle combination to enter the registration numbers and upload more attributes check sheets.</p>
4	<p>To remove an attributes check sheet, click on Remove this Vehicle combination.</p>

Continued on next page

F2.5 Completing and submitting the 50MAX application form continued

Attaching a pro-forma design diagram

Follow the steps below to attach a 50MAX pro-forma design diagram to your application.

Step	Action
1	<p>Go to the 'Vehicle Proforma Information' heading on the application form and click on Choose File below the heading.</p> 
2	<p>In the dialog box that opens, select the file of the pro-forma diagram that you completed and saved earlier (as described in section F2.3 above) and click on Open.</p> <p>The pro-forma diagram will be uploaded and attached to your application when you submit it.</p>

Declaration and signature

By typing your name in the field at the bottom of the application form, you declare that the information you provided in the form is true and correct, and that you have read and understood all the notes in the application form.

As additional confirmation, you must also tick the box below the name field.



Note: By selecting the tick box, you are making a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.

Legislation reference: Land Transport Act 1998, section 44.

Continued on next page

F2.5 Completing and submitting the 50MAX application form

continued

Third party applicants

Third party applicants applying for a 50MAX permit on behalf of a transport operator are bound by the declaration on the application form. They must ensure that they are duly authorised to make the application and that the details provided are complete, true and correct to the best of their knowledge.

Third party applicants must forward all relevant information, terms and conditions to the eventual user of the permit.

Automatic summary email

The tick box to indicate that you wish to receive a summary of your application is selected by default.

Declaration and signatory

I declare that the particulars contained in this application are true and correct. I confirm I have read and understood all the notes in this application form.*

Name: *

Please tick the tick-box to indicate you agree with the declaration*

If you would like to receive a summary of this application via email, please check here

The summary email is a useful record of the information you submitted with your application, including attached documents.

If you do not wish to receive this automated email, uncheck the tick box.

Completeness check

To ensure your application can be processed quickly, double-check that you have completed all required fields on the application form and attached all required documents.

The Transport Agency will return your application and require you to resubmit it if it is incomplete or missing the necessary attachments.

Continued on next page

F2.5 Completing and submitting the 50MAX application form

continued

Submitting the form

Once you are satisfied that all information is complete and correct, click **Submit**.

Declaration and signatory

I declare that the particulars contained in this application are true and correct. I confirm I have read and understood all the notes in this application form.*

Name:

Please tick the tick-box to indicate you agree with the declaration *

If you would like to receive a summary of this application via email, please check here

Note: If you click **Cancel**, all information you entered into the form is cleared and any attached documents are removed.

Confirmation screen and email

If you have successfully submitted your application, a 'Thank you' confirmation page is displayed:

Application Form

Thank you

Thank you for submitting your application for a 50MAX permit to the NZ Transport Agency.

You will also receive a summary email of your application (unless you have unchecked the default option).

Note: If the 'Thank you' page is not displayed or you do not receive a confirmation email, the Transport Agency has not received your application.

Help

If you need help with a 50MAX permit application, email info50MAX@nzta.govt.nz or call the Transport Agency on 0800 699 000.

F2.6 Renewing a 50MAX permit

About renewals

To renew a 50MAX permit, you only need to complete a short renewal application form (see *Accessing and completing the renewal form* below).

Attributes check sheets or pro-forma design diagrams are not required with renewal applications.

You can renew up to two 50MAX permits at the same time.

Renewal or new application?

You can renew a 50MAX permit if:

- you are using the same vehicle combination(s) specified on your current permit
- there have been no modifications to the vehicle units
- total mass and axle spacings are the same as on the current permit, and
- you will travel in the same region(s) specified on the current permit.

If any of the above details has changed, you need to reapply for a new permit.

Required information

You must complete the 50MAX permit renewal application form in one session, or else you will lose all information that you have entered. So before you access the renewal form, ensure you have the following information and documents at hand:

- Your TSL number, New Zealand business number (NZBN) and company contact details.
 - The permit numbers of the permits you wish to renew (up to two permits per renewal application).
 - Electronic copies of the permits you wish to renew.
-

Accessing and completing the renewal form

You can access the 50MAX permit renewal application form at www.nzta.govt.nz/commercial-driving/high-productivity/50max/50max-information-for-operators-and-manufacturers/application-form-renewal/.

Complete all required fields in the online form and follow the instructions for uploading electronic copies of the permits you wish to renew.

Continued on next page

F2.6 Renewing a 50MAX permit continued

- Declaration** By selecting the tick box and typing your name in the Declaration section of the renewal form, you confirm that:
- the information you have provided is true and correct, and
 - the details of the vehicle combination have not been altered since the original 50MAX permit was issued.
- Note:** By entering your name and selecting the tick box, you are making a formal declaration under the Land Transport Act 1998. False statements may be prosecuted.
-

- Completeness check** Before you click on **Submit** on the renewal application form, double-check that you have:
- completed all required fields
 - attached electronic copies of the permits you wish to renew, and
 - selected the tick box and entered your name in the Declaration section at the bottom of the form.
- The Transport Agency will return your application and require you to resubmit it if it is incomplete or has missing or incorrect attachments.
-

- Help** If you need help with a 50MAX permit renewal application, email info50MAX@nzta.govt.nz or call the Transport Agency on 0800 699 000.
-

F2.7 Processing time and permit fee

Processing time	The Transport Agency aims to process your 50MAX permit application within 10 working days.
------------------------	--

Permit fee	When your 50MAX permit application has been processed, you receive an invoice for \$54.55 (excl. GST). The standard permit fee also applies to permit renewals and is charged for each permit issued.
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Vehicle dimensions and mass permitting manual (volume 1)

Part G

Specialist vehicle permits

Current as at 1 June 2020

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

The NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For all amendments to volume 1, please refer to the 'Record of amendments' at the start of volume 1.

Edition/ Amendment	Description of changes in this part	Effective date
2nd edition, amendment 2	<p>This part of the manual has been updated to reflect an amendment to the Land Transport Rule: Vehicle Dimensions and Mass 2016 that exempts buses with a load share ratio in a tandem axle set from the requirement to display a compliance plate.</p> <p>Changes also include minor clarifications.</p> <p>The following sections have been updated:</p> <p>G2.5 Preparing prerequisite documentation</p> <p>Acceptable evidence of the load share ratio in a tandem axle set to be submitted with a permit application now includes a letter from the vehicle manufacturer.</p> <p>G2.7 Completing and submitting a specialist vehicle permit application:</p> <ul style="list-style-type: none"> • Clarification added that false statements on the application form may incur penalties. • Third party applicant responsibilities clarified. 	1 June 2020

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Part G: Specialist vehicle permits

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* (volume 1) describes the NZ Transport Agency's policy for issuing permits for specialist vehicles to exceed general access mass limits. It includes information on:

- specialist vehicle permit requirements, and
- how to apply for a specialist vehicle permit.

Legislative basis

The legislative basis for a road controlling authority to issue specialist vehicle permits is set out in section 5.11 of the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule).

Audience

The intended audience for this part is:

- operators of specialist vehicles that require a permit to exceed prescribed axle mass limits
- Transport Agency staff and contractors involved in processing specialist vehicle permit applications
- local road controlling authorities, and
- enforcement agents such as the Commercial Vehicle Safety Team (CVST) of the New Zealand Police.

In this part

This part contains the following chapters:

Chapter	See page
Chapter G1: Specialist vehicle permit requirements	G1-1
Chapter G2: How to apply for a specialist vehicle permit	G2-1

Chapter G1: Specialist vehicle permit requirements

Overview

About this chapter

This chapter describes the requirements for obtaining a specialist vehicle permit from the Transport Agency and for operating under such a permit.

In this chapter

This chapter contains the following sections:

Section	See page
G1.1 General information about specialist vehicle permits	G1-2
G1.2 Specialist vehicle diagrams	G1-4
G1.3 Maximum axle mass limits under a specialist vehicle permit	G1-6
G1.4 Specialist vehicle operating requirements	G1-7

G1.1 General information about specialist vehicle permits

Legislative background

Until 2010, permits to exceed mass limits were available only to 'overweight' vehicles for transporting indivisible loads.

This changed in 2010 with an amendment to the VDAM Rule that introduced high productivity motor vehicle (HPMV) permits for divisible loads.

In 2015 and 2016, permits to exceed mass limits were introduced first to high capacity urban buses and then to a wider range of large passenger service vehicles.

The VDAM Rule 2016 broadened the eligibility for increased axle masses under a permit to a range of vehicle types referred to as 'specialist vehicles'. This category includes buses.

What are specialist vehicles?

Under the VDAM Rule, the following vehicle types are eligible for a specialist vehicle permit:

- passenger service vehicle (bus)
- concrete mixer
- ground-spreader truck, and
- rubbish truck (fitted with a compactor).

For illustrations see the next section *G1.2 Specialist vehicle diagrams*.

Who issues specialist vehicle permits?

The Transport Agency issues specialist vehicle permits for state highways.

Local road controlling authorities (RCAs) issue specialist vehicle permits for local roads under their control.

If a route involves a combination of state highways and local roads, then the Transport Agency and the local RCAs involved liaise before issuing permits. Where practicable, they align permit periods and maximum axle mass limits that are safe for the entire route before issuing a permit.

Depending on local arrangements, the Transport Agency or a local RCA may also issue joint permits that cover both state highways and local roads. To do so, the issuing authority must obtain the consent of the other RCAs involved for the use of roads under their control.

Continued on next page

G1.1 General information about specialist vehicle permits continued

Several permits per vehicle

If your route includes local roads under the control of different local RCAs, or local roads as well as state highways, you may need a separate specialist vehicle permit from each RCA involved.

Multiple permits must be carried together in the vehicle and are viewed together as a single permit.

Some RCAs issue permits on behalf of other RCAs with their consent. Check with the RCAs in your region for local permitting arrangements.

Permits not guaranteed

Not all specialist vehicles are eligible for a permit. See section *G2.3 Before you apply for a specialist vehicle permit* for details.

Also, the route you want to travel on may not be suitable for the weight you wish to carry. The Transport Agency encourages operators to discuss permitting and route options first with all RCAs involved (ie local RCAs for local roads and the Transport Agency for state highways) before implementing any weight increases.

RCAs may decide to restrict routes or issue a permit at lower axle mass limits than the maximum allowed under the VDAM Rule for safety reasons or to protect weak structures or pavements.

Variation of standard permit period

The Transport Agency usually issues specialist vehicle permits for a period of 24 months. However, it may consider an alternative duration in some cases, for example, to align a permit period with the term of a local authority service contract, or with the duration of a permit issued by a local RCA.

Bus permits issued before 1 February 2017

Permits for buses issued before 1 February 2017 continue to be valid for the duration of the permit period unless revoked or replaced.

G1.2 Specialist vehicle diagrams

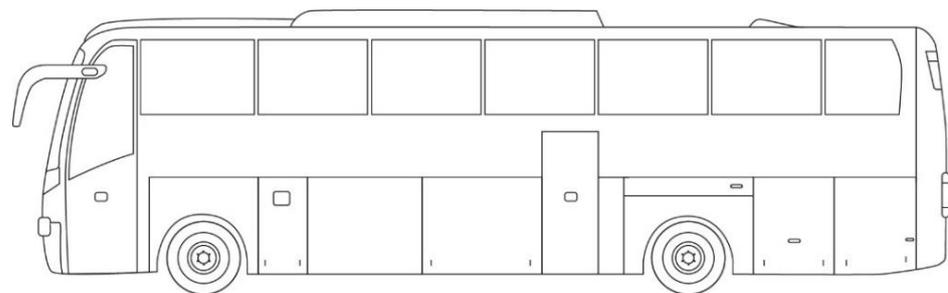
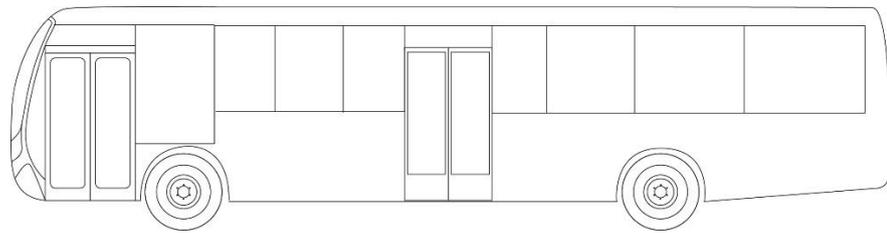
Introduction

This section shows common vehicle designs for specialist vehicles. The illustrations are a guide only. Each vehicle type may have a single or a tandem rear axle set to be eligible for a specialist vehicle permit.

