



Government of South Australia

Department for Transport,
Energy and Infrastructure

MR 434 06/06

Policy for the Transport of Oversize and Overmass Indivisible Loads and Vehicles

June 2006

This policy book is subject to change over time as policy evolves to meet the needs of industry, community, environment and other road users. It is therefore recommended that users of this policy book consult the latest version or amendments on the DTEI website to obtain the latest information.

<http://www.transport.sa.gov.au/permit/>.

FOREWORD

Limits on the dimensions and mass of vehicles using the State's road system are specified in the statutory provisions of the Road Traffic Act.

The Act does however recognise the possibility that sound reason may exist for allowing vehicles exceeding these limits to operate on all or part of the road system by permitting exemptions to be granted. The exemptions are administered through the Department for Transport, Energy and Infrastructure's (DTEI) Permits System which operates under the delegated authority of the Minister for Transport.

In delegating the authority, the Minister has, as a matter of policy, directed that permit applications should be assessed by giving due consideration to:-

- the economic benefits of the proposed operation,
- the need for suitable protection of the State's road system from structural damage,
- the safety and convenience of all road users,
- the capability of the vehicle to safely carry the load,
- environmental impacts,
- equitable treatment of all sectors of the industry.

The purpose of this policy document is to communicate the Government's policy for the movement of specialised forms of transport. Compliance with this permit system will facilitate efficient and safe movement of specialised transport on the State's road system.

You should be aware that the standard of the road system varies throughout the State and change with time.

This policy document is subject to on-going review and, as conditions and circumstances change, will be revised from time to time in the future.

Director, Transport Safety Regulation

Section 1: Permits

1.1	The Permit System	1
1.1.1	Introduction	1
1.1.2	Legal Dimension and Mass Limits	1
1.1.3	Permission to Exceed Legal Mass and/or Dimension Limits	3
1.1.4	Why are permits issued?	3
1.1.5	What kinds of situations require a permit?	4
1.1.6	What types of permits are there?	5
1.2	Applying for a Permit or Exemption	5
1.2.1	Permit Application Forms	5
1.2.2	Permit Fees	6
1.2.3	Downloading Forms	6
1.2.4	Written/Fax Applications	6
1.2.5	Telephone Enquires	6
1.2.6	How to get a permit After Hours in an emergency situation	6
1.2.7	How to get a permit urgently during normal working hours	7
1.2.8	Issued Permits	7
1.2.9	Conditions Applying to an Issued Permit	7
1.2.10	Exceptions to the Guidelines	8
1.2.11	Authority to Issue an Exemption	8

Section 2: Oversize Restricted Access Vehicles

2.1	Oversize Restricted Access Vehicles	9
2.1.1	Oversize Vehicles	9
2.1.2	Limits for Dimension Permits	9
2.1.3	Vehicle Requirements	10
2.1.4	Load Description	11
2.1.5	Thin Projecting Loads	11
2.1.6	Left Hand Drive Vehicles	11
2.2	Conditions of Travel for Oversize Vehicles	12
2.2.1	Times of Travel	12
2.2.2	Night Travel	13
2.2.3	Speed Limits	14
2.2.4	Vehicle Category - Maximum Allowable Speed	14
2.2.5	Convoy Travel	14
2.2.6	Clearances From Other Authorities	15
2.2.7	Route Surveys	16

INDEX

2.3 Warning Signs and Lights 16

2.3.1	Warning Signs	16
2.3.2	Warning Sign Specifications	16
2.3.3	Flags	17
2.3.4	Delineators	17
2.3.5	Flashing Yellow Lights	17
2.3.6	Use of Headlights	17

2.4 Concessions for Specific Oversize Vehicle Classes and Loads 18

2.5 Escort Requirements for Oversize Vehicles and Loads 18

2.5.1	Overwidth and Overlength Loads	18
2.5.2	Escort Requirements for Night Travel	19
2.5.3	Overheight Vehicle Loads	19
2.5.4	Escort Operating Guidelines	19
2.5.5	Use of Pilot Vehicle in Lieu of Rear Vision Mirrors	19
2.5.6	Exceptions to Normal Escort Requirements	20
2.5.7	Escorts Required by Other Authorities	21
2.5.8	DTEI Observer	21

2.6 Escort Charts for Oversize Vehicles and Loads 22

Table 2.4:	Escort Requirements – Adelaide	22
Table 2.5:	Escort Requirements – SA Country Area	23
Table 2.6:	Escort Requirements – Adelaide Hills Area	23

Section 3: Overmass Restricted Access Vehicles

3.1 Overmass Restricted Access Vehicles 24

3.1.1	Overmass Vehicles	24
-------	-------------------	----

3.2 Limits for Mass Permits 25

3.2.1	Limits For Mass Permits	25
3.2.2	Tyre Limits	26

3.3 Non-Load Carrying Overmass Vehicles 29

3.3.1	Non-Load Carrying Vehicle Limits	29
3.3.2	Trip Permits	29
3.3.3	Gross Mass	31
3.3.4	Period/Zone Permits	31

3.4	Load Carrying Overmass Vehicles	32
3.4.1	Load Carrying Vehicle Limits	32
3.4.2	Zone Mass Permits (Maximum gross 49.5 t)	34
3.5	Conditions of Travel for Overmass Vehicles	36
3.5.1	Vehicle Requirements	36
3.5.2	Vehicle Suspension Systems	36
3.5.3	Vehicle Assessment	36
3.5.4	Load Description	38
3.5.5	Times Of Travel	38
3.5.6	Clearance From Other Authorities	39
3.6	Concessions for Specific Overmass Vehicle Classes and Loads	39
3.7	Escort Requirements for Overmass Vehicles and Loads	40
Section 4: Oversize and Overmass Restricted Access Vehicles		
4.1	Oversize and Overmass Vehicles	41
4.2	Mobile Cranes	41
4.2.1	Times of Travel	41
4.2.2	Night Travel for Rigid, Carrier Mounted Mobile Cranes	41
4.3	Towing Articulated Vehicles	42
4.4	General Freight Combinations Operating Under Notice	43
4.4.1	Double and Triple Road Trains	43
4.4.2	B-Doubles	43
4.5	General Freight Combinations Operating Under Permit	43
4.5.1	B-Triples GCM=82.5t	43
4.5.2	AB Road Trains GCM≤99.5t	43
4.5.3	2AB Road Trains GCM≤135.5t	43
4.6	Allowable Non-Permit Vehicles	44

INDEX

Section 5: Definitions 45

Appendix 1: Clearance Contact List 47

Appendix 2: Permit Route Survey Form 48

Appendix 3: Maps 49

Map 1: Adelaide Zone 50

Map 2: Adelaide Hills Zone 51

Map 3: Optus Clearance Zone 52

Section 1: Permits

1.1 The Permit System

1.1.1 Introduction

This Policy provides the legal framework with clear set rules when applying for a heavy vehicle exemption commonly known as “a permit”.

The Road Traffic Act (1961) provides the legal basis for the operation of all heavy transport on South Australian Roads. When a vehicle or load exceeds mass (weight) or dimension (length, height, width) limits, then a permit is required to give that vehicle special permission to travel along certain roads. Permits therefore, are legal documents that exempt certain types of heavy vehicles and/or loads to travel on specific roads. Vehicles that require a permit to operate outside of the legal limits are referred to as Restricted Access Vehicles.

1.1.2 Legal Dimension and Mass Limits

The Road Traffic Act and Regulations specify maximum mass and dimensional limits for General Access Vehicles (GAVs) to operate on roads in South Australia. Any vehicle with a Gross Vehicle Mass (GVM) over 4.5 tonnes must operate within the following limits unless exempted by a Permit or Gazette Notice:

Table 1.1: Mass limits	
Gross Combination Mass	42.5 tonnes
Axles and Axle Groups	Refer to Table 1.3 – Axle Mass Limits
Axle spacing	Refer to Table 1.4 – Axle Spacings

Table 1.2: Dimension limits		
Width (Regulation 66)	2.5 metres	
Height (Regulation 72)	4.3 metres	
Length (Regulation 69)	12.5 metres	Rigid Truck
	12.5 metres	Rigid Bus
	18.0 metres	Articulated Bus
	19.0 metres	Articulated Vehicle
	19.0 metres	Rigid Truck and trailer combination

Table 1.3: Mass limits for single axles and axle groups	
Description of single or axle group	Mass Limit (tonnes)
Single steer and single axle groups	
Single steer axle on	
a) complying bus	6.5
b) any other motor vehicle	6.0
Single axle or single axle group fitted with single tyres with section width of	
a) less than 375 mm	6.0
b) 375mm – 450mm	6.7
c) 450mm +	7.0
Single axle or single axle group fitted with dual tyres on	
a) a pig trailer	8.5
b) a complying bus or bus licensed to carry standing passengers (other than bus referred to in paragraph (c))	10.0
c) a low floor bus with 2 axles that is licensed to carry standing passengers	11.0
d) any other vehicle	9.0
Twinsteer axle groups	
a) without a load-sharing suspension system	10.0
b) with load-sharing suspension	11.0
Tandem axle groups	
Tandem axle groups fitted with single tyres with section width of	
a) less than 375 mm	11.0
b) 375mm – 450mm	13.3
c) 450mm +	14.0
Tandem axle group fitted with single tyres on one axle and dual tyres on the other axle on	
a) a complying bus	14.0
b) any other vehicle	13.0
Tandem axle group fitted with dual tyres on	
a) a pig trailer	15.0
b) any other vehicle	16.5
Triaxle groups	
Triaxle group on a vehicle fitted with single tyres with section width of less than 375mm on all axles, or single tyres on 1 or 2 axles and dual tyres on the other axle or axles	15.0
Triaxle group on a pig trailer with either single tyres with section width of at least 375mm, dual tyres on all axles or a combination of those tyres	18.0
Triaxle group on a vehicle other than a pig trailer, with either single tyres with section width of 375mm, dual tyres or a combination of those tyres	20.0
Quad axle groups	
Quad axle group fitted with single tyres with section width of less than 375mm	15.0
Quad axle groups fitted with single tyres with section of at least 375mm or dual tyres	20.0

Table 1.4 – Mass limits relating to axle spacings (other than Road Train and B/Doubles)								
Distance (metres)		Mass	Distance (metres)		Mass	Distance (metres)		Mass
exceeds	not exceeding	limit (tonnes)	exceeds	not exceeding	limit (tonnes)	exceeds	not exceeding	limit (tonnes)
0	3.7	23.0	5.8	6.0	30.0	8.2	8.3	37.0
3.7	3.8	23.5	6.0	6.2	30.5	8.3	8.5	37.5
3.8	4.0	24.0	6.2	6.3	31.0	8.5	8.7	38.0
4.0	4.2	24.5	6.3	6.5	31.5	8.7	8.8	38.5
4.2	4.3	25.0	6.5	6.7	32.0	8.8	9.0	39.0
4.3	4.5	25.5	6.7	6.8	32.5	9.0	9.2	39.5
4.5	4.7	26.0	6.8	7.0	33.0	9.2	9.3	40.0
4.7	4.8	26.5	7.0	7.2	33.5	9.3	9.5	40.5
4.8	5.0	27.0	7.2	7.3	34.0	9.5	9.7	41.0
5.0	5.2	27.5	7.3	7.5	34.5	9.7	9.8	41.5
5.2	5.3	28.0	7.5	7.7	35.0	9.8	10.0	42.0
5.3	5.5	28.5	7.7	7.8	35.5	10.0		42.5
5.5	5.7	29.0	7.8	8.0	36.0			
5.7	5.8	29.5	8.0	8.2	36.5			

If your vehicle falls within these limits, you can use any road, subject to locally imposed controls such as “Bridge Load Limits” or “No Trucks” signs.

1.1.3 Permission to Exceed Legal Mass and/or Dimension Limits

If your vehicle or combination, exceeds any of the prescribed limits, it will require permission to operate on roads in South Australia. Permission falls into two main areas, **Gazette Notices** and **Permits**.

(a) Gazette Notices

Gazette Notices are general exemptions granted under the Road Traffic Act. These general exemptions are for specific vehicle classes or specific commodities that are exempt from a clause/s of the statutory dimension limits.

A series of South Australian route networks have been assessed and approved as suitable and safe for uses by various classes of Restricted Access Vehicles. Approved route networks are published as either notices in the South Australian Government Gazette and are commonly referred to "Gazette Notices" and/or "Codes of Practice" which include Approved Route Network Map Books

Gazette Notices, as well as containing or referring to approved route network map books, also contain information about the conditions that the restricted access vehicle driver must comply with when operating on the approved routes. Gazette notices can be accessed via the DTEI website at <http://www.transport.sa.gov.au/permits/>.

(b) Permits

If a Gazette Notice or Code of Practice does not satisfy your requirements, you can apply for a permit. Certain conditions need to be met before the decision to issue a permit can be made. (Permits are not automatically issued).

Unlike Gazette Notices, permits can be issued only for a **specific vehicle** and only to the registered owner of the vehicle. Permits can be issued for overmass and overdimensional vehicles and/or loads, or when, in some circumstances, a vehicle operating under a Gazette Notice needs to travel outside of the routes allowed under that Notice

1.1.4 Why are permits issued?

Permits are a legal document providing written authority for travel of the vehicle, covering and including all terms and conditions under which the statutory (legal) limits have been exceeded and the exemption(s) that will apply.

The permit document must be carried with the vehicle when operating subject to the exemption so that the driver is fully aware of all terms, conditions and restrictions specified.

The purpose of a permit is to ensure safe travel of the vehicle, the safety of other road users and preservation of the road environment. The conditions and restrictions specified in the permit document are intended to ensure the following does not occur:

- damage to roads, bridges or culverts;
- damage to road-side fixtures, e.g. street lights, traffic lights, power cables, signs;
- danger for other motorists; and
- danger for the safe passage of the vehicle, driver and load.