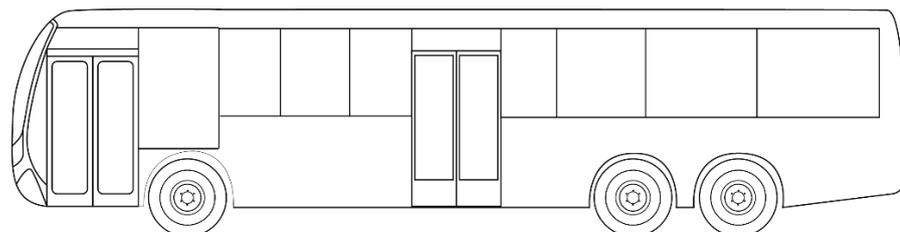
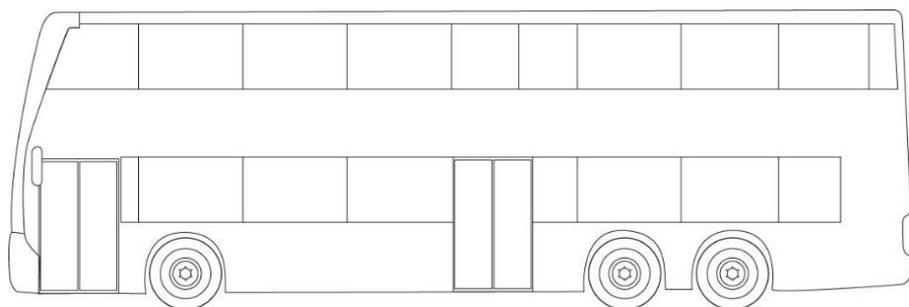
For more details about eligible axle types and configurations, see the next section *G1.3 Maximum axle mass limits under a specialist vehicle permit*.

Passenger service vehicle

Single rear axle



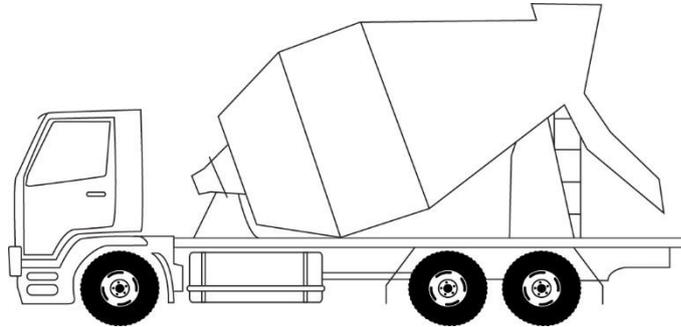
Tandem rear axle set



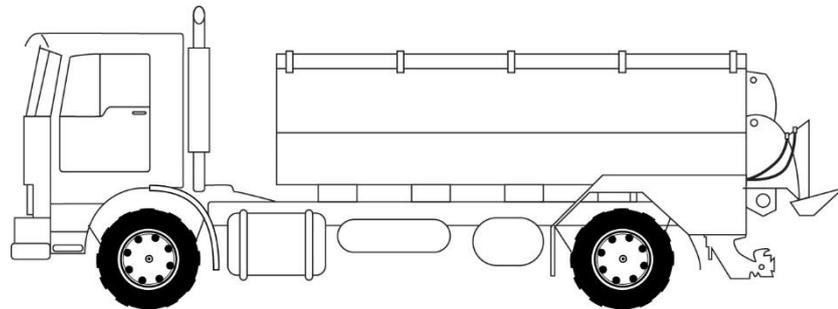
Continued on next page

G1.2 Specialist vehicle diagrams continued

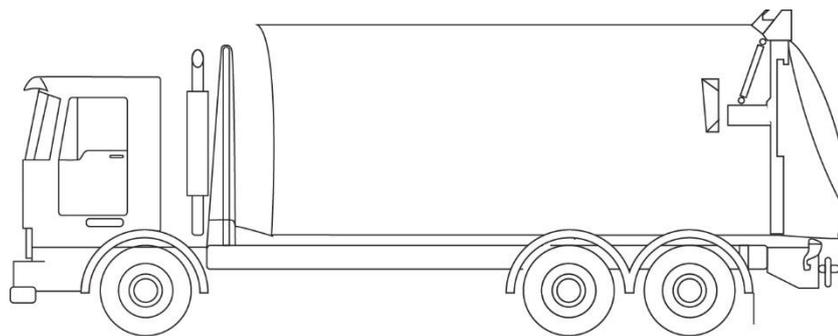
Concrete mixer



Ground-spreader-truck



Rubbish truck



Note: To be eligible for a specialist vehicle permit, rubbish trucks must be fitted with a compactor.

G1.3 Maximum axle mass limits under a specialist vehicle permit

Maximum axle mass limits for specialist vehicles

The maximum axle masses you can apply for under a specialist vehicle permit are shown in the table below.

Type of axle set	Mass (kg)
Single large-tyred axle in a tandem axle set with a twin-tyred axle and a 55/45 load share	8100
Twin-tyred axle in any axle set	12,000
Two axles in a tandem axle set comprising:	
(e) A twin-tyred axle with a single large-tyred axle and a 60/40 load share	16,000
(f) A twin-tyred axle with a single large-tyred axle and a 55/45 load share	18,000
Two twin-tyred axles:	
(a) Spaced less than 1.3 metres from the first axle to the last axle	17,000
(g) Spaced 1.3 metres or more from the first axle to the last axle	18,000

Legislation reference: VDAM Rule 2016 schedule 3, part 3, table 3.6.

Qualifying axle configurations

If your vehicle's axle type and configuration are not covered in the table above, then it is not eligible for a specialist vehicle permit and must comply with general access mass limits.

For example, a concrete mixer with a tri-axle set is **not** eligible for a specialist vehicle permit.

General access mass limits otherwise apply

The mass on any axles other than those listed in the table above must comply with the general access mass limits prescribed in the VDAM Rule schedule 3, part 1.

Gross mass is limited to the general access total mass limits prescribed in the VDAM Rule schedule 3, part 2.

G1.4 Specialist vehicle operating requirements

Introduction	<p>This section outlines specific requirements for specialist vehicles operating under a permit.</p> <p>For general information about permit conditions, see <i>Chapter A3: Operating under a VDAM permit</i> in part A of this manual.</p>
Permit mass limits apply	<p>Specialist vehicles operating under a permit must not exceed the maximum axle mass limits specified on the permit.</p> <p>Note: The mass limits on a permit may be less than the maximum limits available under the VDAM Rule to protect structures and pavements on the route.</p>
Route specific	<p>Permits for specialist vehicles are route specific. Vehicles exceeding general axle mass limits are allowed to travel only on the route specified on the permit.</p>
No heavy trailer	<p>Specialist vehicles must not tow a heavy trailer when operating under a permit.</p>
No 'H' sign	<p>Specialist vehicles operating under a permit must not display the yellow high productivity motor vehicle sign (the 'H' sign).</p> <p>The 'H' sign is only required for vehicles operating under a high productivity motor vehicle (HPMV) permit.</p>
Additional conditions	<p>A specialist vehicle operating under a permit must comply with any additional permit conditions that the road controlling authority issuing the permit considers necessary. This may include conditions to safeguard other road users, protect infrastructure or ensure compliance with the permit.</p>

Chapter G2: How to apply for a specialist vehicle permit

Overview

About this chapter

This chapter describes how to apply for a specialist vehicle permit.

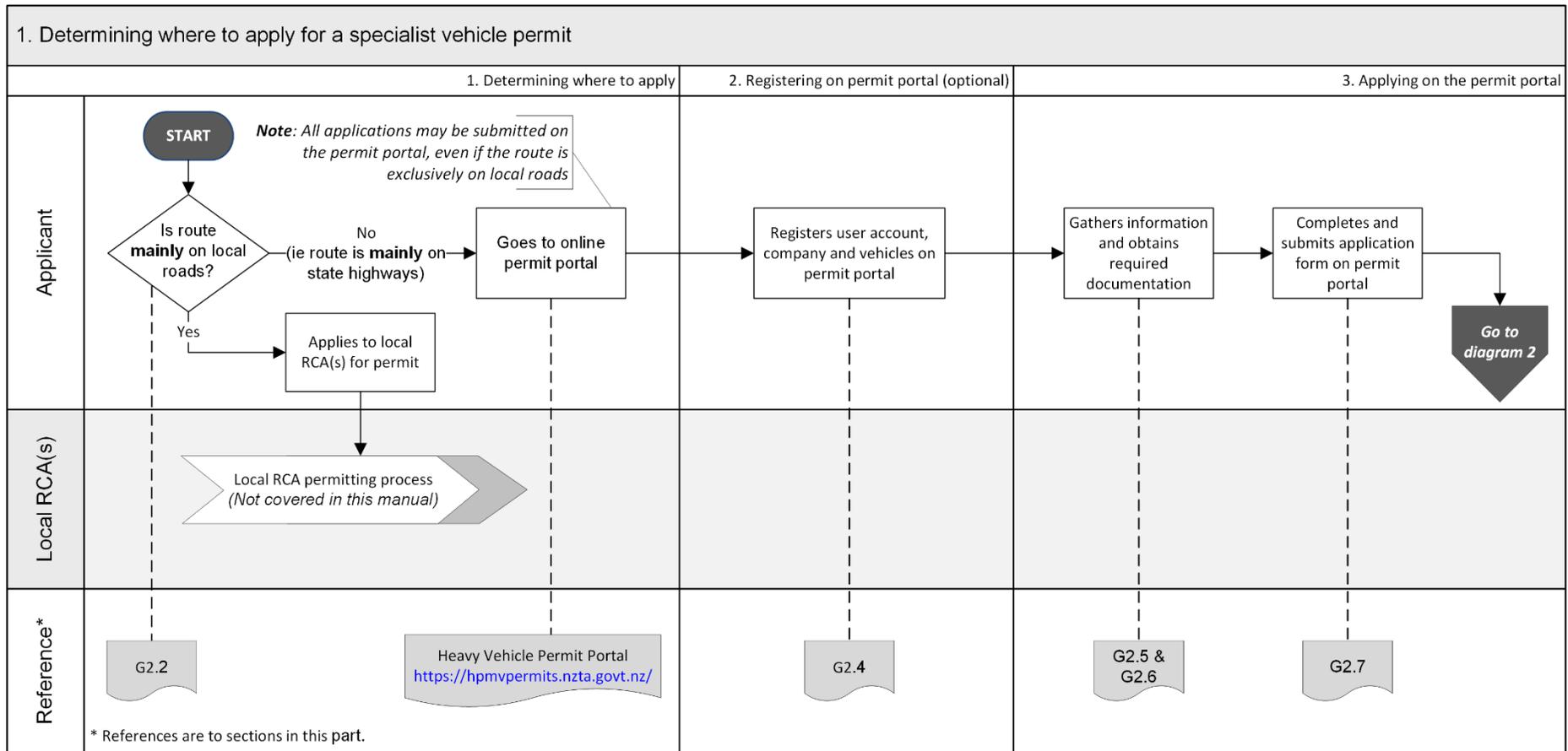
In this chapter

This chapter contains the following sections:

Section	See page
G2.1 Overview diagrams of the specialist vehicle permitting process	G2-2
G2.2 Determining where to apply	G2-5
G2.3 Before you apply for a specialist vehicle permit	G2-6
G2.4 Registering on the Heavy Vehicle Permit Portal	G2-7
G2.5 Preparing prerequisite documentation	G2-11
G2.6 Gathering required information	G2-13
G2.7 Completing and submitting a specialist vehicle permit application on the permit portal	G2-14
G2.8 Permit fee and processing time	G2-17

G2.1 Overview diagrams of the specialist vehicle permitting process

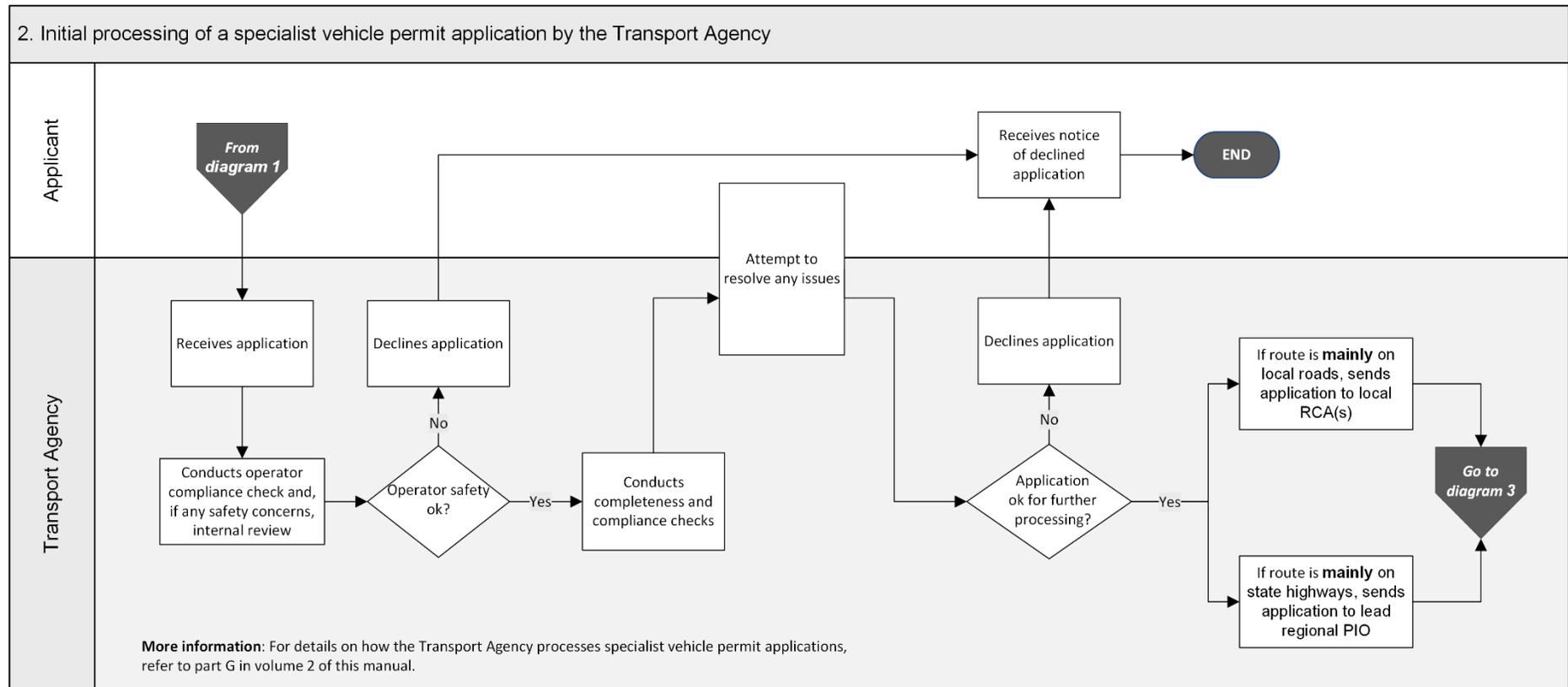
Diagram 1 This diagram illustrates the steps involved in applying for a specialist vehicle permit.



Continued on next page

G2.1 Overview diagrams of the specialist vehicle permitting process continued

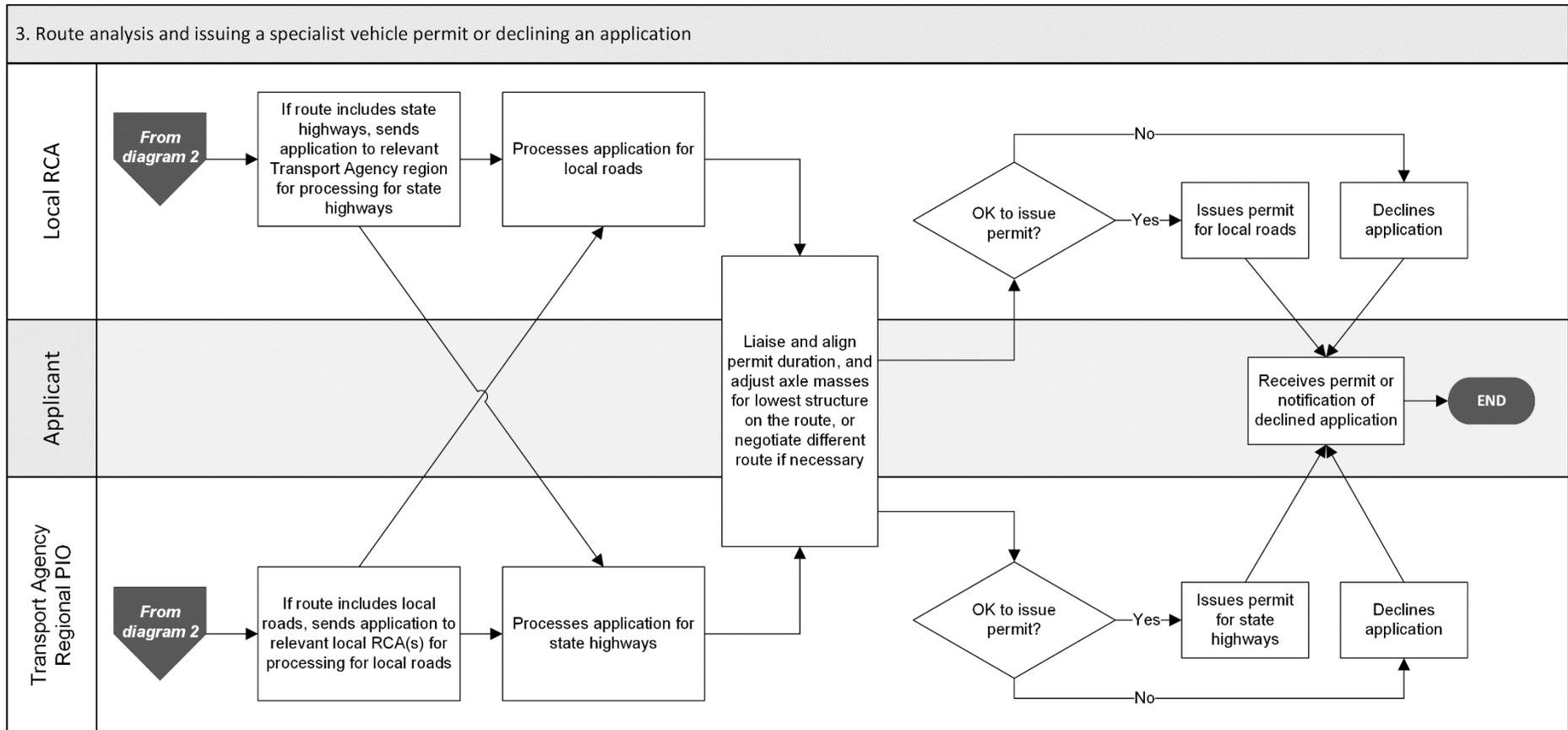
Diagram 2 This diagram shows the Transport Agency’s initial checks when processing a specialist vehicle permit application.



Continued on next page

G2.1 Overview diagrams of the specialist vehicle permitting process continued

Diagram 3 This diagram illustrates how the Transport Agency and local road controlling authorities (RCAs) process specialist vehicle permit applications for route suitability and liaise before issuing a permit.



G2.2 Determining where to apply

Where to apply for a specialist vehicle permit?

Refer to the table below to determine where to apply for a specialist vehicle permit.

If your route is...	Then you should apply for a permit...
mainly on local roads	directly to the local RCA involved.
mainly on local roads involving several local RCA(s)	to the local RCA where the journey starts.
mainly on state highways	on the Transport Agency's Heavy Vehicle Permit Portal.

Examples

1. If you have a rubbish truck that operates mainly on a network of local roads, you should apply to the local RCA for a specialist vehicle permit.
2. If you have an inter-city or touring bus that operates between city centres and travels mainly on state highways, you should apply on the Transport Agency's Heavy Vehicle Permit Portal for a specialist vehicle permit.

Transport Agency liaises with local RCAs

All permit applicants may apply on the Transport Agency's permit portal if they wish, regardless of their route.

If the Transport Agency receives a specialist vehicle permit application with a route that includes local roads, it will liaise with the local RCA(s) involved and, depending on regional arrangements, forward the permit to them for local road processing, or issue a joint permit with their consent.

G2.3 Before you apply for a specialist vehicle permit

Introduction This section describes how to determine whether your specialist vehicle is eligible for a permit. It also gives an overview of the preliminary tasks before you complete the Transport Agency's specialist vehicle permit application form.

Is your vehicle a qualifying 'specialist vehicle'? Your vehicle must be registered as a qualifying specialist vehicle type, ie the certificate of loading must say that the vehicle is either a:

- passenger service vehicle (bus)
- concrete mixer
- ground-spreader truck, or
- rubbish truck (with compactor).

More information about specialist vehicle types can be found at www.nzta.govt.nz/commercial-driving/permits/specialist-vehicle-permits/.

Eligible axle configurations To be eligible for increased mass limits under a specialist vehicle permit, vehicles must have specific axle types and configurations. For details see section *G1.3 Maximum axle mass limits under a specialist vehicle permit*.

Preliminary tasks If you are applying on the Transport Agency's permit portal, it is advisable to complete the following preliminary tasks:

1. registering on the permit portal
2. preparing prerequisite documentation, and
3. gathering information required on the application form.

These preliminary tasks are described in detail in the following sections.

G2.4 Registering on the Heavy Vehicle Permit Portal

Benefits of registering

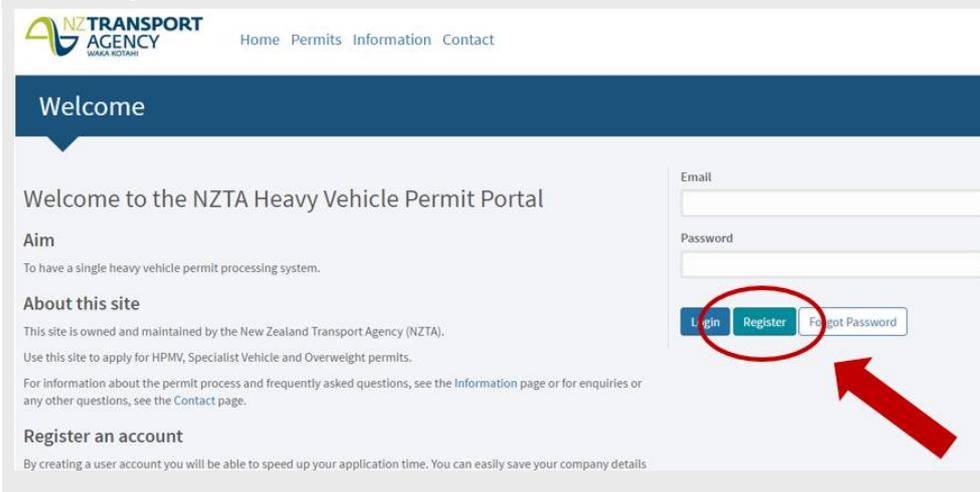
If you need more than one permit, you can save time and effort by registering on the permit portal. Registration is not compulsory, but benefits include:

- you only need to enter company and vehicle information once in the system
- common details are populated automatically for each new application when you fill in the application form
- you can save draft applications and complete them in stages, and
- you can monitor the progress of applications and access previous applications and permits.

Registering a user account

The first step is to register a user account on the permit portal. You will then be able to log in to the portal and set up company details and create a vehicle library.

To register a user account, follow these steps:

Step	Action
1	Go to the Transport Agency's Heavy Vehicle Permit Portal at https://hpmvpermits.nzta.govt.nz/ .
2	On the Welcome page, click on Register :
 <p>The screenshot shows the NZTA Heavy Vehicle Permit Portal Welcome page. At the top, there is a navigation bar with 'Home', 'Permits', 'Information', and 'Contact'. Below this is a 'Welcome' banner. The main content area includes a 'Welcome to the NZTA Heavy Vehicle Permit Portal' message, an 'Aim' section, an 'About this site' section, and a 'Register an account' section. On the right side, there is a login/register form with fields for 'Email' and 'Password', and buttons for 'Login', 'Register', and 'Forgot Password'. The 'Register' button is circled in red, and a red arrow points to it from the right.</p>	
3	On the Register page, complete all required fields and then click on Register . Result: You will receive an email notifying you that your account has been created pending approval. The Transport Agency may contact you to verify your account details before confirming your account.

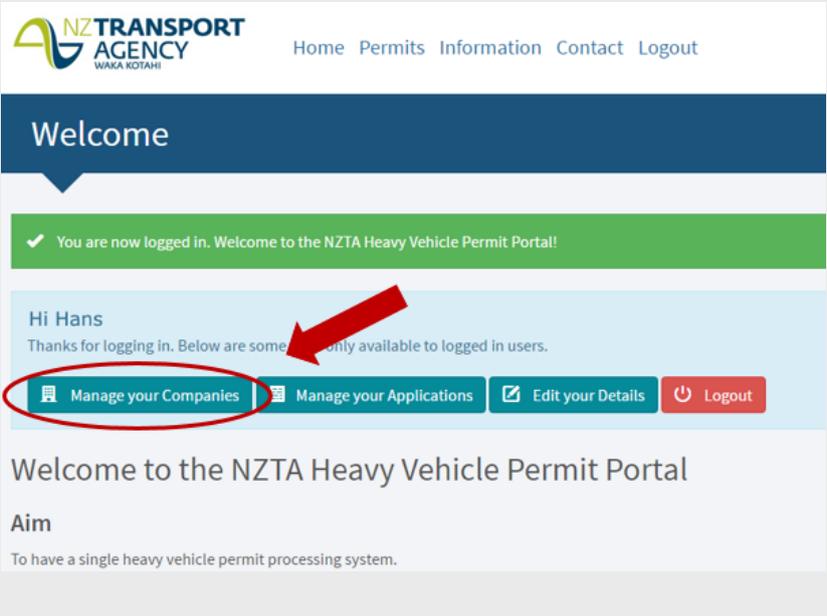
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G2.4 Registering on the Heavy Vehicle Permit Portal continued

Registering a company

Once you receive confirmation of your permit portal user account, you can register your company details. This information will then be automatically entered in the application form every time you apply for a new permit under your saved company's name.