For example, certain older structures are designed to carry certain mass loadings and as such, their lifespan could be reduced by frequent traversing by an overmass vehicle. Some transportable houses may take up all or an excessively large part of the available road width, with the associated potential of inconveniencing other road users and causing damage to roadside furniture. Very long permit vehicles may be restricted to travel along certain routes to ensure a certain level of safety for other road users and not damage the road infrastructure.

Any damage caused to roadside furniture is charged to the operator of the vehicle.

1.1.5 What kinds of situations require a permit?

There are various situations which may require a permit:

- **Overdimensional** – where either the load and/or the vehicle combination itself exceeds a length of 19.0 metres and/or a width of 2.5 metres and/or a height of 4.3 metres.
- **Excess Mass** – when the statutory mass limits (legal weight carrying capability) are exceeded on any axle or axle group and/or the Gross Vehicle/Combination Mass exceeds 42.5 tonnes.
- **Overdimensional & Excess Mass** – when both of the above categories apply.
- **Additional Routes for General Freight Restricted Access Vehicles:** - in some cases permits may be available for general freight vehicles to travel outside the approved gazetted routes. General freight combinations are Restricted Access Vehicles that carry a commodity as freight.

The following are types of general freight restricted access vehicles which usually operate under a Gazette Notice but may, under certain circumstances, operate under permit:

Long Combination Vehicles

Double and Triple Road Trains
Converter Dollies

Medium Combination Vehicles

B-Doubles
Stinger Car Carriers
Rigid Truck and Dog Trailer (19m and 23m)

- **Special Purpose Vehicles**
Some Agricultural Vehicles

Some general freight restricted access vehicles operate by permit only as they are trial combinations which are not generally approved nationally.

Long Combination Vehicles

B-Triples
AB Road Trains
2AB road Trains
Rigid plus Two

Medium Combination Vehicles

Medium Articulated Vehicle with Dog/Pig Trailers (MADs/MAP)

Note: for more information regarding these vehicles, refer to the Restricted Access Vehicle Information Bulletin “General Freight Restricted Access Vehicles” on the DTEI website.

- **Mobile Cranes**

1.1.6 What types of permits are there?

Trip

A trip permit is issued for the single trip of a specific vehicle carrying a load over a specific route. The permit will either require the trip to take place on a specific day or days up to a maximum of one month.

Period

These are issued to cover frequent trips from one given point to another via a specific route or route network. The maximum length for a period permit is 12 months. The duration of these permits may be affected for council owned roads.

Zone

In some situations, zone permits are issued to cover frequent trips by a specific vehicle carrying the same load or type of load within a defined zone, i.e. cartage of grapes in the Riverland. Zone Permits are generally issued for one zone only or one zone plus zones immediately next to a zone. The usual duration is 12 month but, subject to special conditions, a Zone Permit can be arranged for longer periods if the routes within the zone are suitable for the operation proposed.

Combined Period and Zone Permits – issued for travel within a specific zone for a period of time, usually 12 months.

1.2 Applying for a Permit or Exemption

1.2.1 Permit Application Forms

To obtain a permit a vehicle operator must make a formal application to Vehicle Permits Team by completing the relevant forms.

Form A

The Form A is only required when a vehicle and its details are not listed on the Permits database or if any of the **vehicle specifications** have changed.

This form provides DTEI with specifications about the particular vehicle you want to use, such as the make and model, engine and engine capacity, transmission, suspension, axles configuration, tyres etc. This enables the Vehicle Permits Team to assess your vehicles suitability for the types of permit you might apply for. Copies of registration certificates must be attached and where applicable, an engineering rating letter and/or a vehicle specification sheet may be requested.

Depending on the type of vehicle, DTEI may need to carry out an inspection and weighing of the vehicle as part of the assessment process.

When you complete the Form A for your vehicle, it will be entered into the Permits Database so that you do not have to repeat this process when the vehicle is used in a different vehicle combination.

Form B

This is the **application for a permit**. An application cannot be processed unless a completed Form A has been received for the specific vehicle(s) that the permit is being sought for. The application form seeks information about the type and kind of permit required, vehicle owner details, times of travel, mass details, load details, dimension details and the proposed route for travel.

Form B1

This is an application for a particular road or route to be gazetted for use by a particular vehicle type or combination. Forms and information are available from the Vehicle Permits Team, Regency Park (see contact details below).

Form C

This is an application for renewal of an existing permit. This can only be used if all circumstances remain the same, and the application must be accompanied by all relevant clearances. If there are any changes, such as to the route travelled, the owner of the permit vehicle, the participating vehicle units or the configuration type etc, a new permit application (Form B) must be lodged.

1.2.2 Permit Fees

As from 1 July 2006, fees will be charged for permits issued. Information regarding fees can be found on DTEI's website at <http://www.transport.sa.gov.au> or by contacting the Vehicle Permits Team (see 1.2.4 and 1.2.5 below).

1.2.3 Downloading Forms

At present, Forms A, B, B1 and C can be downloaded from the DTEI website and completed electronically, however they must be printed and posted/faxed/delivered to the Vehicle Permits Team (see contact details below). An online lodgement system, allowing Forms A, B and C to be completed and sent to the Vehicle Permits Team electronically, will be available in the near future.

Information regarding permit requirements, gazette notices, approved routes and operational guidelines is available on DTEI's Internet site: www.transport.sa.gov.au

1.2.4 Written/Fax Applications

Permit application forms can be either be faxed, mailed or hand delivered to the Vehicle Permits Team at:

Kateena Street, Regency Park SA 5010; or
PO Box 1 Walkerville SA 5081; or
Fax: (08) 8348 9551 or (08) 8348 9556.

1.2.5 Telephone Enquires

Telephone enquiries to the Vehicle Permits Team can be made on: 1300 882 249

1.2.6 How to get a permit After Hours in an emergency situation

It is recognised that emergencies may occur outside normal hours requiring the services of a permit vehicle i.e. bushfires, major accident where life is at risk need special attention and in these situations, you can apply for an emergency permit by calling DTEI on our emergency out-of-hours number, toll free 1800 018 313.

Depending on the situation appropriate Vehicle Permits Team can be contacted to provide assistance.

1.2.7 How to get a permit urgently during normal working hours

DTEI understands that there are times when you need to get a permit urgently due to the factors outside your control, such as major accidents, extreme weather conditions, or machinery failure that would result in economic loss.

If you are suddenly faced with an urgent situation, please fax your request to the Coordinator, Vehicle Permits Team, justifying your reasons for an urgent assessment.

1.2.8 Issued Permits

Only one original permit is issued per application (since a permit is a legal document). Copies of the original are acceptable provided that all relevant pages have been copied and are carried by the driver. Drivers must carry a copy of the permit with them in the truck cab at all times they are operating under the permit conditions.

It is the responsibility of operator to ensure that permits issued are kept in good condition and remain legible for the life of the permit.

If an operator loses a permit or wishes to replace the original, they may contact the Vehicle Permits Team, but the request for a replacement must be made in writing.

1.2.9 Conditions Applying to an Issued Permit

All permits are issued subject to general conditions which are printed within the text of the permit.

- 1 Acceptance of the permit by the permit holder shall be deemed to be acceptance of this and all the conditions of the permit.
- 2 The permit SHALL be carried by the driver of the vehicle at all times and be produced when requested by an Inspector appointed under the Act, or a police officer.
- 3 The permit may be cancelled or revoked at any time.
- 4 The permit is issued on the express condition that the limitations specified shall not be exceeded.
- 5 The exemption shall operate only with respect to the vehicle, loads, routes and time specified, and does not relieve the owner and/or driver of the duty to observe all other provisions of the Road Traffic Act and Regulations.
- 6 The exemption shall not operate or be deemed to operate on routes that are newly formed, constructed or repaired or have been damaged by floods, submergence, subsidence or otherwise and/or to which special limitations have been applied.
- 7 The exemption shall not operate or be deemed to operate on any bridge, culvert, causeway or road ferry in respect of which a special limitation may have been fixed at any time before or after the date of the permit.
- 8 The permit is issued subject to the condition that if in the course of the operation of the vehicle pursuant to the permit any damage is caused to roads or property owned or maintained by the Commissioner of Highways, by the said vehicle, its owner, driver or escort then in such event the permit holder hereby authorises and requests the Commissioner of Highways, to repair and make good such damage and agrees to pay the cost thereof as a debt due to the Commissioner of Highways for materials supplied and work done within 14 days of the service upon him of a letter setting out the cost of such repairs and materials.

- 9 No warranty is given that the roads specified on the permit, or the bridges, culverts or causeways thereon are capable of carrying the vehicle or loading stated and it shall be a condition of this permit that any journey shall be made at the permit holder's own risk absolutely.

1.2.10 Exceptions to the Guidelines

Due to the varied nature of permit loads and the industries that the road system serves, it is not possible in this policy document, to anticipate every permit operation.

Where this policy document does not provide for a specific operation, or the applicant considers that special circumstances exist, a written submission giving full details of the situation should be made to the Department for consideration.

Applications of this nature will be assessed on the basis of the broad principles detailed in Part 1.2.11 of these guidelines entitled "Authority to Issue an Exemption".

1.2.11 Authority to Issue an Exemption

In accordance with the Road Traffic Amendment Act 1986 and Section 163AA (1) of the Road Traffic Act 1961, the power to exempt from the requirements of the Road Traffic Act is vested in the Minister for Transport.

163AA—Power of exemption

- (1) The Minister may, by instrument in writing or by notice published in the Gazette—
 - (a) exempt—
 - (i) any specified vehicle; or
 - (ii) any vehicles of a specified class; or
 - (iii) vehicles carrying loads of a specified kind, from specified provisions of this Part; or
 - (b) vary or revoke an exemption under paragraph (a).
- (2) An exemption under subsection (1) is subject to such conditions and limitations (if any) as the Minister thinks fit and specifies in the instrument or notice of exemption.

Section 2: Oversize Restricted Access Vehicles

2.1 Oversize Restricted Access Vehicles

2.1.1 Oversize Vehicles

An over dimension permit is required if the vehicle and/or load exceeds the statutory dimension limits of the Road Traffic Act, i.e. a length of 19.0 metres (R 69) and/or a width of 2.5 metres (R 66) and/or a height of 4.3 metres (R 72).

Note: this section applies to vehicles which exceed dimension limits ONLY. Vehicles exceeding mass AND dimension limits are covered separately.

2.1.2 Limits for Dimension Permits

The limits up to which overdimensional permits will be issued are set out in Table 2.1 and vary in accordance with permit classification.

Where a combined period and zone classification permit is required the zone permit limits will apply.

Permit Classification	Height	Length	Width
Trip Permit	No Specific Limits	No Specific Limits	7.0m*
Period Permit Country	4.9m	26.0m	5.0m
Adelaide Metro	4.9m	25.0m	3.5m
Zone Permit Adelaide Metro	4.9m	25.0m	3.5m
Adelaide Hills	4.6m	19.0m	3.5m
All other zones	4.9m	26.0m	4.0m

* For Transportable buildings or similarly shaped loads:

- a. Manufactured after 1 October 1983 the overall width at the eaves including gutters may exceed 7.0 metres but shall not exceed 8.0 metres provided that the eaves are at least 3.5 metres above the ground when the building is loaded on the transporting vehicle.
- b. Manufactured prior to 1 October 1983 the overall width of the load may exceed 7.0 metres.

2.1.3 Vehicle Requirements

Permit loads must be carried on an appropriate vehicle which provides for the load to be carried safely and at the minimum practical overall dimensions.

The suitability of a vehicle is assessed using the following criteria:

a) Height

- For vehicle stability the centre of gravity of the load shall be as low as possible.
- To minimise problems with overhead obstructions (i.e. ETSA Utilities wires, Optus, signs, bridges, trees) the overall height of the load shall be as low as possible.
- Where the height is 4.9 metres or less normal vehicles are generally satisfactory.
- Where the height exceeds 4.9 metres a low loader or satisfactory low deck trailer with a maximum deck height of 1.2 metres is required.
- Where the height exceeds 5.0 metres the separate units of the vehicle combination must be specified to enable individual assessment to be carried out.

Note: If specified by the electricity distribution or cable communications company, plastic skid rails shall be fitted to the load as per their requirements.

b) Length

- For manoeuvrability and overtaking by other vehicles the overall length shall be as short as practicably possible.
- The swept path of a specified vehicle configuration is assessed to ensure it can negotiate the route, in particular intersections and traffic islands.
- The rear overhang of the semi trailer, including the load, must not exceed the lesser of 5.5 metres or 25% of the overall length of the entire vehicle.
- 'Rear Overhang' is measured from the rear extremities of the load to the centre of the rear-most axle group.

c) Width

- For manoeuvrability and to minimise the probability of conflict with roadside furniture, trees and signs, and to reduce overtaking problems for other vehicles, loads should be carried at the minimum practicable width.
- For stability the centre of gravity of the load should be as low as possible and the vehicle configuration is assessed to ensure that the vehicle's axle group widths are wide enough to support the load. The axle group widths should not be appreciably less than one third the width of the load provided that the extremities of the load clear the road surface by at least 1.0 metres. The closer the load is to the ground the wider the axle groups must be to prevent the edges of the load coming into contact with the road pavement, kerbing, medians, posts etc.
- The swept path of the specified vehicle configuration is assessed to ensure that it can negotiate the route, in particular intersections and traffic islands etc.
- For loads 5.0 metres wide or less vehicles which are normally 2.5 metres wide are generally suitable.
- For loads greater than 5.0 metres wide and up to 7.0 metres wide a low loader or low deck trailer with a maximum deck height of 1.2 metres is required.
- For loads greater than 7.0 metres wide, the separate units of the vehicle combination must be specified for individual assessment. Written approval must also be sought from DTEI prior to the load being constructed.
- Transportable homes may be 8.0 metres at the eaves.

2.1.4 Load Description

The load to be carried on a vehicle needs to be described in an application form to enable assessment of:

- indivisibility;
- loading at minimum practical dimensions;
- centre of gravity determination; and
- conspicuousness of the load.