To register a company, follow these steps:

Step	Action
1	Log on to the permit portal.
2	<p>On the Welcome page, click on Manage your Companies:</p>  <p>The screenshot shows the NZTA Heavy Vehicle Permit Portal interface. At the top, there is a navigation bar with the NZ Transport Agency logo and links for Home, Permits, Information, Contact, and Logout. Below this is a 'Welcome' banner. A green notification bar states 'You are now logged in. Welcome to the NZTA Heavy Vehicle Permit Portal!'. A light blue user profile section displays 'Hi Hans' and a message 'Thanks for logging in. Below are some... only available to logged in users.' Below this are four buttons: 'Manage your Companies' (circled in red), 'Manage your Applications', 'Edit your Details', and 'Logout'. The main content area below the buttons says 'Welcome to the NZTA Heavy Vehicle Permit Portal' and 'Aim: To have a single heavy vehicle permit processing system.'</p>
3	<p>On the Your Companies page that opens, click on Register a new company and complete all required fields, then click Save.</p> <p>Result: Company details will now be automatically populated every time you apply for a permit.</p>

Continued on next page

G2.4 Registering on the Heavy Vehicle Permit Portal continued

Registering vehicle details

Once you have registered your company, you can register vehicle details on the portal.

To register vehicle details, follow these steps:

Step	Action
1	Log on to the permit portal.
2	On the Welcome page, click on Manage your Companies .
3	On the Your Companies page that opens, click on the blue company name: <div data-bbox="619 804 1366 1330" data-label="Image"> <p>The screenshot shows the 'Your Companies' page. At the top, there is a navigation bar with 'Home', 'Permits', 'Information', 'Contact', and 'Logout'. Below the navigation bar is a blue header with the text 'Your Companies'. Underneath, there is a breadcrumb trail 'Home / My Companies'. There are two buttons: '+ Register a new company' and 'Request Access'. Below these buttons is a dropdown menu set to '25 records per page'. A table lists companies with columns: Name, Contact, Email, and Phone. The first row is 'Good Trucking Company', 'Hans Porter', 'Hans.Porter@goodtrucking.co.nz', and '0213459876'. The 'Good Trucking Company' name is circled in red, and a red arrow points to it.</p> </div>
4	On the page that opens for the selected company, click on Registered Units and then on Register a unit : <div data-bbox="587 1503 1401 1899" data-label="Image"> <p>The screenshot shows the 'Registered Units' page for a selected company. At the top, there is a breadcrumb trail 'Home / My Companies / Transport Company'. Below this is a message: 'This is the dashboard for your registered company. Here you can manage all the units and submitted permits for your compa'. There is a navigation bar with 'Home', 'Members', 'Permits', and 'Registered Units'. The 'Registered Units' tab is circled in red. Below the navigation bar is a section titled 'Registered Units' with a sub-header 'Registering units makes the process of filling out future forms easier! manually on each form.'. There is a table with columns: Reg #, Type, Axles, Make, Model, and Year. Below the table is a message 'No units have been registered yet!'. A red circle highlights the '+ Register a unit' button, and a red arrow points to it.</p> </div>

Continued on next page

G2.4 Registering on the Heavy Vehicle Permit Portal continued

Registering vehicle details (continued)

Step	Action
5	<p>Complete all required fields and then click Save.</p> <p>Result: You can now select a saved vehicle when you apply for a permit, which will automatically populate vehicle details on the application form.</p>

Authorised applicants

Using the Manage your Companies function, you can also register additional people who are authorised to apply for permits on behalf of the company.

Portal user guide

You can find more detailed help with using the permit portal in the user guide at <https://hpmvpermits.nzta.govt.nz/home/information>.

G2.5 Preparing prerequisite documentation

Prerequisite documentation

The following documents are required to be submitted as attachments with a specialist vehicle permit application:

1. route information
2. evidence of load share (for vehicles with a tandem axle set), and
3. confirmation of a service contract (if applicable).

The requirements for these attachments are described in detail below.

1. Route information

The route information you provide for a specialist vehicle permit application must include all roads and highways between the starting point of the journey and the final destination.

An acceptable format for route information is a complete list of all roads and highways that make up the route.

Alternatively, you may attach a map with the route you wish to travel on clearly marked. You may use directions information from Google Maps or a similar map tool.

Acceptable file formats to attach with your application are MS Word documents, or PDF or image files, up to a maximum file size of 20MB.

2. Evidence of load share

If your specialist vehicle has a tandem axle set with a twin-tyred axle and a single large-tyred axle, you must provide evidence of the load share percentage ratio (60/40 or 55/45) of the tandem axle set with your permit application.

Acceptable evidence of load share is any one of the following:

- a photograph of the compliance plate on the vehicle (if applicable), with clearly legible information
- a weight certificate from a Transport Agency approved heavy vehicle specialist certifier that includes load share information (see www.nzta.govt.nz/resources/heavy-vehicle-specialist-certifiers/), or
- a letter from the vehicle manufacturer with load share information.

Note: If you are applying for multiple identical vehicles (which must all have the same load share ratio), you need to submit evidence of the load share ratio for only **one** of the identical vehicles with your application (see *Multiple vehicle applications* in section G2.7 below).

Continued on next page

G2.5 Preparing prerequisite documentation continued

2. Evidence of load share
(continued)

Attributes check sheets not acceptable

HPMV attributes check sheets do not cover the required information for specialist vehicle permit applications. They are therefore not acceptable and cannot be used in place of the acceptable load share evidence described above.

3. Confirmation of contract

If you are operating under a local authority contract, the Transport Agency may consider a variation of the usual 24-month permit period.

If you wish to apply for a permit period that aligns with a permit-related contract term, you must provide confirmation of the following:

- the parties to the contract
 - contract purpose (ie description of the services to be provided), and
 - the start and end dates for the provision of services under the contract.
-

G2.6 Gathering required information

Have details on hand

If you apply for a permit as an **unregistered** user, it is advisable to have the company and vehicle details described below on hand so that you can complete the application in one session. Otherwise, if you get interrupted while completing the application form, you will lose all information you have entered. Only registered users can save entered data and return to it later.

Company information

You must provide the following company information on the application form:

- legally registered company name
 - company contact details (including contact person and postal address), and
 - your transport service licence (TSL) number (if applicable).
-

Required vehicle details

You must provide the following vehicle details on the application form:

- vehicle registration number(s)
 - axle types and load share ratio (if applicable)
 - mass applied for (total unit mass and individual axle masses)
 - tyre sizes
 - suspension types
 - track outer distances, and
 - axle spacings.
-

Measuring axle spacings

Axle spacings must be measured on the laden vehicle from the centre of the first axle to the centre of the last axle.

For details see section *D3.3 How to measure axle spacings* in part D of this volume.

G2.7 Completing and submitting a specialist vehicle permit application on the permit portal

Checklist for required documents

Use this checklist to ensure you have electronic copies of the documents that must be submitted together with a specialist vehicle application:

- detailed route information or map
- evidence of load share if the vehicle has a tandem axle set with a twin-tyred axle and a single large-tyred axle, and
- confirmation of permit-related contract details, if applicable.

For details see section *G2.5 Preparing prerequisite documentation* above.

Multiple vehicle applications

You may apply for multiple identical vehicles on the same application form.

To be considered identical, vehicles must be the same make and model and have:

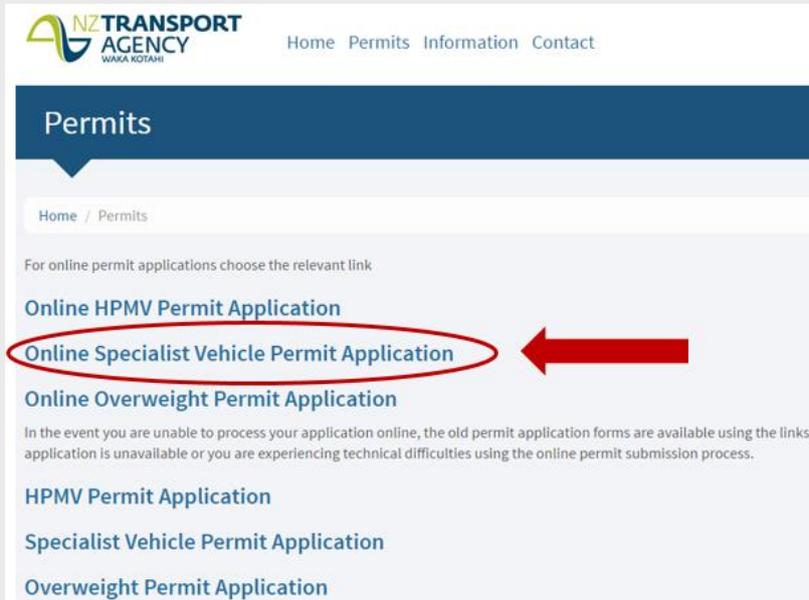
- identical axle spacings
 - the same tyre sizes
 - the same load share ratio (60/40 or 55/45) on the rear tandem axle set (if applicable), and
 - sufficient GVM for the mass applied for.
-

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G2.7 Completing and submitting a specialist vehicle permit application on the permit portal continued

Completing the application form

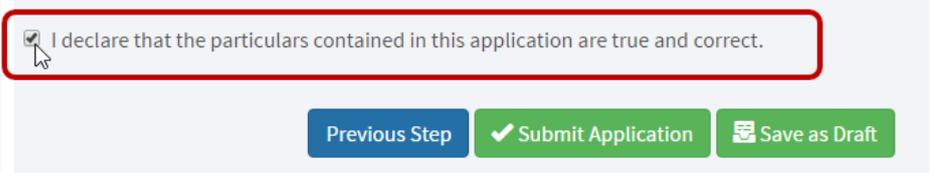
To complete and submit the online permit application form, follow these steps:

Step	Action
1	Go to the Transport Agency's Heavy Vehicle Permit Portal at https://hpmvpermits.nzta.govt.nz/ . Log in if you are a registered user.
2	Click on Permits and then on Online Specialist Vehicle Permit Application : 
3	On the application form that opens, complete all required fields marked with an asterisk (*) or, if you are a registered user, select saved information from the drop-down lists.

Continued on next page

G2.7 Completing and submitting a specialist vehicle permit application on the permit portal continued

Completing the application form (continued)

Step	Action
4	<p>On the Step 6 – Submit page, select the check box to declare that the information you provided in the application is true and correct:</p>  <p>Note: By selecting the tick box, you are making a formal declaration. False statements could be open to prosecution and subject to a penalty of up to \$10,000.</p> <p>Legislation reference: Land Transport Act 1998, section 44.</p>
5	<p>When you are satisfied that all information is complete and correct, click Submit Application.</p> <p>Result: A confirmation message will be displayed and you will receive a confirmation email.</p>

Obligations of third party applicants

Third party applicants applying for a specialist vehicle permit on behalf of a transport operator are bound by the declaration on the application form. They must ensure that they are duly authorised to make the application and that the details provided are complete, true and correct to the best of their knowledge.

Third party applicants must forward all relevant information, terms and conditions to the eventual user of the permit.

Help

If you require help with a specialist vehicle permit application, please call the Transport Agency's contact centre on 0800 699 000 or email info@nzta.govt.nz.

G2.8 Permit fee and processing time

Permit fees	For the standard permit fees, see section A2.5 in <i>Part A: Introduction to VDAM permits</i> in this volume.
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Processing time	<p>The Transport Agency makes every effort to process specialist vehicle permit applications as quickly as possible and generally issues permits for routes exclusively or mainly on state highways within 20 working days.</p> <p>However, some aspects of the permitting process are outside the control of the Transport Agency, for example, if approvals from local road controlling authorities (RCAs) are required.</p> <p>If you have applied to a local RCA for a specialist vehicle permit, please contact the local RCA about processing times for permit applications.</p>
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Vehicle dimensions and mass permitting manual (volume 1)

Part H

[Placeholder]

This page is a placeholder to allow for the addition of new content in the manual.

Vehicle dimensions and mass permitting manual (volume 1)

Part I

Definitions and glossary

Current as at 1 May 2021

Disclaimer

This publication is intended to provide general information about the permitting of vehicles that exceed dimension and mass limits. While every effort has been made to ensure the quality and accuracy of this information, readers are advised that the information provided does not replace or alter the laws of New Zealand, does not replace any legal requirement, and is not a substitute for expert advice applicable to the reader's specific situation. Readers should also be aware that the content in this publication may be replaced or amended subsequent to this publication, and any references to legislation may become out of date if that legislation is amended.

Readers are therefore advised to obtain their own legal and other expert advice before undertaking any action based on information contained in this publication.

Waka Kotahi NZ Transport Agency does not accept any responsibility or liability whatsoever, whether in contract, tort, equity or otherwise for any action taken, or reliance placed, as a result of reading any part of this publication or for any error, inadequacy, deficiency, flaw or omission from the information provided in this publication.

Record of amendments in this part

Note: Amendments are numbered consecutively and may affect individual or multiple parts in one or both volumes of the *Vehicle dimensions and mass permitting manual*. For a complete record of all amendments to this manual, please refer to the 'Record of amendments' at the start of volume 1 and volume 2.