For example, machinery (e.g. front end loaders, bulldozers) should be described specifically (e.g. Bulldozer D7 Caterpillar). Buildings up to 7.0 metres in width (8.0 metres at the eaves) can be described as 'Transportable Home', 'Class room' etc.

2.1.5 Thin Projecting Loads

If a load projects more than 150mm beyond one side of an oversize vehicle or combination, and the projection is less than 500mm thick from top to bottom, there must be:

- a warning light attached to the vehicle or combination; and
- at least two yellow, rigid pieces of material (known as delineators) at least 300mm x 300mm, one attached to the front of the projection and one to the rear of the projection.

If the load projects more than 150mm beyond both sides of the vehicle or combination, there must be at least four delineators attached to the load (one on each side at the front, one on each side at the rear).

2.1.6 Left Hand Drive Vehicles

Left hand drive Special Purpose Vehicles (SPVs) such as mobile cranes may be permitted to operate under permit subject to the following conditions:

- left hand drive exemption is only for SPVs that operate under a permit exceeding the statutory dimension and mass limits;
- imported vehicles will require a copy of the approval from the Federal Department of Transport and Regional Services (DOTARS) prior to any assessments being completed;
- when a new SPV is purchased, it is subject to a full roadworthy inspection, identity inspection, inspection and weighing by the Vehicle Permits Team, vehicle registration conditions, and completion of permit application Forms A and B prior to a permit being issued.

Exemption is granted from Division 1 Section 27(1) of the Road Traffic (Vehicle Standards) Rules 1999 for these vehicles to be driven in the left hand drive form on the routes specified in the permit document.

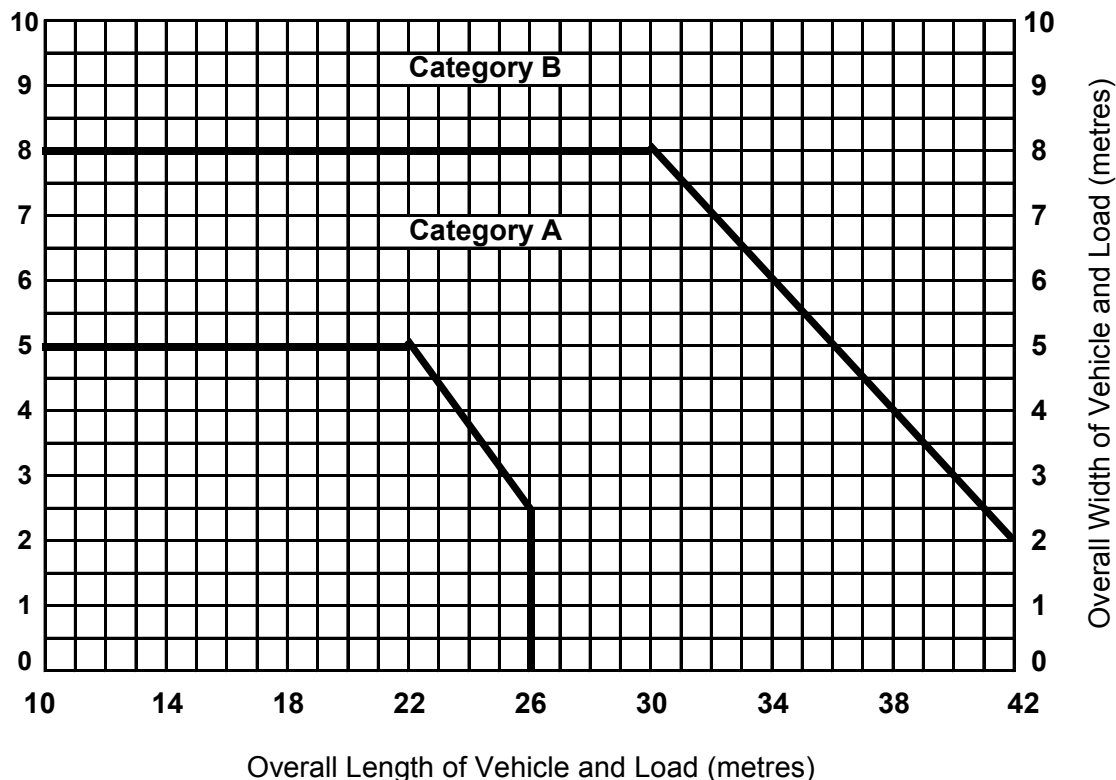
2.2 Conditions of Travel for Oversize Vehicles

2.2.1 Times of Travel

Permits for the movement of oversize vehicles and loads may be issued for travel on any day including weekends and public holidays between sunrise and sunset as specified in the "Proof of Sunrise and Sunset Act 1923", except in the following circumstances:

a) General Restrictions

Table 2.2: Times of Travel Categories by Load Size



The movement of large loads which fall into category 'A' shown in Table 2.2 entitled "Times of Travel Categories by Load Size", will be restricted to specific days and times of travel to reduce traffic disruption to a minimum and to avoid conflict with other permit loads on the same route.

The movement of very large loads which fall into category 'B' as shown in Table 2.2 entitled "Times of Travel Categories by Load Size", will be restricted to Sunday morning or at times of very low traffic density such as at night in the metropolitan area (refer Appendix 3, Map 1) and to specific days and times as determined by DTEI from the traffic data for travel in all other areas.

Times of travel may be restricted on weekdays, weekends or public holidays due to special events.

Travel will not be permitted during periods of low visibility as defined in the Road Traffic Act.

b) All Vehicles/Loads (except Carrier mounted mobile cranes)

Travel will not be permitted between the hours of 7.00 am and 9.00 am or 4.00 pm and 6.00 pm Monday to Friday inclusive. (Travel may be permitted during these hours on public holidays.)
Travel within the Adelaide City Council Area is permitted only as follows:

- (i) For loads/vehicles which do not require a pilot or police escort (refer to Section 2.5 'Escort Requirements for Oversize Vehicles and Loads') travel will be permitted during the following times:
- | | |
|-----------------|---|
| Monday - Friday | sunrise to 7 am and 9 am to 4 pm
6 pm to sunset except on days of late night trading |
| Saturday | 7am to 6pm |
| Sunday | 9am to 6pm |
- (ii) For loads/vehicles which require a pilot or police escort (refer to Section 2.5 "Escort Requirements for Oversize Vehicles and Loads"), travel will be permitted during the following times:
- | | |
|---|--|
| Monday - Friday | sunrise to 7 am
6 pm to sunset except on days of late night trading |
| Saturday, Sunday
and Public Holidays | sunrise to 4 pm |

Travel may be permitted outside these hours with the prior written approval of the Adelaide City Council.

2.2.2 Night Travel

The general movement of overdimensional vehicles and loads between sunset and sunrise as defined in the "Proof of Sunrise and Sunset Act 1923" is undesirable for reasons of road safety.

However, where the movement of a vehicle/load may cause excessive traffic disruption during daylight hours an application for a permit to travel during hours of darkness will be considered on its merits taking into account the safety implications, the size and nature of the vehicle/load and the route characteristics.

The principal requirements for night travel in addition to standard permit requirements are as follows:

- 1 Travel will be determined or assessment made on an individual basis.
- 2 All vehicles/loads will be escorted by at least two (2) pilot vehicles and up to four (4) police escorts (See Table 2.3).
- 3 Travel will only be permitted in the following areas:
 - In the Adelaide Metropolitan Area (refer Appendix 3, Map 1);
 - On arterial roads connecting with the Adelaide Metropolitan Area (refer Appendix 3, Map 1), with at least two lanes for traffic moving in the same direction as the load; and
 - In the larger rural towns where traffic and road conditions are comparable with those found in the Adelaide Metropolitan Area.
- 4 Travel is not permitted in the Adelaide Hills Zone (refer Appendix 3, Map 2).
- 5 Signs on all escorting vehicles are to be floodlit.
- 6 The extremities of the vehicle, load and axle groups are to be floodlit to make the vehicle/load/wheels clearly visible from all sides.
- 7 The lighting and power supply system is to be tested for reliability and the vehicle/load made available to DTEI Permit Officers (or other authorised officers) for inspection by 4.00 p.m. on the afternoon preceding the proposed move.
- 8 Form B Applications for night travel must be lodged at least one month in advance.

2.2.3 Speed Limits

Large and heavy vehicles need to travel at speeds slower than legal limits to maintain vehicle stability and minimise the risk of damage to roadside furniture etc.

The following speed restrictions, notwithstanding any other lower posted limit, shall therefore apply and will be endorsed on the permit as a condition of operation.

2.2.4 Vehicle Category - Maximum Allowable Speed

Gross Mass exceeding 75 tonnes but not exceeding 100 tonnes	80 km/h
Gross Mass exceeding 100 tonnes	60 km/h
Vehicle and load exceeding 6.0 metres but not exceeding 8.0 metres in width	80 km/h
Vehicle and load exceeding 8.0 metres in width	60 km/h

2.2.5 Convoy Travel

Convoy travel is defined as two separate permit loads of similar dimensions travelling to the same destination via the same route.

Convoy travel is not a general permit practice, however, it is recognised that convoy travel has the potential to reduce costs and maximise the utilisation of limited police escort resources and may therefore be considered appropriate under some circumstances.

- Convoy travel will be permitted in most country areas of South Australia subject to the assessment of loads.
- Convoy travel in the Adelaide Metropolitan Area (refer Appendix 3, Map 1) will be restricted to times where traffic density is very low, ie Sunday mornings or at night.
- Typical situations would be two large vehicle/loads travelling together where overhead services need to be raised or traffic signals temporarily removed to allow passage of the permit vehicles.
- Only two permit vehicles can travel in convoy at any one time.
- A minimum of two police escorts and two pilot vehicles shall accompany the conveying permit vehicles eg. two separate sections of a house each requiring two pilot vehicles and one police escort may travel in convoy with one pilot vehicle and police escort at the front and one pilot and police escort at the rear of the convoy thus eliminating the need for two pilot vehicles.
- Roadworthy inspections may be required prior to a permit being issued.

Approval for convoy travel will be assessed on an individual basis and the Permit Application needs to give full justification for this type of travel.

2.2.6 Clearances From Other Authorities

a) Overhead Clearances - Telstra / Optus / ETSA utilities / Cowell Electric

If the height of the vehicle/load exceeds 4.3 metres, a written clearance is required from the relevant electricity utility*. For travel within the Optus Clearance Zone (refer Appendix 3, Map 3), a written clearance from Optus is also required.

Where the height of the vehicle/load exceeds 4.9 metres, copies of relevant clearances must accompany the permit application.

If the height of the vehicle/load exceeds 5.5 metres, a written clearance will be required from Telstra for telephone lines.

All Written clearances must state the:

- permit applicant;
- loaded height of the vehicle;
- load description;
- route to be travelled; and
- conditions of travel.

* There are areas of the State such as Woomera, Olympic Dam and Coober Pedy where the power supply is the responsibility of a local authority such as Cowell Electric, not ETSA Utilities. In these areas, the written clearance must be obtained from the relevant authority. Advice on who is the relevant authority is available upon request from the Vehicle Permits Team. A list of some of these authorities, with contact numbers is attached in Appendix 1.

b) Rail Crossings

If the vehicle/load exceeds 5.50 metres in height and/or 8.0 metres in width or where considered appropriate as part of the permit assessment process, a written clearance from the appropriate rail authority will be required which will state the conditions of travel at rail crossings.

c) Local Government

The powers delegated to Permit Officers of the DTEI to exempt vehicles from the statutory requirements of the Road Traffic Act extend to all roads in South Australia. However, in granting exemptions for operation on roads for which the care and control is vested in Local Government, the Department invariably seeks to preserve the structural, safety and environmental integrity of the Local Government road system.

A written Council clearance will be required to be provided by the applicant for vehicles/loads that:

- exceed 5.0 metres in width; or
- are for a period of more than one month; or
- are for a route network (more than one route).

The clearance must specify the:

- permit applicant;
- vehicle registration numbers;
- date(s) of operation;
- roads permitted; and
- conditions of travel.

2.2.7 Route Surveys

For loads 5.0 metres or more in width a route survey undertaken by the permit applicant will be required before the application will be considered. A copy of the route survey form is included in Appendix 2 and is also available for downloading from the DTEI website.

A route survey shall document by means of either a sketch, a table, or descriptively any critical obstructions on the proposed route. These include both overhead and lateral obstructions such as signs, bridges, overhead wires, buildings, trees and railway crossings, etc.

The survey shall also indicate how it is proposed to negotiate critical obstacles.

Route surveys for other permit applications may also be required.

Route surveys are not required for travel on principle permit routes, Adelaide Metropolitan Area Over Dimension Routes, SA Country Area Over Dimension Routes (refer to Heavy Vehicle Access Framework for maps), provided that the width does not exceed 8.0 m and/or the length does not exceed 30.0 m.

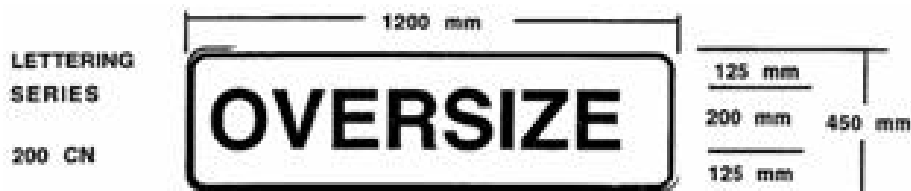
2.3 Warning Signs and Lights

2.3.1 Warning Signs

Warning signs as specified below shall be used on permit vehicles and pilot vehicles when specified in any permit or gazette notice.

2.3.2 Warning Sign Specifications

- The sign panel must be constructed of stiff weatherproof material, for example zincalume (minimum 0.8mm thick). However, the rear sign on an oversize vehicle or combination may be made of flexible material if the load is unsuitable for the attachment of a rigid sign.
- The option to use a box edge or similar construction is allowed. Round or square corners are optional and will depend on the construction style chosen.
- The sign must have a yellow retro-reflective class 1 or class 2 surface which meets Australian Standards AS 1906-pt's 1-4 with a 20mm black edge border set 10mm in from the edge. If a box edge construction is chosen, it shall provide the surface to incorporate the black border. In this case the yellow outline need not be provided. The "OVERSIZE LOAD AHEAD" sign shall be dual faced.
- Lettering shall be black upper case 200mm high Series CN for legend "OVERSIZE" and upper case 100mm high for Series DN for the legend "LOAD AHEAD" and comply with Australian Standards AS 1744.



- The manufacturer's name and trademark must be permanently marked on the sign (but not in the bottom corners of the pilot sign) with letters 10mm high, identifying the class of material used and the standard to which it is manufactured, to ensure compliance is capable of verification.
- Bottom corner cut-outs 150mm in width and 100mm in height on the pilot sign are permitted if required for mounting the amber rotating flashing lights.

2.3.3 Flags

All loads exceeding 2.5 metres in width must have brightly coloured red, yellow or red and yellow flags at least 450mm long and at least 950mm wide.

The flags must be clearly visible at a distance of 100 metres to a person of normal vision.

Flags shall be maintained so that they are in good condition, clean and clearly visible at a distance of not less than 200 metres under normal atmospheric conditions.

2.3.4 Delineators

For loads exceeding 6.0 metres in width, delineators shall be used, comprising of a 450mm wide strip of fluorescent yellow/orange cloth or board with black stripes to extend across the full width of the load, front and rear.

For thin projecting loads (see Section 2.1.5), delineators must be made of a yellow material with minimum size of 300mm x 300mm.

Delineators must:

- comply with Class 1 or 2 of Australian Standard AS 1906, "Retroreflective Materials and Devices for Road Traffic Control Purposes", 1990; and
- be positioned at the front of the vehicle so that the reflective surface is facing forward of the vehicle; and
- be positioned at the rear of the vehicle so that the reflective surface is facing rearward of the vehicle; and
- be maintained so that they are in good condition, clean and clearly visible at a distance of not less than 200 metres under normal atmospheric condition.

2.3.5 Flashing Yellow Lights

The pilot vehicle(s) shall display one or two revolving flashing yellow light(s) mounted on the top of the vehicle when escorting an overdimension load so that at least one light is visible from all directions as per the requirement in the escort guidelines booklet for oversize overmass vehicles and loads.

Such light(s) shall only be used when a pilot vehicle is actually engaged in escorting another vehicle with an overdimension load and shall not be operated at any other time. When operating, at least one light must be clearly visible from all sides up to a distance of 200 metres under normal atmospheric conditions.

A revolving flashing yellow light or lights may be used in a similar fashion on the permit vehicle in accordance with Part 7 of the Road Traffic (Oversize or Overmass Vehicle Exemptions) Regulations 1999, or where specified on a permit or gazette notice.

2.3.6 Use of Headlights

When under escort, the escort vehicle(s) and the permit vehicle shall operate their headlights in the dipped (low beam) position at all times.

2.4 Concessions for Specific Oversize Vehicle Classes and Loads

Some concessions apply for specific oversize vehicle classes and load types, including:

Concrete Pipes;
Logs and Railway Sleepers;
Aggregate Spreaders;
Grape Harvesting Machines (Night Travel);
Boat Trailers;
Rolls of Plastic Pipe;
Caravans and Horse Floats;
Large Rolls of Hay;
Rectangular Baled Hay;
Pin Jib Crane Boom Sections;
Long Roof Decking; and
Used Transportable Buildings >5 metres in Width.

Further information regarding these concessions can be obtained from the Vehicle Permits Team, Regency Park.

2.5 Escort Requirements for Oversize Vehicles and Loads

2.5.1 Overwidth and Overlength Loads

Escorts (either pilot vehicle or police) are essential in preserving road safety when large overdimension loads move on the roads. Pilot vehicle escorts with appropriate signing provide advance warning to approaching traffic. For larger loads police escorts are required for traffic direction.

South Australia has been divided into three areas for the purpose of determining escort requirements:

Adelaide Zone (Appendix 3, Map 1);
Adelaide Hills Zone (Appendix 3, Map 2); and
South Australian Country Area (defined as the remainder of the State).

Tables 2.4, 2.5 and 2.6 in section 2.6 (“Escort Charts for Oversize Vehicles and Loads”) detail the escort requirements for the three areas.

2.5.2 Escort Requirements for Night Travel

Table 2.3 sets out the minimum number of pilot vehicles and police escorts required depending on the dimensions of the vehicle and load, however the number of escorts required is based on special assessment and is subject to negotiation

Other conditions for night travel are set out in section 2.2.2.

Table 2.3: Escort Requirements for Night Travel for Overdimensional Vehicles and Loads		
Dimensions of Vehicle including Load	Minimum Number of Pilot Vehicles Required	Police Escort Vehicles Required
Width > 2.5m and ≤ 3.1m and Length ≤ 22.0m	2 pilot vehicles required	1 police escort required
Width > 3.1m and ≤ 3.5m and/or Length ≤ 26.0m	2 pilot vehicles required	2 police escorts required
Width > 3.5m and/or Length > 26.0m	2 pilot vehicles required	Up to 3 police escorts required
Convoy Travel	2 pilot vehicles required	Up to 4 police escorts required

2.5.3 Overheight Vehicle Loads

Permits are normally issued for high vehicles/loads without the need for pilot escorts where there is clearance with overhead wires etc. Where power and utility wires need to be raised, a minimum of one pilot and two police escorts will be required (see section 2.5.7 "Escorts Required by Other Authorities").

2.5.4 Escort Operating Guidelines

A separate document has been prepared titled "Escorting Guidelines for Overdimension and Excess Mass Vehicles" which covers:

- (a) The specification requirements for pilot vehicles;
- (b) The role and responsibilities of and operating criteria for pilot vehicle drivers; and
- (c) The role, responsibilities and duties of police escorts.

This policy booklet must be carried by the driver of the pilot vehicle while escorting overdimension and overmass vehicles. This booklet is available from customer service centres and on DTEI's website at http://www.transport.sa.gov.au/pdfs/freight/escort_guidelines.pdf.

2.5.5 Use of Pilot Vehicle in Lieu of Rear Vision Mirrors

The Road Traffic Act requires the driver of a vehicle at all times with the use of rear vision mirrors to have a clear reflected view of the approach of any vehicle from the rear.

Regulation 35 of the Road Traffic Act specifies that rear vision mirrors may protrude beyond the side extremities of the vehicle/load to a maximum of 150mm. Vehicles with a Gross Vehicle Mass Limit greater than 3.50 tonnes may have the mirrors protruding up to 230mm, subject to being capable of retracting to 150mm.

Extending mirrors beyond the side extremities of a wide load can be impractical under certain circumstances. Therefore, to provide a practical solution, if the load/vehicle is greater than 3.5 m wide and the driver is unable to extend the mirrors to enable vision to the sides and rear of the permit vehicle he may travel with a rear pilot that is in radio communication to advise of approaching traffic.

For vehicles and/or loads exceeding 3.5 metres in width the use of a rear pilot vehicle in lieu of rear vision mirrors is provided by notice in the South Australian Government Gazette:- Refer to Gazette Notice 4.7 "Exemption From the Requirement to Fit Rear Vision Mirrors" and "Proclamation of Specified Class of Vehicle".

It is considered that mirrors can be adequately extended on vehicles with permit loads up to 3.5 metres wide.

It is the driver's responsibility to determine how he will comply with the intent of the aforementioned Sections of the Road Traffic Act.

If an escort vehicle is used for the purpose of the rear vision mirror exemption it shall be in addition to any other pilot vehicle requirement specified in the permit with the exception where two pilot vehicles are specified. That is, with one at the front and one at the rear of the permit vehicle, the rear pilot vehicle may perform a dual role as the pilot vehicle for the purpose of the permit and as the escort vehicle for the purpose of the rear vision mirror exemption. In this situation the vehicle shall comply with the requirements for both purposes.

An 'Oversize Load Ahead' sign shall be displayed on the roof of the pilot vehicle with the wording visible to approaching traffic. (A revolving yellow flashing light shall be displayed in accordance with subsection (1)(b) of Regulation 5.14 of the Road Traffic Act.)

2.5.6 Exceptions to Normal Escort Requirements

Because of factors such as traffic volumes, topography, accident history, and the safety of all road users it will at times be necessary to vary the standard escort requirements. Such variations will be as follows:

(a) Routes

The escort requirements specified for the Adelaide Zone (excluding vehicle/load sizes that fall into the shaded category in the SA Country Area Escort Requirement Chart) shall apply to the following:

- The section of Route 1 to the Route 1/Bolivar Road intersection when travelling north and from Lower Light to the metropolitan area when travelling south.
- The section of Route 20 (Sturt Highway) between the intersection of Main North Road and the Gawler Bypass and the first parking bay west of Accommodation Hill.
- OD Route - Halfway House Road (off Route 20 east of Accommodation Hill) Sedan, Murray Bridge (heavy vehicle bypass), to the South Eastern Freeway, Swanport Bridge, Route 8 to the parking bay at the Monteith intersection (approximately 3 km east of the bridge) or from Tailem Bend when travelling in the opposite direction.
- The Adelaide Zone escort requirements shall apply to the following:
 - Mount Barker Road between the intersection of Cross and Portrush Roads and Eagle on the Hill;
 - Victor Harbor Road between Willunga South and Victor Harbor; and
 - The Mount Compass to Goolwa Road.

- Variations to the country area:
 - For travel on the Stuart Highway between Port Augusta West and the SA/NT border only one police escort (instead of the two specified in the Country Area Chart) shall be required for vehicle/loads where the length does not exceed 26.0 metres.
 - Police escorts will not normally be required in remote areas (off major highways) north of a line joining Cockburn, Lyndhurst, Woomera and Yalata.

(b) Exceptions for Specific Vehicles/Loads

Exceptions to the escort requirements have been made for Inconspicuous Loads and Agricultural Implements.

- (i) Inconspicuous Loads
Vehicles transporting items which are inconspicuous or difficult to delineate, may require additional escorts. Such applications are assessed on an individual basis.
- (ii) Agricultural Implements
Self propelled or towed agricultural implements can now operate under the booklet "Operation of Agricultural Vehicles in South Australia". An individual vehicle permit will be required if operating outside the terms and conditions in this booklet.

2.5.7 Escorts Required by Other Authorities

If the vehicle/load is the subject of a clearance from another Authority, such as ETSA Utilities or other electricity providers, Telstra, Railway Authorities, TransAdelaide, etc., and the clearance specifies that the authority's escort accompany the vehicle/load, a minimum of two police escorts shall accompany the vehicle/load.

Where the vehicle/load requires one of these escorts in the Adelaide and Adelaide Hills Zone, any additional police escorts shall accompany the vehicle/load from the boundary of the Adelaide or Adelaide Hills Zone or the originating location if within these Zones to clear the last location where the escort is required.

Where the clearance requires the escort at a specific location which is outside the Adelaide or Adelaide Hills Zones, any additional police need only be in attendance whilst the vehicle/load is at this location.

2.5.8 DTEI Observer

A Departmental observer will be required for vehicles/loads which exceed:

- 8.0 metres in width; or
- 6.5 metres in width when travelling in the Adelaide Hills Area (refer Appendix 3, Map 2).

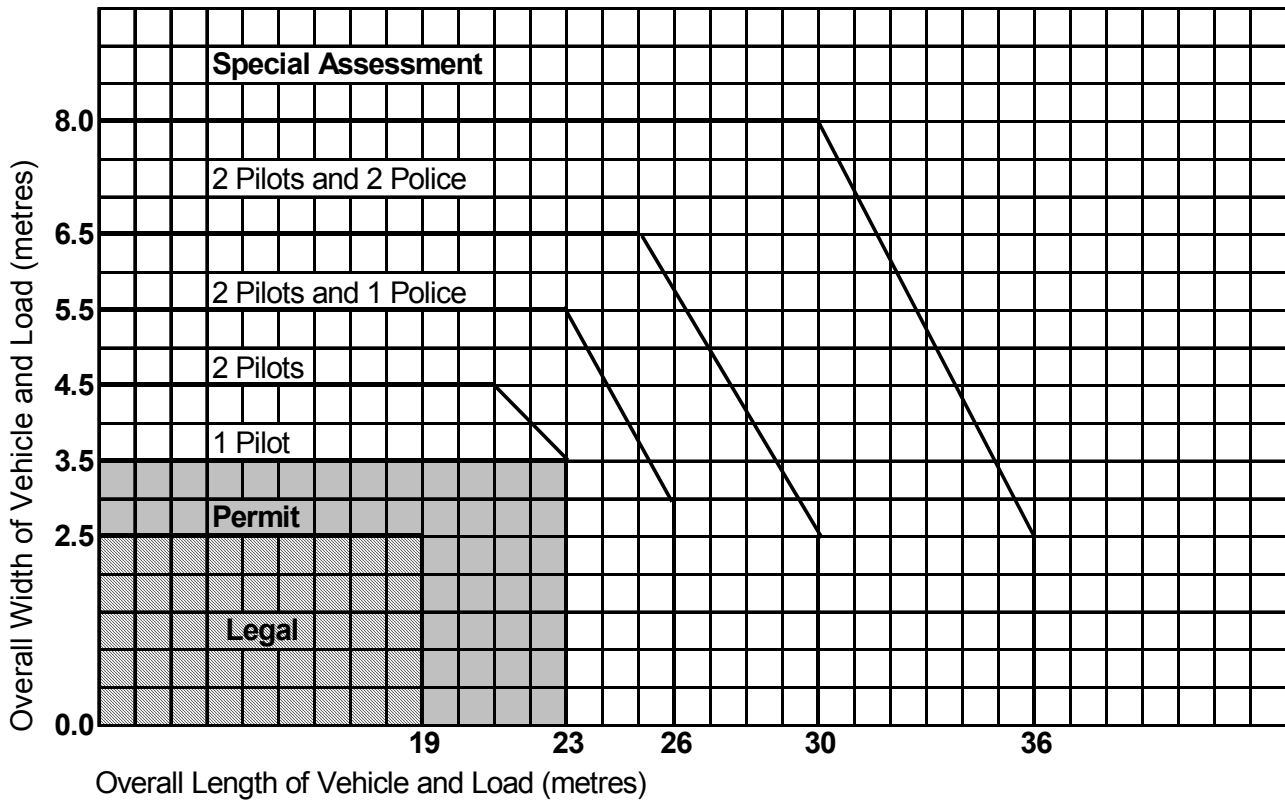
Where the permit move is undertaken solely on roads under the care, control and management of a local Government Authority, the need for an observer will be at the discretion of the relevant Local Government Authority.