Amendment to 2nd edition	Description of changes in this part	Effective date
Amendment 5	<p>Updates reflect amendments from legislative changes, including from the:</p> <ul style="list-style-type: none"> • Land Transport (NZTA) Legislation Amendment Act 2020 • Land Transport Rule: Agency to Director (Consequential Changes) Amendment 2021, and • Amendment (Omnibus) Rules 2021. <p>The following definitions and terms have been added or amended.</p> <p>In Chapter 11: Definitions from the VDAM Rule</p> <ul style="list-style-type: none"> – Enforcement officer – Gross combination mass – Gross vehicle mass – Low volume vehicle – Maximum towed mass (MTM) – Rear axis – Snow plough – Tri-axle set <p>In Chapter 12: Glossary:</p> <ul style="list-style-type: none"> – Director of Land Transport 	1 May 2021
Amendment 2	<p>Updates reflect the following changes:</p> <ul style="list-style-type: none"> • Amendments from the Land Transport Rule: Regulatory Stewardship (Omnibus) Amendment 2018, which took effect on 1 June 2019, and • New performance based standards (PBS) introduced by the Transport Agency in May 2019. <p>The changes are as follows.</p> <p>Chapter 11: Definitions from the VDAM Rule:</p> <ul style="list-style-type: none"> • B-train: '1.4m' replaced with 1.4' to correct an error. • Gross vehicle mass: Wording aligned with the definition in the Land Transport Act 1998. <p>Chapter 12: Glossary:</p> <ul style="list-style-type: none"> • Performance based standard: Clarification added. 	1 June 2020

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Chapter 11: Defined terms	11-1
Definitions from the VDAM Rule	11-1
Chapter 12: Glossary	12-1
List of general terms	12-1

Part I: Definitions and glossary

Introduction

About this part

This part of the *Vehicle dimensions and mass permitting manual* provides a comprehensive list of specific terminology and abbreviations used in the manual.

This part is divided into two chapters:

- chapter I1 lists terms defined in the Land Transport Rule: Vehicle Dimensions and Mass 2016 (the VDAM Rule), and
- chapter I2 lists general terms related to vehicle dimensions and mass permitting and how they are used in this manual.

Audience

The intended audience for this part is all users of this manual.

In this part

This part contains the following chapters:

Chapter	See page
Chapter I1: Defined terms	I1-1
Chapter I2: Glossary	I2-1

Chapter 11: Defined terms

Definitions from the VDAM Rule

Introduction	The definitions listed alphabetically below are defined terms in part 2 of the VDAM Rule.
Access provider	<p>Access provider has the meaning given in the Railways Act 2005, ie the person who controls the use of that railway line by rail operators (including that person if it is also a rail operator).</p> <p>The access provider may engage rail personnel to exercise or assist in exercising control on its behalf; but those rail personnel are not 'access providers' themselves.</p>
Agency	Agency means the New Zealand Transport Agency established under section 93 of the Land Transport Management Act 2003.
Agricultural motor vehicle	<p>A motor vehicle that is designed, constructed, or adapted for agricultural purposes and:</p> <p>a) includes:</p> <ul style="list-style-type: none"> i. an agricultural trailer, and ii. an agricultural tractor, but <p>b) does not include any vehicle that is:</p> <ul style="list-style-type: none"> i. of a class specified in table A of part 2 of the Land Transport Rule: Vehicle Standards Compliance 2002, and ii. designed or constructed for general road use.

Continued on next page

Definitions from the VDAM Rule continued

Agricultural purpose

Agricultural purpose:

a) includes:

- i. land cultivation
- ii. growing and harvesting crops (including horticulture and viticulture)
- iii. rearing livestock, and

iv. any land management operation undertaken in connection with:

- (A) the operation or management of a farm; or
- (B) a purpose described in (i) to (iii).

b) does not include forestry, or any land management operation not referred to in (a)(iv) above.

Agricultural tractor

A vehicle that is designed and constructed principally for the purposes of:

- a) towing an agricultural trailer, or
 - b) drawing, or powering, an implement ordinarily used for an agricultural purpose.
-

Agricultural trailer

An agricultural trailer:

- a) means a trailer that is used principally for agricultural purposes, and
 - b) includes a wheeled agricultural implement, the wheels of which are in contact with the road when the implement is being towed, but
 - c) does not include:
 - i. a trailer that is:
 - (A) designed principally for the carriage of goods, and
 - (B) operated at a speed exceeding 40km/h, or
 - ii. a logging trailer.
-

Ambulance service

Ambulance service means a service that complies with the requirements in *NZS 8156:2002 Ambulance Sector Standard*.

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Definitions from the VDAM Rule continued

Articulated bus

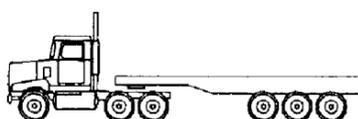
A bus consisting of two or more rigid sections that:

- a) articulate relative to each other, and
- b) have interconnecting passenger compartments that allow passengers to move freely between them, and
- c) are not easily detachable from each other without specialist equipment.

Articulated vehicle

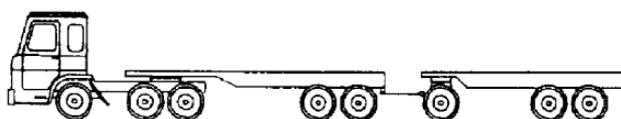
Any motor vehicle with a semi-trailer attached, so that part of the semi-trailer is superimposed upon the motor vehicle.

A substantial part of the weight of the semi-trailer, and its load, is borne by the motor vehicle.



A-train

An A-train is an articulated vehicle towing a full trailer.



Axle

An axle is one or more shafts, spindles, or bearings in the same vertical transverse plane. In conjunction with the wheels mounted on it, an axle transmits a portion of the weight of the vehicle to the roadway, and:

- a) if two or more wheels of a motor vehicle are substantially in the same line transversely and some or all of them have separate axles, the axles of all those wheels are to be treated as one axle
- b) if the longitudinal centre-line of an axle of a motor vehicle is less than 1 metre distant from the longitudinal centre-line of another axle, the two axles are to be treated as one axle ('a dual axle'), and
- c) for the purposes of measuring the distance of a dual axle from any other axle, the measurement is taken from the longitudinal centre-line of the axle that is nearer to the axle from which the distance is to be measured.

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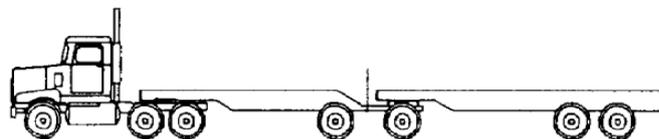
Definitions from the VDAM Rule continued

- Axle set** Axle set means:
- a single axle set
 - a tandem axle set
 - a twin-steer axle set
 - a tri-axle set, or
 - a quad-axle set.
-

Beacon Beacon means a warning lamp comprising one or more sources designed to emit a flashing light or a revolving beacon of light.

Brake code mass Brake code mass has the meaning given in schedule 4 of the Land Transport Rule: Heavy-vehicle Brakes 2006, ie the maximum laden mass of a vehicle as calculated using statutory maximum axle load criteria.

B-train A motor vehicle comprising a towing vehicle and two semi-trailers connected at two points of articulation where the forward distance of the longer trailer divided by the forward distance of the shorter trailer does not exceed 1.4.



Caravan trailer A trailer that is permanently equipped with features intended to make the vehicle suitable as a person's dwelling place. It must include at least one sleeping berth and one table, both of which may be of a design that allows them to be retracted or folded away.

Category Category, in relation to an overdimension vehicle, means the category assigned to that vehicle by part 1 of schedule 6 of the VDAM Rule.

Continued on next page

Definitions from the VDAM Rule continued

Class	Class, in relation to vehicles, means a category of vehicle of one of the groups A, L, M, N and T, as specified in Table A: Vehicle classes in part 2 of the VDAM Rule.
Combination vehicle	A towing vehicle in combination with one or more trailers or another motor vehicle that is being towed.
Controller	The person who is the National Controller in accordance with section 10, or a Group Controller appointed under section 26, of the Civil Defence Emergency Management Act 2002.
Converter dolly	An individual trailer unit with a fifth wheel coupling used to convert a semi-trailer to a full trailer. A dolly must have either: <ul style="list-style-type: none"> a) a rigid drawbar associated with an oscillating fifth wheel and a single axle or a tandem axle set, or b) a tandem axle set with a hinged drawbar with a fixed fifth wheel.
Direction-indicator	A lamp used for signalling an intention to change direction to the right or to the left.
Emergency services	New Zealand Police, New Zealand Fire Service or an ambulance service.
Enforcement officer	Enforcement officer has the meaning given in section 2 of the Land Transport Act 1998, ie: <ul style="list-style-type: none"> a) a constable b) a police employee who is not a constable authorised for the purpose by the Commissioner c) a person who is appointed to that office by warrant under section 208 of the Land Transport Act 1998 or who holds that office by virtue of this Act, or d) the Transport Agency, in the circumstances set out in section 208A of the Land Transport Act.

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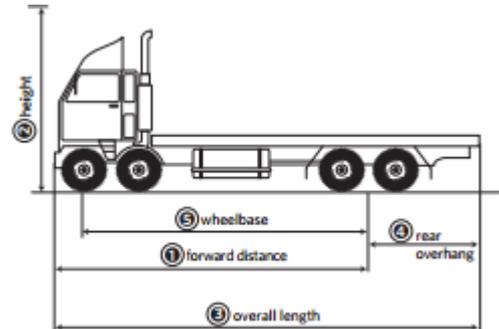
Definitions from the VDAM Rule continued

Forklift

A forklift is a motor vehicle (not fitted with self-laying tracks) designed principally for lifting, carrying and stacking goods by means of one or more tines, platens, or clamps.

Forward distance

The table below describes the measurement of forward distance on different types of vehicles or trailers.



Type of vehicle/trailer	Measurement of forward distance
Rigid vehicle	The distance from the rear axis to the front of the vehicle or its load, whichever is foremost.
Front section of an articulated bus	
Full trailer	The distance from the rear axis to the front of the trailer (excluding the drawbar and front axle set with its associated carriage) or its load, whichever is foremost.
Simple trailer	The distance from the rear axis to the centre of the point of attachment to the towing vehicle.
Rear section of an articulated bus	
Semi-trailer	The distance from the rear axis to the centre of the kingpin.
Pole trailer (one axle set)	The distance, excluding load, from the trailer's rear axis to the centre of the point of attachment to the towing vehicle with the drawbar fully extended.
Pole trailer (two axle sets)	The distance, excluding load, from the trailer's front axis to the centre of the point of attachment on the towing vehicle with the drawbar fully extended.

Frangible

Frangible means breakable or readily deformable.

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Definitions from the VDAM Rule continued

Front axis

The front axis means:

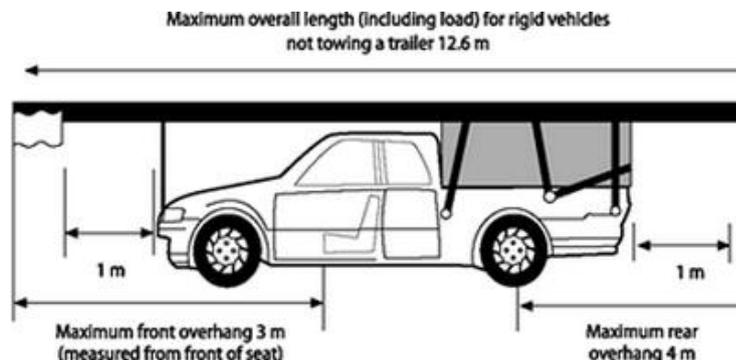
- a) the centre point of the front axle set of a trailer that has two axle sets and is steered by the front axle set, or
- b) the centre of the foremost axle of a rigid vehicle with motive power.

Front overhang

The front overhang of a vehicle is the distance measured to the foremost point of the vehicle, including its load but in the case of a full trailer excluding the drawbar, measured from the following positions:

Type of vehicle/trailer	Measured from...
Rigid vehicle	the front edge of the driver's seat, when in the rearmost position (see illustration below).
Semi-trailer	the centre of the kingpin
Full trailer	the centre of the turntable
Simple trailer	the centre of the tow coupling
Load of a pole trailer combination	the centre of the turntable on the towing vehicle

The diagram below shows the front (and rear) overhangs applying to rigid vehicles.

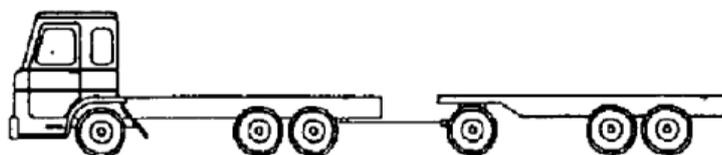


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Definitions from the VDAM Rule continued

Full trailer

A trailer with two axle sets, the foremost of which is steered by a drawbar (as shown in the image below).



The term 'full trailer' also includes a semi-trailer with non-steering axles coupled to a converter dolly.

Gross combination mass (GCM)

Gross combination mass (GCM) has the meaning given in the Land Transport Rule: Heavy Vehicles 2004, ie (for a vehicle that is permitted to tow another vehicle) the maximum permitted combined mass of the towing vehicle and any combination of attached trailers or vehicles, determined by the vehicle manufacturer and approved by the Director of Land Transport, or determined by the Director.