The observer will accompany the vehicle/load and record any damage done to the roadside furniture, bridges, signs, traffic lights, etc.

The Vehicle Permits Team will arrange for the DTEI observer, however, it is the responsibility of the permit applicant to pay the cost of the observer at least two working days prior to the movement of the vehicle/load.

2.6 Escort Charts for Oversize Vehicles and Loads

Table 2.4: Escort Requirements – Adelaide



The following locations and road intersections are a guide to determine the pick up and drop off points for escort vehicles for the Adelaide Metropolitan Zone:

- The intersection of Portrush Rd and Adelaide/Crafers Hwy at Glen Osmond (East bound).
- The parking bay 16km west of the Callington Interchange on the South Eastern Freeway to the Adelaide Metropolitan area (West bound).
- The intersection of Salisbury Hwy and Route One, Cavan, travelling in either direction. (Only applies if no pilot vehicles are required in the country area).
- Victor Harbor Rd between Willunga South and Victor Harbor.
- The Mount Compass/Goolwa Rd at Currency Creek. (The intersection of Mt Compass/Goolwa Rd and Strathalbyn/Goolwa Rd).

Table 2.5: Escort Requirements – SA Country Area

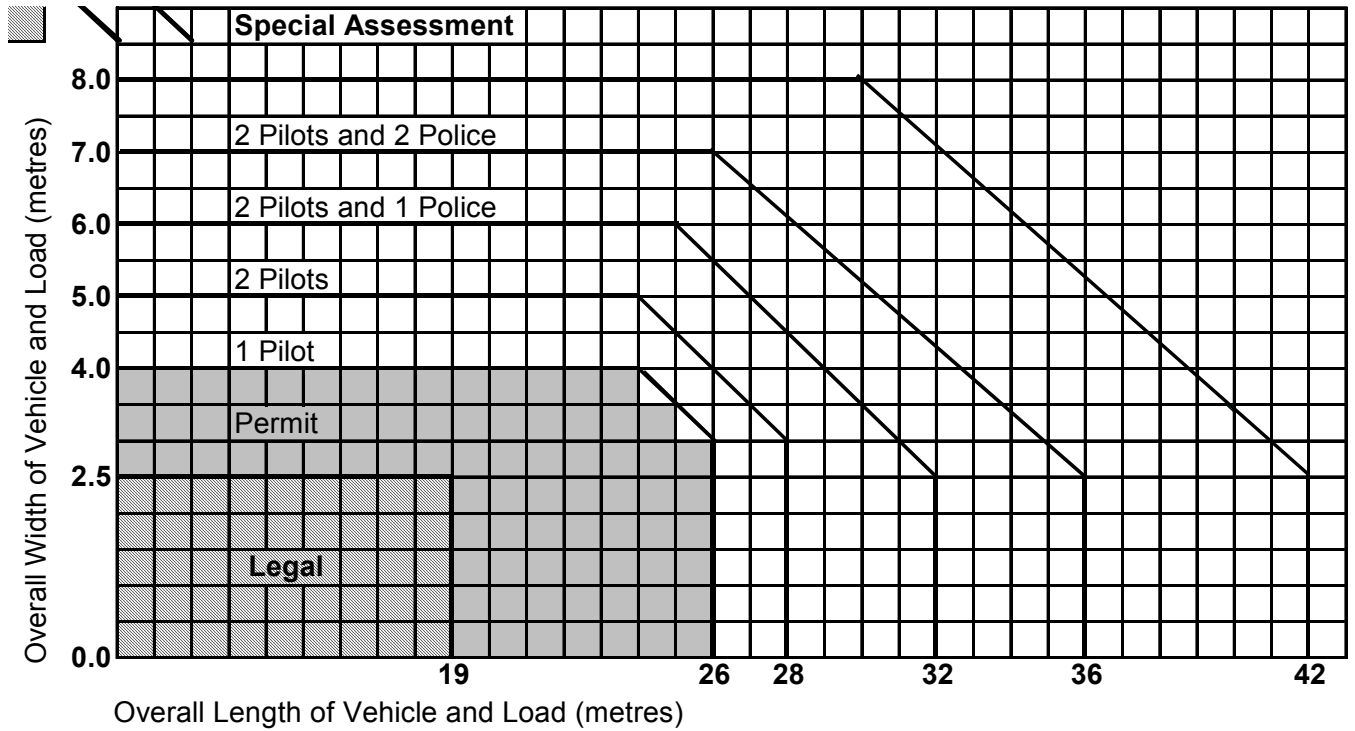
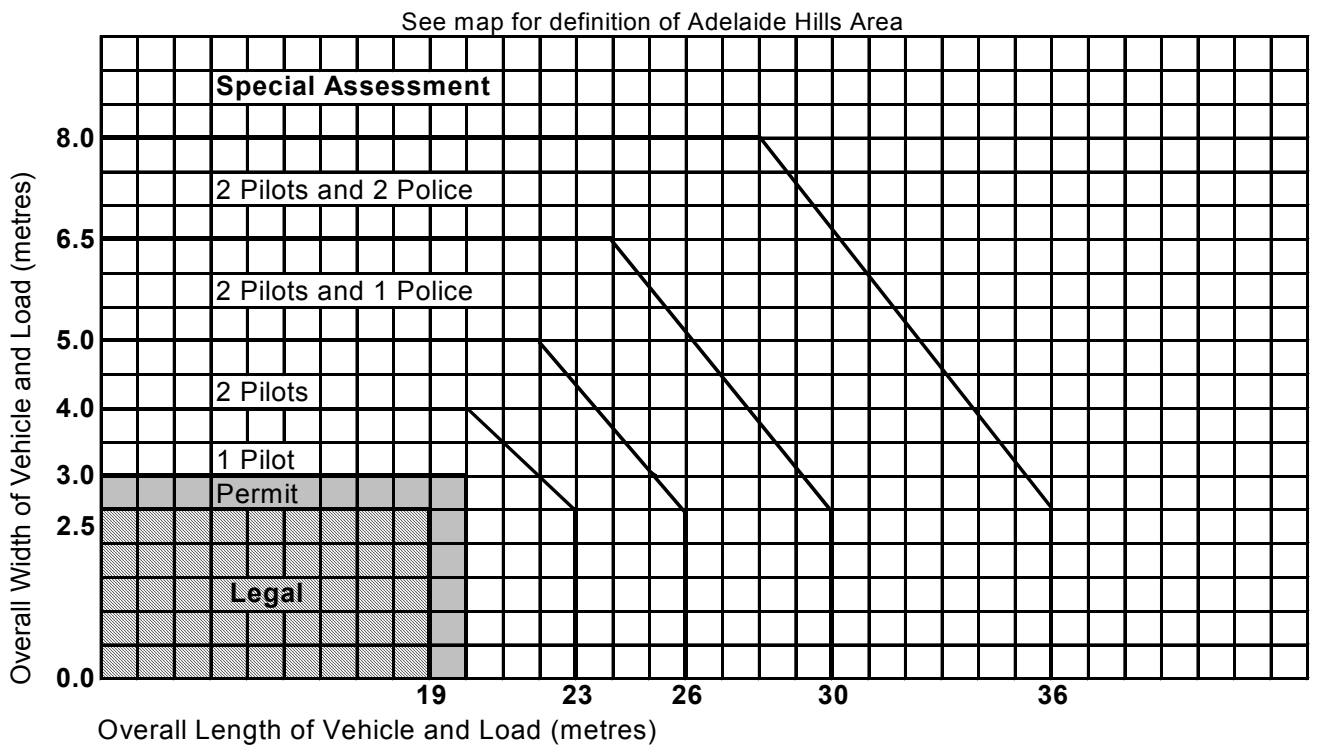


Table 2.6: Escort Requirements – Adelaide Hills Area



Section 3: Overmass Restricted Access Vehicles

3.1 Overmass Restricted Access Vehicles

3.1.1 Overmass Vehicles

An excess mass permit is required if the vehicle exceeds the statutory axle mass limits, vehicle configuration requirements or the maximum axle spacing schedule as detailed in Section 1.2.

Note: this section applies to vehicles which exceed mass limits ONLY. Vehicles exceeding mass AND dimension limits are covered separately.

Mass permit limits are based upon the recommendations of the 'NAASRA Study of the Road Movement of Indivisible Items' (AUSTROADS). Recommended Mass and Dimension Limits (vehicles up to 100 tonnes gross mass). The allowable mass is determined from consideration of the following:

- the road pavement;
- the road structures (e.g. bridges and culverts); and
- the vehicle.

In general the strength of pavements determines the maximum load on individual axles, and the strength of bridges and culverts determines the allowable axle group loads and gross mass limits. Thus, permitted loads are the lesser of the limits imposed by pavement and structural constraints, provided that the load capacity of the vehicle is not exceeded.

The issue of mass permits for vehicle combinations with a GCM exceeding 100 tonnes requires assessment of individual structures by the responsible authority i.e. either DTEI or Local Government. Assessments of structures will be deemed current for three months from the date of the relevant authority's report. After this time it will be necessary to request another assessment.

As far as possible, the mass and dimension limits detailed in this section allow the use of the road system to the limit of its capacity. However, the standard and capacity of the road system varies across the State and loadings at the limits specified in this section may not therefore be available for all permit applications.

The capacity of the road system to handle permit loads is also constantly changing due to deterioration, reconstruction, changing traffic situations and other factors and the issue of a particular permit at a previously approved level cannot necessarily be guaranteed.

3.2 Limits for Mass Permits

3.2.1 Limits For Mass Permits

The limits up to which mass permits will be issued are set out in Table 3.1 and vary in accordance with permit classification and vehicle category.

Mass vehicles are categorised as either Load Carrying or Non Load Carrying as described below.

Load carrying vehicles generally consist of a prime mover and low-loader, semi-trailer or low-loader/dolly combination.

Non load carrying vehicles do not carry a payload and travel on the road at their unladen mass. Vehicles in this category includes mobile cranes, earthmoving machines and drilling rigs and could be described by the generic term 'plant'.

Table 3.1: Limits for Mass Permits	
Non-Load Carrying Vehicles	Load Carrying Vehicles
Up to a gross vehicle mass of 70 tonnes. Axle group limits in accordance with Table 3.8.	No specific limit on gross vehicle mass. Individual assessment applies for gross vehicle mass in excess of 100 tonnes. Axle group and tyre limits in accordance with Tables, 3.4, 3.5, 3.6, 3.7, 3.10, 3.11 and 3.12
Up to a gross vehicle mass of 40 tonnes. Axle group limits in accordance with Table 3.9.	Up to a gross vehicles mass of 100 tonnes. Axle group and tyre limits in accordance with Tables specified above.
Within the Adelaide Metro area or within a single zone. Up to a gross vehicle mass of 40 tonnes. Axle group limits in accordance with Table 3.9.	Within the Adelaide metro area or within a single zone. Up to a gross mass of 49.5 tonnes in accordance with criteria listed in Section 3.

3.2.2 Tyre Limits

The maximum mass which can be permitted under permit for any particular vehicle may be limited by the type and capacity of the tyre equipment fitted.

Maximum tyre loads are based on the lesser of the rated tyre capacity as specified by the Tyre and Rim Association of Australia or other relevant standards and the limits set for acceptable pavement loading as shown in Tables 3.2 and 3.3.

Table 3.2: General Maximum Axle Load Limits on the basis of acceptable pavement loadings		
NOMINAL SECTION WIDTH	ALLOWABLE AXLE LOAD (kg)	
	Single Tyres (2 tyres per axle)	Dual Tyres (4 tyres per axle)
7.50 to 8.99	4500	9000
9.00 to 9.99	5000	9500
10.00 to 10.99	6000	10000
11.00 to 11.99	6500	11000
12.00 to 12.99	7000	12000
13.00 to 13.99	7500	13000
14.00 to 14.99	8000	14000
15.00 to 15.99	9000	
16.00 to 17.99	10000	
18.00 to 19.99	11000	
20.00 and above	12000	

Notes: Axle Load limits in the above table may be reduced by any or all of the following:

1. The rating by the manufacturer of each type or rim in relation to inflation pressures, speed and other relevant requirements.
2. Loads of the current Standard Manual of the Tyre and Rim Association of Australia or equivalent.
3. For axle groups incorporating 15.00 to 20.00 tyres, the limits in Table 3.3.
4. For 7.50, 8.25 and 10.00 low loader tyres, the limits in Table 3.4.
5. For 9.00 to 14.00 truck tyres, the limits in Table 3.5.
6. For non load-carrying vehicles, the limits in Tables 3.6 and 3.7.
7. For load carrying vehicles, the limits in Tables 3.8, 3.9, 3.10 and 3.11.

Table 3.3: Maximum Loads for Axle Groups Incorporating wide single tyres		
MINIMUM NOMINAL SECTION WIDTH	ALLOWABLE AXLE GROUP LEAD (kg)	
	Tandem	Triaxle
15.00	16500	22000
16.00	17000	23000
17.00	17500	24000
18.00	18000	25000
19.00	18500	26000
20.00	19000	27000

Notes: These limits are subject to lesser loads as provided by:

- the rating by the manufacturer of each tyre or rim in relation to inflation pressures, speed and other relevant requirements;
- loads of the current Standards Manual of the Tyre and Rim Association of Australia or equivalent; and
- the limits in Tables 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10 and 3.11.