Gross mass

Gross mass, in relation to any vehicle or combination vehicle, means the total mass of that vehicle and its load, equipment and accessories, which may be determined by calculating the sum of the mass on the vehicle's axles or axle sets.

Gross vehicle mass (GVM)

Gross vehicle mass has the same meaning as in the Land Transport Act 1998, ie it means the maximum safe operating mass for a vehicle (including the mass of any accessories, crew, passengers or load) that is derived from the design, capabilities and capacities of the vehicle's construction, systems and components, and that:

- a) is determined by:
 - i. the Director of Land Transport, or
 - ii. the manufacturer of the vehicle, or
 - iii. if the vehicle is modified after manufacture, a certifier approved by the Director, and
 - b) may be recorded in kilograms on the register of motor vehicles.
-

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Definitions from the VDAM Rule continued

Heavy motor vehicle	<p>A heavy motor vehicle is a vehicle that is either:</p> <ul style="list-style-type: none"> a) of class MD3, MD4, ME, NB, NC, TC or TD, or b) a vehicle (not of a class specified in Table A: Vehicle classes in part 2 of the VDAM Rule) with a gross vehicle mass that exceeds 3500kg.
Heavy passenger service vehicle	<p>A passenger service vehicle whose gross vehicle mass exceeds 3500kg.</p>
High productivity motor vehicle (HPMV)	<p>A heavy motor vehicle or heavy combination vehicle that is operating under a permit issued under the VDAM Rule to, with or without a load:</p> <ul style="list-style-type: none"> a) exceed a gross mass of 44,000kg, or b) vary from a dimension requirement in schedule 2 listed in section 5.9(5) of the VDAM Rule, or c) both exceed a gross mass of 44,000kg and vary from a dimension requirement in schedule 2 listed in section 5.9(5) of the VDAM Rule.
Hours of darkness	<p>Hours of darkness is defined as:</p> <ul style="list-style-type: none"> a) any period of time between half an hour after sunset on one day and half an hour before sunrise on the next day, or b) any other time when there is not sufficient daylight to render clearly visible a person or a vehicle at a distance of 100 metres.
Indivisible load	<p>A load that cannot reasonably (without disproportionate effort, expense or risk of damage to the load) have its size reduced or be divided into two or more sections for road transport. This definition includes loads specified in the VDAM Rule as indivisible.</p>
Inter-vehicle spacing	<p>The distance between a towing vehicle (excluding the tow coupling shroud) and trailer (excluding the drawbar or tow rope or front dolly but including the load).</p>

Continued on next page

Definitions from the VDAM Rule continued

Level surface A level surface (including a reasonably level surface) in relation to a road means a road or weigh platform (including weigh scale surfaces) of such a minimal gradient that a heavy motor vehicle or combination vehicle on it does not move forwards or backwards after the enforcement officer has requested all brakes on such vehicle be released.

Note: The vehicle should not otherwise be restrained by any artificial restraining force, such as chocks, when an enforcement officer requests that the brakes be released.

Light motor vehicle A light motor vehicle is a motor vehicle with a gross vehicle mass that is 3500kg or less.

Light passenger service vehicle A passenger service vehicle with a gross vehicle mass that is 3500kg or less.

Load A vehicle's load (which includes part of a load):

- a) includes covers, ropes, ties, blocks, tackles, barrows, or other equipment or objects used in the securing or containing of a load on a vehicle or the loading or unloading of a vehicle, whether or not any other load is on the vehicle, but
- b) does not include animal wastes discharged from animals being carried on a vehicle at the time.

Load-sharing axle set An axle set suspension system that has effective damping characteristics on all axles of the set and is built to divide the load between the tyres on the set so that no tyre carries a mass more than 10% greater than the mass it would carry if:

- a) the load were divided in the axle set so that each tyre carries an equal load, or
- b) the axle set is a tandem axle set comprising a twin-tyred axle and a single large-tyred axle and is built to divide the load between the tyres on the set so that:
 - i. 60% of the load is borne by the twin-tyred axle and 40% of the load is borne by the single large-tyred axle, or
 - ii. 55% of the load is borne by the twin-tyred axle and 45% of the load is borne by the single large-tyred axle.

Continued on next page

Definitions from the VDAM Rule continued

Load-sharing trailer	<p>A type of short, load-sharing semi-trailer that is not designed to directly carry any goods.</p> <p>It has one or more axles equipped with a kingpin, a fifth wheel and other parts necessary for attaching it to the rear end of a towing vehicle and the front portion of a second gooseneck trailer.</p>
Low volume vehicle	<p>Low volume vehicle has the meaning given in the Land Transport Rule: Vehicle Standards Compliance 2002, ie it is a vehicle of a class specified in Table A: Vehicle classes, other than class MD3, MD4, ME, NB, NC, TC or TD, that is:</p> <ul style="list-style-type: none">a) manufactured, assembled or scratch-built in quantities of 500 or less in any one year, and where the construction of the vehicle may directly or indirectly affect compliance of the vehicle with any of the vehicle standards prescribed by New Zealand law; orb) modified uniquely, or in quantities of 500 or less in any one year, in such a way that compliance of the vehicle, its structure, systems, components or equipment with a legal requirement relating to safety performance applicable at the time of the modification may be affected.
Manned steering jinker	<p>A specialised load-bearing vehicle that is steered by an operator and used to carry the rear of a long load.</p>
Mass	<p>In relation to a vehicle, mass means the quantity of material contained in or on the vehicle that, when subjected acceleration due to gravity, will exert downwards on a level surface a force that can be measured as the weight of the vehicle.</p>
Maximum towed mass (MTM)	<p>Maximum towed mass (MTM) has the meaning given in the Land Transport Rule: Heavy Vehicles 2004, ie the maximum permitted mass of all vehicles that may be towed behind a vehicle as determined by the manufacturer of the towing vehicle and approved by the Director of Land Transport.</p>

Continued on next page

Definitions from the VDAM Rule continued

Mobile crane A non-load carrying self-propelled vehicle designed solely or principally for lifting objects using a boom with lifting gear.

Modify In relation to a vehicle, 'to modify' means to change the vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment.

Repair work is not defined as a modification.

Motor vehicle Motor vehicle has the meaning given in section 2 of the Land Transport Act 1998, ie it means a vehicle drawn or propelled by mechanical power, including a trailer.

The definition of a motor vehicle does not include:

- a) a vehicle running on rails
 - b) a trailer (other than a trailer designed solely for the carriage of goods) that is designed and used exclusively as part of the armament of the New Zealand Defence Force
 - c) a trailer running on one wheel and designed exclusively as a speed-measuring device or for testing the wear of vehicle tyres
 - d) a vehicle designed for amusement purposes and used exclusively within a place of recreation, amusement, or entertainment to which the public does not have access with motor vehicles
 - e) a pedestrian-controlled machine
 - f) a vehicle that the Transport Agency has declared is not a motor vehicle under section 168A of the Land Transport Act 1998, or
 - g) a mobility device.
-

Non-steering axle Any axle of a vehicle whose wheels remain substantially parallel with the longitudinal centre-line of the vehicle while the vehicle is turning.

Operate In relation to a vehicle, 'to operate' means to drive or use the vehicle on a road, or to cause or permit the vehicle to be on a road or to be driven on a road, whether or not the person is present with the vehicle.

'Operator' has a corresponding meaning.

Continued on next page

Definitions from the VDAM Rule continued

Oscillating axle

Any axle that complies with the following provisions:

- a) the axle has four wheels and four or eight tyres attached to it, consisting of two pairs of wheels, and
 - b) each of the pair of wheels is mounted on a separate axle affixed to the vehicle so as to share the load equally between the two wheels and to permit oscillation of the separate axles in a vertical transverse plane that is at right angles to the longitudinal centre-line of the vehicle, and
 - c) the centre of each such wheel is at least 500mm distant from the centre of every other wheel fitted to the motor vehicle.
-

Overall length

Overall length means the length of a vehicle or vehicle combination measured in a straight line. It includes:

- a) the length of any load, and
 - b) the length of the drawbar in a fully extended horizontal straight ahead position measured to the towing eye centre of a full trailer when measured on its own.
-

Overdimension load

Overdimension load means an indivisible load on a motor vehicle that exceeds the dimension limits in schedule 2 of the VDAM Rule.

Overdimension motor vehicle

Overdimension motor vehicle means a motor vehicle or combination vehicle (including any load) that exceeds one or more of the dimension limits in schedule 2 of the VDAM Rule.

Overweight motor vehicle

Overweight motor vehicle means a motor vehicle or combination vehicle (including any load) that exceeds the gross mass limits for general access in part 2 of schedule 3 of the VDAM Rule.

Continued on next page

Definitions from the VDAM Rule continued

Passenger service vehicle A 'passenger service vehicle' has the same meaning in the VDAM Rule as in the Land Transport Act 1998, ie it:

- a) means a vehicle used or available for use in a passenger service for the carriage of passengers, but
- b) does not include:
 - i. a vehicle designed or adapted to carry 12 or fewer persons (including the driver) provided by one of the passengers being carried, or
 - ii. a vehicle specified as an exempt passenger service vehicle in the regulations or the rules.

Pilot vehicle A motor vehicle that escorts an overdimension and/or overweight motor vehicle, and that warns road users of the potential hazard created by the overdimension and/or overweight vehicle or its load, or both.

Pivot steer vehicle A vehicle with a chassis that is split into two dependent parts that are connected by a permanent steering pivot.

Pole trailer A pole trailer is a trailer that is attached to a towing vehicle by a telescoping or sliding pole, and is designed to support a common long load spanning between the trailer and the towing vehicle.

Quad-axle set A set of four axles where:

- a) the centres of the first and fourth axles are spaced not less than 3.75 metres and not more than 4 metres apart
- b) all axles contain an equal number of tyres, and
- c) none of the axles is a single standard-tyred axle.

Continued on next page

Definitions from the VDAM Rule continued

Rear axis

Rear axis has the following meanings:

In relation to a vehicle with...	'rear axis' means
one non-steering axle	that axle
a non-steering axle set of two axles	(i) midway between those axles, if each axle has an equal number of tyres on it, or (ii) two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle
<ul style="list-style-type: none"> • a non-steering tri-axle set, or • a non-steering quad-axle set, or • an overdimension vehicle with more than three axles 	midway between the extreme axles of the set
a rear axle set that includes one or more steerable axles in conjunction with one or more non-steering axles ¹	midway between the extreme non-steering axles of the set
a rear axle set that includes one or more retracted axles in conjunction with one or more non-retracted axles	midway between the extreme non-retracted axles of the set
no axle arrangement listed above	a position determined by the Director of Land Transport

Note:

1. This applies except in relation to a semi-trailer with two non-steering axles at the front and two steering axles at the rear, where 'rear axis' means the centre-line of the second non-steering axle.

Rear overhang

The distance from the rear axis to the rear of the vehicle or its load, whichever is greater.

For pole trailers transporting a long load, rear overhang is the distance from the rear axis or centre of the bolster to the rear of the vehicle or its load, whichever is greater.

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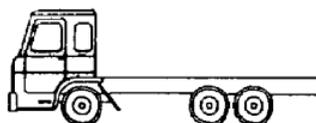
Definitions from the VDAM Rule continued

Rear trailing unit distance The rear trailing unit distance is the maximum distance from the centre of the fifth wheel or tow coupling on the towing vehicle to the rear of the combination.

Repair 'To repair' means to restore a damaged or worn vehicle, its structure, systems, components or equipment.
It includes the replacement of damaged or worn structures, systems, components and equipment with equivalent undamaged or new ones.

Retractable axle An axle that has a convenient adjustment to allow the axle load distribution of the axle set to be varied substantially.
An axle that is retracted is not considered to be part of the axle set.

Rigid vehicle A vehicle with motive power, driver's position and steering system that does not have any pivot points to allow any part of the chassis of the vehicle to move or rotate in relation to any other part of the chassis of the vehicle.



The definition of 'rigid vehicle' includes a pivot steer vehicle.

Road Road has the meaning given in section 2 of the Land Transport Act 1998, ie it includes:

- a) a street
- b) a motorway
- c) a beach
- d) a place to which the public have access, whether as of right or not
- e) all bridges, culverts, ferries and fords forming part of a road or street or motorway, or a place referred to in (d) above, and
- f) all sites at which vehicles may be weighed for the purposes of the Land Transport Act 1998 or any other enactment.

Continued on next page

Definitions from the VDAM Rule continued

Road controlling authority (RCA) In relation to a road, the road controlling authority is the authority, body or person having control of the road.
It includes a person acting under and within the terms of a delegation or authorisation given by the controlling authority.

Roadway Roadway means that portion of the road used or reasonably usable for the time being for vehicular traffic in general.

Rubbish truck A vehicle designed and constructed for the collection and transport of rubbish and which is fitted with a compactor.

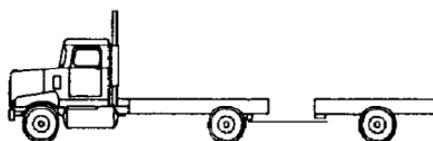
Semi-trailer A trailer with only one axle set where the point of attachment to the towing vehicle or leading trailer:

- a) is no further rearward than the rearmost axle of the towing vehicle or rearmost axle of the leading trailer, or
- b) if the towing vehicle is a rigid vehicle and has more than one axle in its rear axle set, is no more than 300mm rearward of the rear axis of the towing vehicle.

Side lamp A vehicle lamp of lower power than the head lamps used for the purpose of indicating the presence of the vehicle when seen from a distance, and also for indicating the approximate width of the vehicle. A side lamp includes:

- a) a forward-facing side lamp, which indicates primarily the front end of the vehicle
- b) a rearward-facing side lamp (rear lamp, red tail-lamp), which emits a red light indicating primarily the rear end of the vehicle, and
- c) a sideways-facing side lamp, which is mounted between the front and rear extremities on the side to indicate primarily the side of the vehicle.

Simple trailer A trailer (other than a semi-trailer) that has only one axle set, as shown in the image below.



Continued on next page

Definitions from the VDAM Rule continued

Single-tyred axle	Any axle fitted with two or more wheels, but which is neither an oscillating axle nor a twin-tyred axle.
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Single axle set	Either one axle or two axles having their centres spaced less than 1 metre apart.
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Single large-tyred axle	A single-tyred axle where the manufacturer's designated tyre section width is 355mm or more but less than 444mm.
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Single mega-tyred axle	A single-tyred axle where the manufacturer's designated tyre section width is 444mm or more.
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Single standard-tyred axle	A single-tyred axle where the manufacturer's designated tyre section width is less than 355mm.
-----------------------------------	--

Snow plough	A vehicle: a) designed for the purpose of clearing snow, or b) with equipment attached designed for the purpose of clearing snow.
--------------------	---

Specialist overdimension motor vehicle	A motor vehicle that is designed for a primary purpose of carrying out a specialist function that requires overdimension equipment and is not primarily designed to transport overdimension or overweight loads.
---	--

Standard load	A load that will fit on a motor vehicle within the dimension limits in schedule 2 and within the mass limits for general access in section 4 of the VDAM Rule.
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Standard motor vehicle	A motor vehicle whose dimension limits comply with schedule 2 and mass limits comply with requirements for general access in section 4 of the VDAM Rule.
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Definitions from the VDAM Rule continued

Static roll threshold (SRT)	The maximum level of steady turning lateral acceleration a vehicle can tolerate without rolling over, which is expressed as a proportion of 'g' where g is the acceleration constant due to gravity (9.81 m/s/s).
Swept path	Swept path means the maximum road width required by a vehicle when it negotiates a turn.
Tandem axle set	An axle set comprising two axles having their centres spaced not less than 1 metre and not more than 2 metres apart.
Towing vehicle	A rigid vehicle that tows a trailer or another motor vehicle.
Tractor	A motor vehicle (not being a traction engine) designed exclusively for traction at speeds not exceeding 50km/h.
Traffic control device	<p>Traffic control device has the meaning given in the Land Transport Rule: Traffic Control Devices 2004, ie a device used on a road for the purpose of traffic control. It includes any:</p> <ul style="list-style-type: none"> a) sign, signal, or notice b) traffic calming device, or c) marking or road surface treatment. <p>It does not include roadway art installed in accordance with section 5.6(1) of the Land Transport Rule: Traffic Control Devices 2004.</p>
Trailer	<p>A vehicle without motive power that is capable of being drawn or propelled by a motor vehicle from which it is readily detachable.</p> <p>It does not include:</p> <ul style="list-style-type: none"> a) a side-car attached to a motor cycle, or b) a vehicle normally propelled by mechanical power while it is being temporarily towed without the use of its own power.

Continued on next page

Definitions from the VDAM Rule continued

Tri-axle set A set of three axles, where:

- a) the centres of the first and third axles are spaced not less than 2 metres (or 1.8 metres in the case of a single standard-tyred axle) and not exceeding 3 metres apart, and
- b) all axles contain an equal number of tyres.

Twin-steer axle set An axle set of two axles with single tyres, where both axles are connected to the same mechanism in order to steer similarly.

Twin-tyred axle Any axle, not being an oscillating axle, that has a wheel track of 1.3 metres or more and is equipped with four or more tyres.

Vehicle Vehicle has the meaning given in the Land Transport Act 1998, ie a contrivance equipped with wheels, tracks or revolving runners on which it moves or is moved. It includes a hovercraft, a skateboard, in-line skates, and roller skates. But it does not include:

- a) a perambulator or pushchair
- b) a shopping or sporting trundler not propelled by mechanical power
- c) a wheelbarrow or hand-trolley
- d) a pedestrian-controlled lawnmower
- e) a pedestrian-controlled agricultural machine not propelled by mechanical power
- f) an article of furniture
- g) a wheelchair not propelled by mechanical power
- h) any other contrivance specified by any other rule not to be a vehicle for the purposes of this definition, and
- i) any rail vehicle.

Vehicle axle index (VAI) A rating, determined by a road controlling authority, which:

- a) indicates the relative effect on road pavements of the mass on the axles of a motor vehicle compared to standard axle mass, and
- b) describes the highest rating for any of the axles on the vehicle.

Continued on next page

Definitions from the VDAM Rule continued

Vehicle inspector or inspecting organisation

Vehicle inspector or inspecting organisation has the meaning given in the Land Transport Rule: Vehicle Standards Compliance 2002, ie an individual appointed by the Director of Land Transport under 2.2(1) of the Vehicle Standards Compliance Rule to carry out inspection and certification activities in accordance with requirements and conditions imposed by the Director.

Vehicle recovery service vehicle

A vehicle used in a vehicle recovery service for towing or transporting any motor vehicle on a road.

It does not include a vehicle that is not designed or adapted for the purpose of towing or carrying motor vehicles.

Visible

'Visible' describes anything that can be seen by a driver with normal vision under normal atmospheric conditions.

Wheelbase

Wheelbase means the distance from a vehicle's rear axis to its front axis.

Chapter I2: Glossary

List of general terms

Introduction	<p>The terms listed alphabetically below are used in this manual with the intended meaning provided in the explanation of each term, unless the context indicates otherwise.</p> <p>References to ‘the VDAM Rule’ refer to the Land Transport Rule: Vehicle Dimensions and Mass 2016.</p>
Acceleration	<p>Acceleration is the rate of change of the velocity of an object, over time. In the context of motor vehicles, it is usually expressed as the time (in seconds) that a vehicle takes to go from one speed to a higher speed.</p> <p>A vehicle must be able to accelerate effectively from a stop, or increase speed while moving. This enables safe interaction with other road users, especially at intersections, traffic lights and when overtaking another vehicle.</p>
Axle group	<p>An axle group is a series of axles in which the axle spacings are all less than 2.4 metres.</p>
Axle index	<p>The axle index is the ratio of the mass on an axle, to the reference axle mass for that axle. For details see <i>Chapter B9: Calculating the vehicle axle index (VAI)</i> in part B of this volume of the manual.</p>
Axle number	<p>The axle number is used to identify the number and location of each axle on a vehicle. Axles are always numbered from the front of the vehicle. For example, on a two-axled vehicle, the front axle would be numbered (1), and the rearmost axle would be numbered (2).</p>

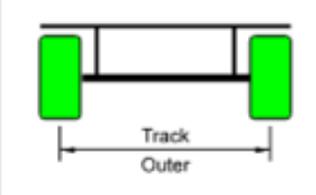
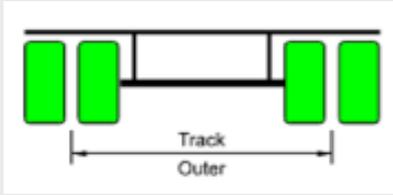
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List of general terms continued

- Axle set type** Axle set types are distinguished by the number of axles that are placed together. Axle set types include:
- (IN) Individual (see *Axle type* below)
 - (TS) Twin steer
 - (T) Tandem
 - (Tri) Tri-axle
 - (Q) Quad-axle.

Axle spacing Axle spacing is the longitudinal distance between centre lines of any two adjacent axles.

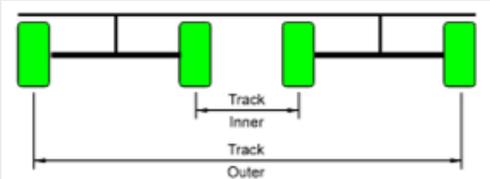
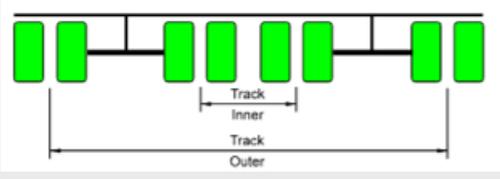
Axle type Individual axles are distinguished by the number and type of tyres, as shown in the table below.

Individual axle type	Code
<p>Single-tyred axle</p> 	<p><i>Can be either:</i></p> <ul style="list-style-type: none"> • Single standard-tyred: S • Single large-tyred: SL • Single mega-tyred: M
<p>Twin-tyred axle</p> 	<p>T</p>

Continued on next page

List of general terms continued

Axle type
(continued)

Individual axle type	Code
<p>Four-tyred oscillating axle</p> 	(4)
<p>Eight-tyred oscillating axle</p> 	(8)

Base of operations

A base of operations is a site office established for at least 24 hours to manage a contract of works, or a local depot to which drivers report daily for assignment of tasks or to commence driving.

Bridge class

Bridge class is a measure of the ability of the main structural members of a bridge to carry overweight vehicles.

Bridge engineering supervision

Bridge engineering supervision is supervision provided to ensure that the effects of a vehicle are kept within the capacity of a bridge.

Bridge engineering supervision is indicated if the DLR exceeds 130%.

However, this limit may be exceeded without bridge engineering supervision if a detailed structural analysis of the bridge shows that allowable stress levels are not exceeded when the particular vehicle operates unsupervised.

Bridge engineering self supervision

Bridge engineering self supervision (BESS) is a training and registration system for companies and drivers of heavy vehicles that operate under an overweight permit. BESS registration is a requirement for obtaining overweight permits that include restrictions on crossing bridges. For details see *Chapter B6: Bridge engineering self supervision (BESS)* in part B of this volume of the manual.

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List of general terms continued

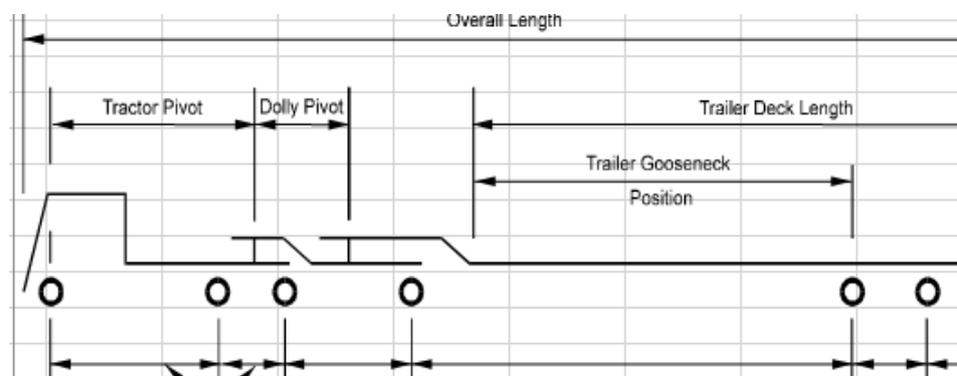
Certificate of Loading	A certificate of loading is a document issued by a Certificate of Fitness issuing authority. It states the maximum permissible loading.
Continuous permit	A continuous permit covers the movement of a vehicle that is used frequently, and in a specific area or on a specific route. The vehicle's load is constant and not considered to be divisible.
Crawl speed	Crawl speed is defined as a maximum uniform speed of 10km/h on bridge crossings.
Critical span	The critical span of a bridge is the length of the most critical longitudinal span of a particular bridge, as assessed during rating of the bridge.
Critical wheelbase	The critical wheelbase is the wheelbase giving the VGI (ie maximum GI) – see <i>Chapter B10: Vehicle parameter calculations other than VAI</i> in part B of this volume for a method of determination.
Deck loading ratio	The deck loading ratio is an indicator of the extent to which the axles of a vehicle will load a particular bridge deck.
Director of Land Transport	<p>Role established by the Land Transport (NZTA) Legislation Amendment Act 2020 to provide leadership within Waka Kotahi NZ Transport Agency in relation to any regulatory matters. The Act sets out the Director's functions, powers and duties.</p> <p>Under the VDAM Rule, the Director is responsible for issuing permits in accordance with the rule. The Director has delegated the authority to issue permits to Waka Kotahi's permitting staff and contractors.</p> <p>References in this manual to Waka Kotahi/the Transport Agency or to permitting staff should be read as a reference to the Director if:</p> <ol style="list-style-type: none"> the reference relates to a Director function, and such a reading is consistent with the Act.
Divisible load	<p>A divisible load is a payload that is either a fluid, or has more than one separate component (even though these components may be temporarily connected for the purposes of handling, storage, or transport).</p> <p>Examples include milk, gravel, logs, animals, or bundles of steel or timber.</p>

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List of general terms continued

Dolly pivot point

The dolly pivot point is identified in the diagram below.