Table 3.4: Maximum Loads for 15" Radial Ply Low Loader Tyres				
Tyre Size	Ply Rating	Maximum Speed	Tyre Load (kg)	Pressure (kg)
7.5 R15	16	80	2060	850
		50 and below	2250	850
8.5 R15	14	80	1800	800
		50	2080	800
		40	2200	800
		25 and below	2250	850
8.25 R15	18	80 and below	2250	850
10.00 R15	14	80	2150	750
		50 and below	2250	850
	18	80	2250	850

Notes:

1. The loads in Table 3.4 are based on E.T.R.T.O. data for use with imported tyres. Australian made 8.25 R15 (14) are subject to T & R.A. limits.
2. These limits are subject to lesser loads as provided by:
 - (a) the rating by the manufacturer of each tyre or rim in relation to inflation pressures, speed and other related requirements; and
 - (b) loads of the current Standards Manual of the Tyre and Rim Association or equivalent.

Table 3.5: Maximum Axle Loads for Truck Type Tyres			
Tyre Size	Ply or Load Index/ Speed Rating	Axle Load (kg)	
		Single Rating (2 tyres per axle)	Dual Tyres (4 tyres per axle)
9.00-20	10	4260	7240
	12	4740	8320
	14	4980	9120
9.00 R20 and 10.00 R22.5	10	4260	7480
	12	4740	8720
	14	4740	8720
10.00-20	12	5100	8720
	14	5620	9640
	16	5620	10000
10.00 R20 and 11.00 R22.5	12	5100	8720
	14	5620	9640
	16	6000	10000
11.00-20	12	5560	9480
	14	6120	10480
	16	6120	11000
11.00 R20 and 12.00 R22.5	12	5920	10808
	14	6500	11000
11.00-24	12	6280	10720
	14	6500	11000
12.00-20	12	6000	10200
	14	6250	11120
	16 & 18	7000	12000
13.00-20	16 & 18	7500	13000
14.00-20	14	7000	12240
	16, 18 & 20	8000	14000
14.00-24	16 & 18	8000	14000
255/8OR 22.5	140/137J	5000	9200
275/8OR 22.5	145/142J	5800	10000
295/8OR 22.5	149/146J	6500	12000

Notes:

1. Tubeless radial ply tyres with rim diameters of 22.5 and 24.5 have the same maximum loads as their conventional in 20 and 22 inch diameters, e.g. 11 R22.5 = 10.00, 12 R24.5 = 11.00 R22.
2. Loads for tyres not listed should be the lesser of the limits in Table 3.4 or 3.5 as appropriate and the load rating of the Tyre and Rim Association of Australia or equivalent.

3.3 Non-Load Carrying Overmass Vehicles

3.3.1 Non-Load Carrying Vehicle Limits

This section lists the maximum mass and associated vehicle dimension limits for which permits can be issued for non-load carrying vehicles up to 70.0 tonnes gross mass.

Non-load carrying vehicles in excess of 70.0 tonnes gross mass require a detailed engineering assessment on an individual basis.

The availability of permits for the maximum allowable axle loadings is dependent upon both the design capacity of the vehicle and the capacity of the road and structures on the route.

It should be emphasised that compliance with the vehicle capacity limits does not guarantee that a permit can be issued, as some bridges, culverts, pavements etc. may not have the capacity to withstand the loads involved.

3.3.2 Trip Permits

The mass limits for permits issued on a single trip basis for non-load carrying vehicles shall not exceed the limits in Table 3.6.

Table 3.6: Trip Permit Limits Non-Load Carrying Vehicles		
Single Axle (single tyres)	8.0 t	
Single Axle (dual tyres)	12.0 t	
Tandem Axle (single tyres) see note 3	16.0 t	
Tandem Axle (dual tyres) see note 2 (a)	23.0 t	} plus 1.0 tonne } per 100mm wider } than 2.5 metres } (28 t maximum)
Tandem Axle (dual tyres) see note 2 (b)	20.0 t	
Triaxle (single tyres)	21.0 t	
Triaxle (dual tyres) see note 2 (a)	27.0 t	} plus 1.0 tonne } per 100mm wider } than 2.5 metres } (37 t maximum)
Triaxle (dual tyres) see note 2 (b)	25.0 t	
Quadaxle (dual tyres) see note 2 (b)	30.0 t	plus 1.0 tonne per 100 mm wider than 2.5metres (40 t max)

Notes to Table 3.6:

1. The gross mass formula applies to any combination of axle groups but not between the individual axles within a group. For the purpose of this formula, a single axle may be regarded as an axle group.
2. (a) To qualify for maximum loading, minimum longitudinal axle spacing for dual tyred tandem and triaxle groups shall be 1.35 metres.
(b) For spacings of axles between 1.2 metres and 1.35 metres.
3. Single tyred groups with wide single tyres may be permitted higher loads as detailed in Table 3.5.
4. Both the gross mass and the allowable axle group mass will be reduced by 1 tonne for each 100 mm by which the overall tyre contact width is less than 2.4 metres.
5. Table 3.4 is the appropriate table for non load carrying vehicles with only 4 tyres per vehicle. (Trip permits only.)
6. Vehicle Indivisibility. The tare mass of a crane means basic vehicle full of fuel and hydraulic fluid, together with any of:
 - fly jib lattice extension;
 - outrigger pads;
 - auxiliary hoist ropes;
 - spare wheel/s (maximum one of each tyre size); and
 - hooks.

The mass of the driver will be included as tare mass.

The maximum loads permitted will normally be the tare mass. However, an extra allowance of up to 1 tonne, provided allowable limits in the Tables are not exceeded, will be permitted to cover such items as:

- slings;
- alternative blocks;
- timber packing;
- shackles; and
- tools and other ancillary equipment.

This allowance of one tonne will be divided between axles or axle groups on the recommendation of the manufacturer or owner, and will be included in the allowable mass figures shown on the permit.

7. The use of boom extension as a means of mass control for cranes is only permitted with the written permission of the manufacturer and when all items which can reasonably be removed from the crane have in fact been removed, and no other alternative exists. The configuration adopted shall be that which gives the shortest overall length.

3.3.3 Gross Mass

The maximum permitted gross mass of a non-load carrying vehicle weighing up to 70 tonnes shall be based on the formula $M=3L+15$, plus 1 tonne for each 100mm width in excess of 2.5 metres, where M is the gross mass in tonnes and L is the overall axle spacing in metres.

The width for the purpose of mass calculation shall be the width across the axles of the heaviest axle group, provided variations in the width of groups does not exceed 0.5 metres.

3.3.4 Period/Zone Permits

The mass limits for period permits for non-load carrying vehicles shall not exceed the limits in Table 3.7.

Table 3.7: Period/Zone Permit Limits Non-Load Carrying Vehicles		
Single Axle (single tyres)	7.0 t	
Single Axle (dual tyres)	10.0 t	
Tandem Axle (single tyres)	14.0 t	
Tandem Axle (dual tyres) see note 2 (a)	23.0 t	} plus 1.0 t per 100 mm wider } than 2.5metres (27 t maximum) }
Tandem Axle (dual tyres) see note 2 (b)	20.0 t	
Triaxle (single tyres) see note 3	18.0 t	
Triaxle (dual tyres) see note 2 (a)	27.0 t	
Triaxle (dual tyres) see note 2 (b)	25.0 t	
Gross Mass		Calculated according to the requirements for trip permit limits to a maximum of 40.0 t.

3.4 Load Carrying Overmass Vehicles

3.4.1 Load Carrying Vehicle Limits

Permit applications for load carrying vehicles are assessed on an individual basis.

This section lists the maximum axle and group loadings which may be available for load carrying vehicles up to and including 100 tonnes gross mass.

Table 3.8: Permit Limits Load Carrying Vehicles	
Single Axle (single tyres)	6.0 t
Single Axle (dual tyres)	9.0 t
Tandem Axle (dual tyres)	18.5 t
Driving/Dolly Combination	As per Tables 3.9 & 3.10
Trailing Group	As per Table 3.11
Note: The minimum load on a tandem drive axle group shall be 14.0 tonnes.	

Load carrying vehicles in excess of 100 tonnes gross mass require detailed engineering assessment on an individual basis and the listed axle group loadings may not be available. The assessment will include the setting of an appropriate minimum drive axle mass for traction and safety.

The availability of permits for the maximum allowable axle loadings is largely dependent upon the spacing between groups of axles, the design capacity of the vehicles and the capacity of the road and structures on the route. It follows therefore that simultaneous loading of all axle groups at the maximum limits listed here in may not be available.

Table 3.9: Limits for Drive Dolly Combinations (tonnes) Single Axle Dolly							
Overall Ground Contact Width of Axle (metres)	Overall Axle Spacings (metres)						
	2.8	3.0	3.2	3.4	3.6	3.8	4.0
2.5	25	26	27	28	29	30	30
2.6	26	27	28	29	30	31	31
2.8	27	28	29	30	31	32	32
3.0	28	29	30	31	32	33	34
3.2	29	30	31	32	33	34.5	34.5
3.4	30	31	32	33	34	34.5	34.5
3.6	31	32	33	34	34.5	34.5	34.5
3.8	31	32	33	34	34.5	34.5	34.5

Table 3.10: Limits for Drive Dolly Combinations (tonnes) Tandem Axle Dolly													
OVERALL GROUND CONTACT WIDTH OF AXLE (metres)	OVERALL AXLE SPACING (metres)												
	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0
2.5	29	30	31	32	33	34	35	36	37	38	39	39.5	40
2.6	30	31	32	33	34	35	36	37	38	39	40	40.5	41
2.8	31	32	33	34	35	36	37	38	39	40	41	41.5	42
3.0	32	33	34	35	36	37	38	39	40	41	42	42.5	43
3.2	33	34	35	36	37	38	39	40	41	42	43	43.5	44
3.4	34	35	36	37	38	39	40	41	42	43	44	45	45.5
3.6	35	36	37	38	39	40	41	42	43	44	45	46	46.5
3.8	35.5	36.5	37.5	38.5	40	41	42	43	44	45	46	47	48
4.0		37	38	39	40.5	42	43	44	45	46	47	48	49
4.2				39.5	41	43	44	45	46	47	48	49	50
4.4					41.5	44	45	46	47	48	49	50	50.5
4.6						45	46	47	48	49	50	50.5	50.5

Notes:

1. Minimum longitudinal spacing of axles in both drive and dolly groups shall be 1.2 metres.
2. Load on any 8 tyred tandem (two rows of 4) shall not exceed 18.5 tonnes.
3. Load on any 4 tyred axle fitted with 7.50 or 8.25 tyres shall not exceed 9 tonnes.
4. Load on any 8 tyred axle shall not exceed 16 tonnes.
5. Widening axles with four tyres per axle will gain no mass advantage above the limits applicable at 2.5 metres wide.
6. Allowable tyre loads must not be exceeded.

Table 3.11: Limits for Trailing Groups (tonnes)					
Width of Group (metres)	Number of Axles in Trailing Group				
	2 rows of 8 1.2m spacing (min)	3 at 1.2m spacing (min)	3 at 1.8m spacing (min)	4 at 1.2m spacing (min)	4 at spacing 1.2, 2.4 1.2 (min)
2.5	18.5	25	27	30	35
2.6	20	26	29	31.5	36
2.7	21	27	31	33	37.5
2.8	22	28	33	34	39
2.9	23	29	34.5	35	40
3.0	24	30	36	36	41
3.1	25	31	37.5	37.5	42
3.2	26	32	39	39	43.5
3.3	27	33	40	40	44.5
3.4	27.5	34	41	41	46
3.5	28	35	42	42	47
3.6	28.5	36	43	43	48
3.7	29	37	44	44	49
3.8	30	38	45	45	50
3.9	30.5	39	46	46	51
4.0	31	40	47	47	52
4.1			48	48	53
4.2				49	54
4.3				50	55
4.4				51	56
4.5				52	57
4.6				52.5	57.5

Notes:

1. Load on any one 8 tyred tandem shall not exceed 18.5 tonnes.
2. Load on any one 4 tyred axle fitted with 7.50 or 8.25 tyres shall not exceed 9 tonnes.
3. Load on any 8 tyred axle shall not exceed 16 tonnes.
4. The allowable load for a 2.5 metres wide group with five 4 tyred axles at 1.8 metres centres shall be 43 tonnes provided at least 3 axles have positive (rather than castor) steering.
5. Widening axles with 4 tyres per axle will gain no mass advantage above the limits applicable at 2.5 metres wide.
6. Allowable tyre loads must not be exceeded.

3.4.2 Zone Mass Permits (Maximum gross 49.5 t)

Excess mass and/or combined excess mass and dimension permits are available to allow the transport of single indivisible items within a specified zone subject to the following criteria.

- For the purpose of this notice an “indivisible item” shall mean an item which cannot without disproportionate effort, expense or risk of damage, be divided into two or more items for road transport.

- The carrying vehicle shall consist of a three axle prime mover fitted with a single steer axle and a tandem drive rear axle, hauling a triaxle or quad axle semi-trailer (low loader).
- The aggregate mass carried on all axles of the vehicle combination shall not exceed 49.5 tonnes (subject to adequate vehicle capacity).
- The maximum axle mass limits (subject to adequate tyre and axle capacities) shall be as follows:
 - single steer axle 6.00
 - tandem drive axle group 18.50 tonnes
 - triaxle/quad axle 25.00 tonnes
- The distance from the rearmost axle of the prime mover to the foremost axle of the triaxle group of the semi-trailer shall not be less than 6.0 metres.
- The minimum load on the tandem axle group shall be 14.0 tonnes.
- Permits will be issued for travel within an Operator's general area of operation, e.g. the Adelaide Metropolitan Area is considered one zone and for the remainder of the State zones will be based on Council areas or combinations of Council areas.
- In line with the principles of the agreement with the Local Government Association a written clearance from the respective Local Council may be required for operation within that Council area. This clearance is necessary to enable Councils to advise of any roads or structures which may not be suitable or have sufficient capacity for use by the permit vehicle. This clearance shall clearly state the owner and vehicle combination for which the clearance is given and must be provided to the Vehicle Permits Team before a permit can be issued.
- The maximum allowable dimensional limits are:

ZONE	HEIGHT	WIDTH	LENGTH
Metropolitan	4.9 metres	3.5 metres	25.0 metres
Adelaide Hills	4.9 metres	3.05 metres	19.0metres
Country	4.9 metres	3.5 metres	25.0 metres

- To ensure protection of the road system and the safety of other road users, specification and roadworthy inspections of prime movers/low loaders may be required prior to the issue of a permit.
- Should this permit concession prove to cause excessive damage to roads, affect road safety, or local environments, then as agreed with the Local Government Association, this zone permit concession will be revised. Any breaches of permit conditions may result in individual permits being revoked.
- A revolving yellow flashing light visible from all sides shall be displayed on the vehicle in accordance with subsection (1) (b) of Regulation 5.14 of the Road Traffic Act where the vehicle/load exceeds 23 metres in length and/or 3.05 metres in width.

3.5 Conditions of Travel for Overmass Vehicles

3.5.1 Vehicle Requirements

Permit loads must be carried on an appropriate vehicle which will be assessed based on vehicle and component design, the proposed application in which it is to be used and the most practical minimum and maximum axle and gross mass limits. i.e. a prime mover/dolly/low loader combination will not be permitted to carry a load which could be carried on a prime mover low loader combination within permit mass limits.

3.5.2 Vehicle Suspension Systems

Vehicles operating under a mass permit must be equipped with "Load Sharing" suspension systems on all axle groups. For a twin steer axle group operating at up to 11.0 tonnes mass the axle group must be load sharing.

A "Load Sharing" system means an axle group suspension system that utilises hydraulic, pneumatic, mechanical or other means to effect substantially equal sharing, by all the ground contact surfaces of an axle group, of the total load carried by that axle group.

Effective load sharing shall be deemed to be achieved if it can be substantiated that each axle is laden in all operating conditions to within 10% of its nominal share of the total group load.

3.5.3 Vehicle Assessment

An Application for Vehicle Listing (Form 'A') shall be completed for all vehicles both load carrying and non-load carrying, which require mass permits. This includes for example, front-end loaders, mobile cranes, prime movers, dollies, low loaders, etc. The Vehicle Listing Form 'A' shall be submitted prior to the issue of the first permit. Subsequent permits will not require the submission of a Form 'A' unless the vehicle has been modified or transferred to a new owner.

Evidence of actual axle or group loadings (weigh note) shall be submitted with the form 'A' for a Non-Load Carrying Vehicle. These vehicles will be inspected and weighed by Vehicle Permits staff to confirm vehicle specification and axle loads.

All vehicles used for mass permit operations will be assessed to determine an appropriate gross vehicle mass, gross combination mass, and axle mass limits, as follows:

(i) Single Axle/Axle Group Mass Limit

The single axle or axle group mass limit shall be the lesser of the limit determined on the basis of:

- (i) Tyre load capacity;
- (ii) Axle load capacity recommended by the vehicle/axle manufacturer; and
- (iii) Suspension load capacity recommended by the vehicle suspension manufacturer.

(ii) Gross Vehicle Mass

The gross vehicle mass shall be the lesser of:

- (i) The sum of the single axle/axle group mass limits (as determined above);
- (ii) The vehicle manufacturer's gross vehicle; and
- (iii) Mass rating.

(iii) Gross Combination Mass

The gross combination mass shall be the lesser of:

- (i) The vehicle manufacturer's gross combination mass rating;
- (ii) Driveline component gross combination mass rating as recommended by the component manufacturer; and
- (iii) The maximum gross mass at which the vehicle will start from rest on a five percent grade using the gradeability formula

$$\text{GCM} = \frac{\text{K} \times \text{R} \times \text{M} \times \text{T}}{\text{g}+1}$$

where

GCM = Gross combination mass in kilograms

K = Drive efficiency constant for the type of drive axle fitted to the hauling unit -

for single drive axles	K = 0.055
for single drive tandem axles	K = 0.053
for dual drive tandem axles	K = 0.051
for tri drive tri axles	K = 0.047

R = Overall gear reduction between the engine and the drive wheels.

M = Tyre revolutions per kilometre determined from Table 3.12 which gives the standard number of revolutions per kilometre to be adopted for tyre sizes used in road train operations.

T = Maximum engine nett torque in Newton metres. Where an engine manufacturer only provides gross torque figures for their product, reduce the gross figure by 5% and use as a nominal nett rating.

g = Maximum grade expressed as a percentage. For normal permit operation adopt a value of 15% (starting ability 10% + operating grade 5%).

Table 3.12: Tyre Size/Revolutions for GCM Calculations			
Tyre Size	Revolutions per Km	Tyre Size	Revolutions Per Km
9.00 *20	325	11.00 *24	280
10.00 *20	315	12.00 *24	270
11.00 *20	310		
12.00 *20	295	255/70 R 22.5	355
13.00 *20	285	275/70 R 22.5	345
14.00 *20	270	275/80 R 22.5	330
		295/75 R 22.5	325
9 R 22.5	345	295/80 R 22.5	320
10 R 22.5	325	315/80 R 22.5	310
11 R 22.5	315		
12 R 22.5	305	385/65 R 22.5	315
13 R 22.5	295	425/65 R 22.5	300
10.00 *22	300	445/65 R 22.5	290
11.00 *22	295		

3.5.4 Load Description

The load to be carried on a vehicle needs to be described in an application form to enable assessment of:

- indivisibility;
- centre of gravity determination; and
- mass of the load.

Plant carried on conforming vehicles up to a gross vehicle mass of 49.5 tonnes may be described as an indivisible item.

All other load types shall be described specifically, e.g. Caterpillar D9 Bulldozer, roof frame, overhead crane, gantry.

3.5.5 Times Of Travel

Mass permit vehicle/loads which do not exceed the statutory limits relating to dimension will not be subject to times of travel restrictions, except when structural considerations dictate the complete closure of a bridge to other traffic while it is traversed at slow speed by a heavy load.

3.5.6 Clearance From Other Authorities

The authority of DTEI officers to exempt vehicles from the statutory requirements of the Road Traffic Act extends to all roads in South Australia. However, in granting exemptions for operation on roads for which the care and control is vested in local government, the Department invariably seeks to preserve the structural, safety and environmental integrity of the Local Government road system.

Single trip permits can usually be issued without specific consultation for each trip. However, for period or zone permits, or very large single trip moves (vehicles/loads greater than 100 tonne gross mass), written Council agreement to the proposed operation will be a condition of permit issue.

Council clearances must specify the:

- permit applicant;
- vehicle registration numbers;
- date(s) of operation;
- roads permitted; and
- conditions of travel.

3.6 Concessions for Specific Overmass Vehicle Classes and Loads

Some concessions apply for specific overmass vehicle classes and load types, including:

- 40 foot (12.2metres) ISO Containers;
- Low Loader Dolly; and
- Quad Axle Low Loaders.

Further information regarding these concessions can be obtained from the Vehicle Permits Team, Regency Park.

3.7 Escort Requirements for Overmass Vehicles and Loads

Table 3.13: Minimum Escort Requirements	
Vehicle/Load Conditions	Escorts
Vehicle to travel at 10km/h along one side of a structure.	No specific escort requirements apply provided that the vehicle remains within a normal traffic lane and causes little disruption to other traffic.
Vehicle to travel down centreline of structure with other traffic permitted . (i) single structure (two way traffic) (ii) single structure (one way traffic)	One police escort. One police escort unless the structure is more than two lanes wide.
Vehicle to travel down centreline of structure with other traffic excluded . (i) single structure (two way traffic) (ii) single structure (one way traffic)	Two police escorts. One police escort unless the structure is more than two lanes wide.

Where the structure is within the Adelaide Hills Zone (refer Appendix 3, Map 2), any additional police escort shall accompany the vehicle:

- from the boundary of the Adelaide and Adelaide Hills Zone, until clear of a last bridge where the extra escort is required or to the vehicle's destination; or
- from the originating location if within the Adelaide Zone (refer Appendix 3, Map 1) to the location of the structure.

Where the bridge structure is in the Country Area any additional police need only be in attendance whilst the vehicle is crossing the structure.

Section 4: Oversize and Overmass Restricted Access Vehicles

4.1 Oversize and Overmass Vehicles

A combined oversize and excess mass permit is required if the vehicle/load exceeds both the statutory dimension and mass limits.

Therefore it follows that a combination of vehicle requirements and permit conditions from both the Oversize 2.1 and Excess Mass 3.1 sections will apply.

4.2 Mobile Cranes

4.2.1 Times of Travel

Carrier-mounted mobile cranes which are between 2.5 metres and 3.05 metres wide, but in all other respects comply with statutory dimension limits will be permitted to travel between the hours of sunrise and sunset as defined in the "Proof of Sunrise and Sunset Act 1923".

Times of travel for carrier mounted mobile cranes which exceed the statutory length and/or height limits and/or exceed 3.05 metres in width will be restricted as follows:

Travel will not be permitted between the hours of 7.00 am and 9.00 am or 4.00 pm and 6.00 pm Monday to Friday inclusive. (Travel may be permitted during these hours on public holidays.)
Travel within the Adelaide City Council Area is permitted only as follows:

- (a) For loads/vehicles which do not require a pilot or police escort (refer to Section 3.1.5 'Escort Requirements') travel will be permitted during the following times:

Monday - Friday	sunrise to 7 am
	9 am to 4 pm
	6 pm to sunset except on days of late night trading
Saturday, Sunday and Public Holidays	sunrise to 4 pm
- (b) For loads/vehicles which require a pilot or police escort, (refer to Section 3.1.5 'Escort Requirements') travel will be permitted during the following times:

Monday - Friday	sunrise to 7 am
	6 pm to sunset except on days of late night trading
Saturday, Sunday and Public Holidays	sunrise to 4 pm

Travel may be permitted outside these hours with the prior written approval of the Adelaide City Council.

4.2.2 Night Travel for Rigid, Carrier Mounted Mobile Cranes

To improve industry efficiency and provide greater transport flexibility, permits to allow 24 hour travel for carrier mounted mobile cranes are now available subject to the following –

1. The overall width does not exceed 3.1 metres.
2. The overall length does not exceed 14.5 metres.
3. Forward projection of the boom shall not exceed 2.5 metres.

4. The forward projection of the boom from the centre of the steering wheel shall not exceed 3.5 metres.
5. The rear overhang does not exceed 4.0 metres or 90% of the wheelbase.
6. The side and end extremities of the vehicle, excluding the boom, shall be delineated with red, yellow or red and yellow flags at least 450mm square.
7. The front and rear of the crane shall be fitted with a warning sign bearing the words "OVERSIZE". The specification of the signs shall be in accordance with the approved specification.
8. The crane shall be fitted with warning lights and mounted in such a position that the lights when operating are clearly visible at a distance of 500 metres in all directions.

When switched on the warning lights must:

- a) emit a rotating, flashing yellow coloured light;
 - b) flash between 120 and 200 times a minute;
 - c) have a power of at least 55 watts; and
 - d) not be a strobe light.
9. At night, lights spaced not more than 2.0 metres apart showing yellow to the front and red to the rear (known as side markers) shall be fitted along both sides of the vehicle and along any front or rear projection. Side marker lights shall be fitted within 1.2 metres of the front of the boom.
 10. At least 1.2 metres of the end of the boom shall be painted white.
 11. The lighting requirements prescribed above are in addition to any lighting requirements specified in the Road Traffic Act and Regulations.

4.3 Towing Articulated Vehicles

Permits are available to allow a tow truck, in an emergency to tow a disabled articulated vehicle subject to the following conditions.

- Permit will be route restrictive and only available for principal highways;
- There will be no restrictions on times of travel;
- The overall length of the combination of tow truck and towed vehicle shall be based on the length of the longest vehicle to be towed plus the length of the towing vehicles and drawbar distance;
- A substitute prime mover is not available;
- A reflectorised "Vehicle Under Tow" sign shall be fitted to the front and rear of the combination;
- The articulated vehicle would be a hazard to other traffic if not removed; and
- Towing of the disabled unit is only permitted from the "pick-up" point to: the nearest point of safety off the road where a substitute prime mover can be connected; or where repairs can be effected, whichever is the shorter distance.

4.4 General Freight Combinations Operating Under Notice

Double Road Trains, Triple Road Trains and B-Doubles are approved for operation by national regulation and the South Australian Government Gazette. For more detailed information, refer to the following:

4.4.1 Double and Triple Road Trains

- Gazette Notice titled “Operation of Road Train Vehicles in South Australia”;
- “Code of Practice for Road Trains book”;
- “Approved Route Network for Road Trains” book;
- “Information Guide for Road Trains” book
- “Restricted Access Vehicle Information Bulletin No. 7 “New Gazette Notice for the Operation of Road Train Vehicles”

Note: the Code of Practice includes operation of Converter Dollies.

4.4.2 B-Doubles

- Gazette Notice titled “Operation of B-Double Vehicles up to 25m in length”;
- “Code of Practice for B-Doubles book”;
- “Approved Route Network for B-Doubles” book;
- “Information Guide for B-Doubles” book
- “Restricted Access Vehicle Information Bulletin No. 2 “New Gazette Notice for the Operation of B-Double Vehicles up to 25m in length”

4.5 General Freight Combinations Operating Under Permit

4.5.1 B-Triples GCM=82.5t

There are currently no national standards for B-Triples. There is a limited network for the operation of these combinations in South Australia.