Dolly width

Dolly width is measured as the distance to the outside of the tyres. If this can be varied, it is necessary to indicate the range of widths that may be achieved.

Engine power

Engine power is the rated power of the tractor unit, after allowing for ancillaries. It may be expressed in brake horse power (BHP) or kilowatts (kW).

Note: 1 BHP = 0.75kW.

ESC

Electronic stability control (ESC) is a computerised technology that improves a vehicle's stability by detecting and reducing a loss of traction (skidding).

Evidence

In the context of vehicle permitting, evidence includes (but is not limited to) documents that support compliance with requirements, for example:

- PBS reports
- signed letters
- copies of registration, or
- audit reports.

Waka Kotahi may seek to verify any information supplied as evidence.

Continued on next page

List of general terms continued

Fraction of capacity (FOC)	Fraction of capacity (FOC) is a measurement bridge engineers use to determine the capacity of bridges to carry overweight loads.
Gradeability	The gradeability of a vehicle refers to the steepness of grade that a motor vehicle is capable of climbing at an efficient speed.
Gross index (GI)	The gross index is the ratio of the mass on any grouping of axles, to the reference mass for that grouping.
High speed transient off-tracking	<p>High speed transient off-tracking refers to the sideways distance that the last trailer in a combination moves outwards to either side during a high speed turning manoeuvre, such as changing lanes or taking evasive action.</p> <p>The distance is measured by comparing the position of the centre of the rear axle of the last trailer, with the path taken by the centre of the steering axle during the manoeuvre.</p>
Identical vehicle	<p>A vehicle (or vehicle combination) can be considered identical for operating on multiple registration permits if it meets all of the following criteria:</p> <ul style="list-style-type: none">• same prime mover (only one prime mover is allowed per permit)• identical axle spacings• same tyre size• identical inner and outer wheel track• all units (including prime mover) in the combination have a sufficient GVM for the load in question, and• all units (including prime mover) in the combination have sufficient MTM, GCM, 5th wheel, tow bar and tow ball ratings, etc, where applicable, for the load in question.

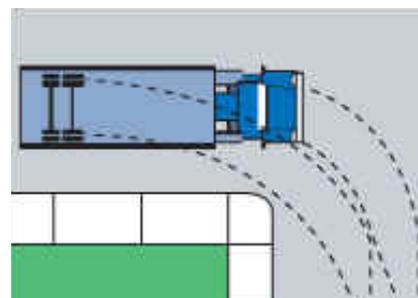
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List of general terms continued

Low speed off-tracking

Low speed off-tracking refers to the phenomenon of a rear axle moving inwards from the path of the steering axle during a low or moderate speed turn (see image right).

The longer the wheelbase of the vehicle or the tighter the turn, the more off-tracking occurs.



Measuring the extent to which a vehicle off-tracks is important for permitting, as it will ascertain the risk to other road users (including pedestrians) posed by heavy vehicles; for example, when turning 90 degrees at an intersection.

Manager, System Management (regional)

The Manager, System Management, is the regional manager of one of Waka Kotahi's eight regional offices: Auckland, Hamilton, Tauranga, Napier, Wanganui, Wellington, Christchurch and Dunedin.

Maximum allowable gradient for combination (MGC)

The MGC is the maximum uphill gradient that a particular vehicle combination can negotiate without subjecting the pavement surface to the possibility of damage through loss of traction by driving wheels.

For the formula for calculating the MGC see *Chapter B10: Vehicle parameter calculations other than VAI* in part B in this volume.

Mobile plant

Mobile plant is a vehicle that is operated mainly off the highway, and which does not carry a separate payload while on the highway.

This includes mobile cranes, motor scrapers, dump trucks, drilling rigs, front-end loaders, forklifts, crushing plants and batching plants.

Mobile power crane

A mobile power crane is a self-propelled, pneumatic tyred vehicle consisting of either:

- a crane mounted on a purpose made crane carrier, or
- a crane mounted on a truck.

Multiple trips

Multiple trips are the separate movements of one particular vehicle over the same route with similar payloads within a limited time period.

Continued on next page

List of general terms continued

Normal limits	Normal limits are the work time limits specified in section 30ZC of the Land Transport Act 1998.
OPermit	OPermit is a computer-based system used by Waka Kotahi for processing overweight and HPMV higher mass permit applications. The system contains bridge, highway and vehicle data. It is used for checking pavements and bridges on a specified route for their ability to carry vehicles that exceed general access mass limits.
Overdimension permit	An overdimension permit is a permit issued by Waka Kotahi to allow the movement on a public road of a motor vehicle that exceeds the dimension limits specified in section 6.49 of the VDAM Rule, or is unable to comply with the requirements of its dimension category as specified in schedule 6, part 1 of the VDAM Rule.
Overweight permit	An overweight permit is a permit issued by a road controlling authority to allow the movement on a public road of a heavy motor vehicle that exceeds the mass limits specified in section 4 of the VDAM Rule.
Pavement grade	The pavement grade is a measure of the ability of a road pavement to carry overweight vehicles. For details see <i>Chapter B10: Vehicle parameter calculations other than VAI</i> in part B in this volume of the manual.
Pavement loading ratio (PLR)	The PLR is an indicator of the extent to which the axles of a particular vehicle will load a particular road pavement. For the method of calculation see <i>Chapter B10: Vehicle parameter calculations other than VAI</i> in part B in this volume of the manual.
Payload	Any load carried by a vehicle that is not permanently attached to the vehicle.
Payload weight	The payload weight is the weight that will (if necessary) be transported/ loaded on to the vehicle.

Continued on next page

List of general terms continued

Performance based standards (PBS)	<p>Performance based standards (PBS) are a set of approved performance measures that focus on how a vehicle performs on the road, rather than on the traditional prescriptive regulations of length and mass.</p> <p>Waka Kotahi uses performance based standards (PBS) to determine whether non-standard heavy vehicles meet the safety performance requirements equivalent to standard vehicles.</p> <p>The standards encourage vehicle operators, manufacturers and designers to think innovatively about vehicle design and technology to create HPMVs that comply with the standards.</p>
Permit Issuing Officer (PIO)	<p>The PIO is the person who processes and issues vehicle dimensions and mass permits on behalf of the road controlling authority.</p>
Reference axle weight	<p>The reference axle weight is the nominal allowable mass given to an axle. It takes into account the axle type and spacing. In general terms the reference axle mass is equivalent to the legal axle mass limit – see <i>Chapter B9: Calculating the vehicle axle index (VAI)</i> in part B in this volume of the manual.</p>
Reference gross weight	<p>The reference gross weight for any grouping of axles is the nominal allowable mass given to that grouping of axles – see <i>Chapter B10: Vehicle parameter calculations other than VAI</i> in part B in this volume of the manual.</p>
Single trip	<p>A single trip is a continuous movement under an overweight permit by one vehicle. This includes a movement in one general direction with stops totalling no more than two days but without change of load.</p> <p>Also included is an outward plus return journey over substantially the same route with stops totalling no more than two days, with or without change of load.</p>
Small standard tyres	<p>Small standard tyres are tyres with smaller footprint areas, and hence lower reference axle masses, than standard tyres.</p> <p>For details see <i>Chapter B9: Calculating the vehicle axle index (VAI)</i> in part B in this volume of the manual.</p>
Spaced axle	<p>A spaced axle is an axle that is 2.4 metres or more from another axle.</p>

Continued on next page

List of general terms continued

Specified standard tyres	<p>Specified standard tyres have larger footprint areas, and hence higher reference axle loads, than standard tyres.</p> <p>For details see <i>Chapter B9: Calculating the vehicle axle index (VAI)</i> in part B in this volume of the manual.</p>
Startability	<p>Startability is the ability of a vehicle to start moving forward on a grade, without posing any additional risk to other road users.</p>
Strippable load	<p>A strippable load is a payload that can be significantly reduced in mass (albeit with some difficulty) without causing irreparable damage.</p> <p>Some examples include:</p> <ul style="list-style-type: none">• removing blade, rippers and ripper mechanism from a tractor• removing jib and counterweights from a crane• cutting of a log which would otherwise be cut at a mill, and• cutting of a welded steel truss. <p>Note: Once the load is stripped, the parts are then a divisible load.</p>
Suspension type	<p>Suspension types include:</p> <ul style="list-style-type: none">• A for Air Bag• B for Walking Beam (may be in combination with leaf spring)• H for Hydraulic• R for Wire Rope• L for Leaf Spring• O for Other, or• D if on Drive Axle.
TORO	<p>TORO refers to the Transport Register Online website at https://toro.nzta.govt.nz/</p>
Total unit mass	<p>The tare mass of a vehicle unit plus the load to be carried on the unit.</p>

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List of general terms continued

Tracking ability

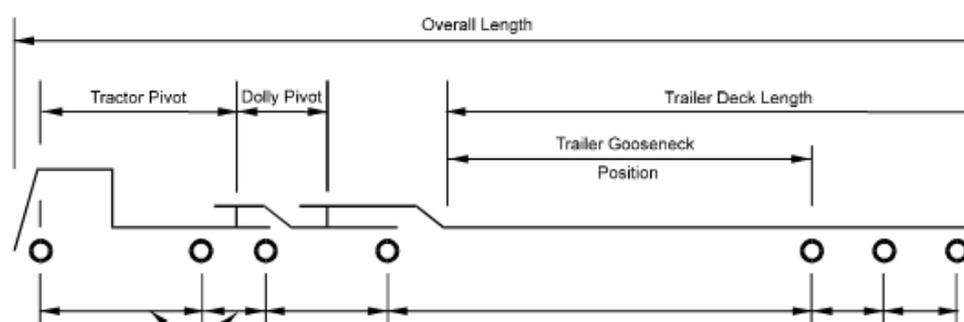
The tracking ability of a vehicle refers to that vehicle's ability to remain on a straight path. It ensures a vehicle remains within its traffic lane during forward movement on a straight road at highway speed.

Traction friction coefficient

The traction friction coefficient is a value that reflects the friction force developed between the wheel or tyre and the pavement surface during traction.

Tractor pivot point

The tractor pivot point is illustrated in the diagram below.



Tractor width

The tractor width is measured as the distance between the outsides of the tyres.

Trailer deck height

The trailer deck height is the distance between the ground and the top of the deck. This height may be variable.

Trailer deck length

The trailer deck length is the distance measured from the base of the gooseneck to the end of the deck.

Trailer gooseneck height

The trailer gooseneck height is the distance from the deck of the trailer to the highest point on the gooseneck.

Trailer gooseneck position

The trailer gooseneck position is the distance from the base of the gooseneck to the centre of the leading axle on the trailer.

Continued on next page

List of general terms continued

Trailer width	The trailer width is measured as the distance between the outsides of the tyres.
Transporter	A transporter is a vehicle specifically designed to carry a payload.
TSL number	<p>A TSL number is a transport service licence number.</p> <p>Companies or individuals must hold the appropriate transport service licence (TSL) if they operate:</p> <ul style="list-style-type: none">• a passenger service• a goods service• a vehicle recovery service, or• a vehicle rental service. <p>There are different kinds of TSLs for each type of service.</p> <p>Vehicles for which no TSL is required include:</p> <ul style="list-style-type: none">• mobile cranes• mobile plant and machinery• special purpose vehicles, and• agricultural vehicles.
Tyre size	<p>Tyres are categorised as 'standard' if they are less than 355mm wide.</p> <p>Tyres are categorised as 'large' if their width is 355mm or more but less than 444mm.</p> <p>Tyres with a width of 444mm or more are categorised as 'mega' tyres.</p> <p>Tyre measurements need to be specified on permit applications. For details see <i>Chapter B9: Calculating the vehicle axle index (VAI)</i> in part B in this volume of the manual.</p>
Unit	For permit issuing purposes, a 'unit' is defined as something that can be used singularly or in conjunction with other units to make an overall vehicle.

Continued on next page

List of general terms continued

Vehicle	For permit issuing purposes a 'vehicle' is defined as the complete combination (of units) that the permit will be issued for. Different combinations of units require different permits unless the permit is for multiple identical vehicles (see <i>Identical vehicle</i> above).
Vehicle gross index (VGI)	The VGI is the maximum gross index for a vehicle. It is an indicator of the effect of the gross load of a vehicle on bridges.
Vehicle tare weight	The tare weight (or simply 'tare') is the unladen weight of a vehicle. The tare weight includes a full fuel tank and any normal running gear. For air bag axle vehicles, the tare value is the weight at zero bag pressure.
Wheel track	The wheel track is the distance between the centres of the left-side and right-side wheels of a pair of wheels.
Work time rules	Work time rules include but are not limited to part 4B of the Land Transport Act 1998 and the requirements of the Land Transport Rule: Work Time and Logbooks 2007.
Yaw damping ratio	The yaw damping ratio is the rate at which the sway of the rear trailer in a combination diminishes (decays) after a short duration steering manoeuvre has taken place, such as when moving back into a line of traffic after an overtaking manoeuvre. To reduce risk to other road users, a quick recovery is required. A longer recovery time increases the workload on the driver to bring the vehicle under control.