Approval for this combination is currently by individual permit, hence operators should contact the Vehicle Permits Team on 1300 882 249 for more information.

4.5.2 AB Road Trains GCM≤99.5t

There are currently no national standards for AB Road Trains. There is a limited network for the operation of these combinations in South Australia.

Approval for this combination is currently by individual permit, hence operators should contact the Vehicle Permits Team on 1300 882 249 for more information.

4.5.3 2AB Road Trains GCM≤135.5t

There are currently no national standards for 2AB Road Trains. There is a limited network for the operation of these combinations in South Australia.

Approval for this combination is currently by individual permit, hence operators should contact the Vehicle Permits Team on 1300 882 249 for more information.

4.6 Allowable Non-Permit Vehicles

For all the following items, please refer to the latest Gazette Notice or applicable regulation.

- Indivisible Items
- Car Carriers
- Stockcrates
- Opal Mining Vehicles
- Baled Wool and Hay
- Sheaved Hay
- Overwidth Buses
- Buses towing a disabled Bus
- Exemption for Rear View Mirrors
- Agricultural vehicles when driving
- Agricultural vehicles when carrying

These can be downloaded from DTEI's website at www.transport.sa.gov.au

Section 5: Definitions

Adelaide Hills Zone is the shaded area shown on Map 2 in Appendix 3

Adelaide Zone (Adelaide Metropolitan Area) is the shaded area shown on Map 1 in Appendix 3

Daylight means the time beginning at sunrise and ending at sunset as specified in the “Proof of Sunrise and Sunset Act 1923”

Depot means a private property that abuts and has driveway access to and from a road.

DTEI means Department for Transport, Energy and Infrastructure.

Dolly means an axle or axle group which is built to support any part of a boom, and is connected to the towing vehicle by a pole or cable or by the boom itself.

Gazette Notice means an oversize or overmass vehicle exemption granted by the Minister under Part 4 of the Act by notice published in the Government Gazette.

General Access Vehicle (GAV) is a vehicle that operates within the:

- axle mass limits specified in Table 1 of the Road Traffic (Mass and Loading Requirements) Regulations 1999; and
- mass limits relating to axle spacing in Section 3, Table 2, Road Traffic (Mass and Loading Requirements) Regulations 1999, and does not exceed:
 - a height of 4.3 metres; or
 - a width of 2.5 metres; or
 - a length of 19 metres; or
 - a total mass of 42.5 tonnes; and
- is not a Controlled Access Bus.

General Mass Limits (GML) means the:

- defined axle mass limits in Table 1 of the Road Traffic (Mass and Loading Requirements) Regulations;
- mass limits relating to axle spacing in Section 3, Table 2 of the Road Traffic (Mass and Loading Requirements) Regulations 1999

General Access Dimension Limits means the:

- dimension limits as specified in Division 2 – Dimensions of Part 7 Vehicle Configurations and Dimensions of the Road Traffic (Vehicle Standards) Regulations 1999
- but does not include any dimensions specified for a Controlled Access Bus, Road Train, B-Double or any other combination over 19.0 metres long.

Gross Vehicle Mass (GVM) means the maximum loaded mass of a vehicle:

- (a) as specified by the manufacturer; or
- (b) as specified by the vehicle registration authority if:
 - (i) the manufacturer has not specified a maximum loaded mass; or
 - (ii) the manufacturer cannot be identified; or
 - (iii) the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate

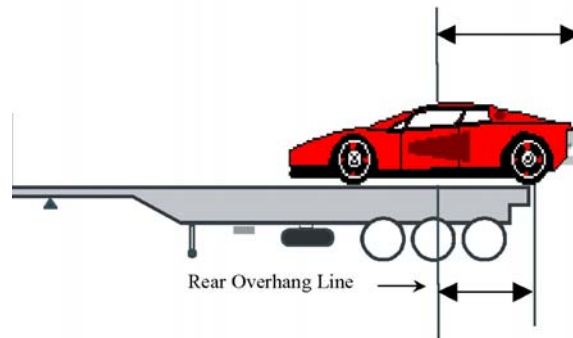
Indivisible Item is an item which cannot without disproportionate effort, expense or risk of damage, be divided into two or more items for road transport.

Load, in relation to a vehicle, includes anything that is not directly related to the operation of the vehicle.

Low Visibility means any time when, due to insufficient daylight or unfavourable weather conditions, people or vehicles on a road are not clearly visible from a distance of 250 metres by a person of normal vision. Unfavourable weather conditions include, but are not limited to: fog; heavy rain; smoke; dust; and insect plague.

Night-time means the time beginning at sunset and ending at sunrise as specified in the “Proof of Sunrise and Sunset Act 1923”

Rear Overhang is measured from the centre of the rear axle group to the rear of the load and must not exceed the lesser of: 5.5 metres; or 25% of the overall length of the entire vehicle.



Restricted Access Vehicle (RAV) means a vehicle that exceeds either the General Mass Limits and/or the General Access Dimension Limits contained in the Road Traffic Act 1961 and Regulations and can only travel on approved routes.

Special Purpose Vehicle (SPV) means a motor vehicle, other than a tow truck or agricultural vehicle, built for a purpose other than carrying a load, except for water in the case of concrete pumps and fire trucks.

Appendix 1: Clearance Contact List

The Utilities listed below provide transport, power and communication services to the community of South Australia. The infrastructure managed by these utilities form an integral part of the road system, which results in restrictions on the size of vehicles and loads that access the road network.

Any access to the road network by oversize vehicles and loads is dependent on vehicle size and is subject to the appropriate Utility clearances being obtained. Clearances can include requirements and restrictions that are in addition to any requirements or conditions specified by DTEI in any Notice of Approval or Exemption or permit issued.

Operators must obtain the relevant clearances when required by any Notice of Approval or Exemption, or when required to be lodged with an oversize vehicle application.

UTILITY NAME	CONTACT PHONE NUMBER
OPTUS	08 8468 5141
ETSA (inc VISIONSTREAM)	08 8292 0492
TELSTRA	08 8308 4702
Australian Southern Rail A.R.G	08 8343 5455
Australian Rail and Track Corporation	08 8217 4313
TransAdelaide Rail	08 8218 4001

Note: This list is current as at May 2006.

PERMIT ROUTE SURVEY

SUMMARY OF A SURVEY UNDERTAKEN
TO ENSURE ADEQUATE WIDTH AND HEIGHT CLEARANCE EXISTS
FOR THE VEHICLE AND LOAD



**Government
of South Australia**

Department for Transport,
Energy and Infrastructure

Permit Application Number:

LOAD

Description of Load:

Vehicle/Load Dimensions: LENGTH.....m WIDTH.....m HEIGHT.....m

ROUTE

Description of Route Surveyed:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Department for Transport,
Energy and Infrastructure

Vehicle Services

VEHICLE PERMITS

ABN 92 366 288 135
Kateena Street
Regency Park SA 5010
Telephone 1300 882 249
Fax 08 8348 9551

ROUTE SURVEY RESULTS

Description of every Obstacle (if any), their precise location on the Route (note: the survey involves checking adequate clearance exists for both the Height and Width of the Vehicle and it's Load) and the proposed solution to clear the Obstacle (PLEASE ATTACH ADDITIONAL SHEETS IF NECESSARY):

.....
.....
.....
.....
.....
.....
.....
.....
.....

VEHICLE OPERATOR

I certify that I have undertaken a Route Survey in respect of the Vehicle(s) Load and Routes described above and that at the time of the Survey there were no Obstacles on the Route other than those documented above.

Signature: Date:/...../.....

Please Print Name:

Company:

NOTE: A Permit Route Survey is required for Department for Transport, Energy and Infrastructure roads when the vehicle/load exceeds 8.0m width and/or 30.0m length. For all other roads, a Survey is required when the vehicle/load exceeds 5.0m width.

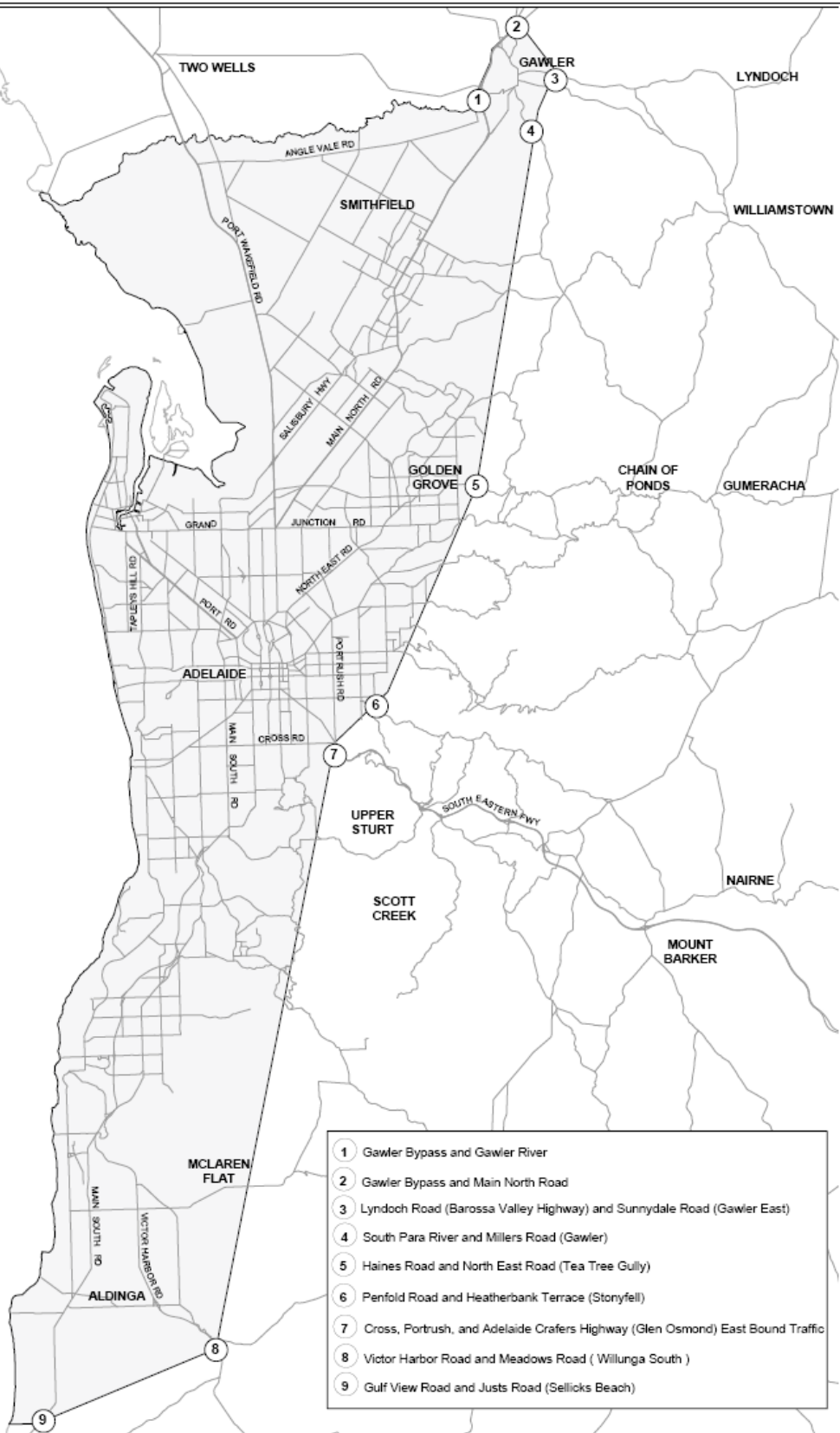
Appendix 3: Maps

Map 1: Adelaide Zone

Map 2: Adelaide Hills Zone

Map 3: Optus Clearance Zone

Gulf St. Vincent



- 1 Gawler Bypass and Gawler River
- 2 Gawler Bypass and Main North Road
- 3 Lyndoch Road (Barossa Valley Highway) and Sunnydale Road (Gawler East)
- 4 South Para River and Millers Road (Gawler)
- 5 Haines Road and North East Road (Tea Tree Gully)
- 6 Penfold Road and Heatherbank Terrace (Storyfell)
- 7 Cross, Portrush, and Adelaide Crifers Highway (Glen Osmond) East Bound Traffic
- 8 Victor Harbor Road and Meadows Road (Willunga South)
- 9 Gulf View Road and Justs Road (Sellicks Beach)

Produced by Transport Information Management December 2004

The Adelaide Zone



**MAP 1
ADELAIDE ZONE**


Transport of Indivisible Items

The information and data are provided herein as an information resource only. Whilst all reasonable care has been taken in the preparation of this information, Transport SA is not able to warrant the accuracy of this information and accepts no responsibility for any loss, injury or any other liability incurred by any person that arises as a result of the use of this information by any person or organisation.





- THE SHADED SECTION CONNECTED BY NUMBERED CIRCLES COINCIDES WITH THE BOUNDARY OF THE ADELAIDE METROPOLITAN AREA
- 1 Lyndoch Road (Barossa Valley Highway) and Sunnysdale Road (Gawler East)
 - 2 Haines Road and North East Road (Tea Tree Gully)
 - 3 Penfold Road and Heatherbank Terrace (Stonyfell)
 - 4 Cross, Portrush, and Adelaide Craters Highway (Glen Osmond)
 - 5 Victor Harbor Road and Meadows Road (Willunga South)
 - 6 Gulf View Road and Justs Road (Sellicks Beach)

 The Adelaide Hills Zone



Produced by Transport Information Management December 2004

MAP 2
ADELAIDE HILLS ZONE
 Transport of Indivisible Items

The information and data are provided herein as an information resource only. Whilst all reasonable care has been taken in the preparation of this information, Transport SA is not able to warrant the accuracy of this information and accepts no responsibility for any loss, injury or any other liability incurred by any person that arises as a result of the use of this information by any person or organization.



