South Eastern Freeway

Heavy Vehicle Safety Review

Government of South Australia
Department for Infrastructure and Transport

OFFICIAL

Document disclaimer

While every reasonable effort has been made to ensure that this document is correct at the time of publication, the Minister for Infrastructure and Transport, their agencies, instrumentalities, employees and contractors disclaim any and all liability to any person in respect to anything or the consequence of anything done or omitted to be done in reliance upon the whole or any part of this document.

Summary and key highlights

The South Australian Government has undertaken a comprehensive review of heavy vehicle safety on the South Eastern Freeway down-track (the city bound lanes) between Crafers and the intersection of Cross Road, Portrush Road and Glen Osmond Road.

The review is built upon safety measures that are already in place for all vehicles using the down-track of the South Eastern Freeway. These existing measures include increased signage, reduced speeds for heavy vehicles making the descent, and covering the costs of towing heavy vehicles from safety ramps.

The review explored:

- Potential infrastructure improvements as well as ways to better use existing infrastructure and systems such as safety ramps, signage and safety cameras
- Improving compliance and heavy vehicle driver competencies, including legislation, driver and industry training, and education and communication with industry and communities
- How technology can be used to improve safety
- Measures that other states have implemented to manage steep descents.

‘Heavy vehicles’ refers to trucks, buses and other large vehicles that are greater than 4.5 tonnes. Heavy vehicles are distinct from cars, vans, utility vehicles and other smaller passenger or commercial vehicles.

What we know

Recent heavy vehicle crash incidents on the freeway down-track have occurred in 2010, 2011, 2014 and 2022 and have been of varying severity.

While it is apparent that most drivers do the right thing by using the available safety ramps or pulling over safely in the event of brake failure, there are still cases where drivers have continued along the South Eastern Freeway and entered the intersection with Cross Road, Glen Osmond Road and Portrush Road. Tragically, in some cases, this has resulted in loss of life and/or serious injury.

The South Eastern Freeway down-track is steep. It consists of a sustained 7.5-kilometre continuous gradient of 6–8%. The freeway ends on the fringe of our metropolitan area, at an intersection of three very busy roads. While there have been several improvements made over the past decades, we have turned our attention to investigating what further improvements we can make to prevent and reduce the severity of future incidents.

The solution is complex and there is no single solution that will prevent all incidents from happening on all occasions. The Department for Infrastructure and Transport (the Department) has looked at a long list of potential solutions that relate to:

Changes to infrastructure

How we design the freeway, its geometry (i.e. steepness and curves), and other supporting infrastructure like lights and signs

Using vehicle technology

Smart solutions that reach drivers in their vehicles and remind them of descent and the need to drive for the conditions

Speed and traffic management

Making sure vehicles are moving along the down-track at safe and appropriate speeds

Road safety, education, behaviour and legislation

How we can get all operators and drivers to use the roads in a safe, informed and considerate way, and understand that there are consequences in place for when this does not happen.

Did you know?

The Department for Infrastructure and Transport does not charge trucks or buses a fee for using the safety ramps, and even covers the costs of towing heavy vehicles out of the safety ramp.

How we are responding to the challenge

Improving safety on the South Eastern Freeway is complex and requires a range of solutions.

To make sure we understood the problem fully, the review consulted with the heavy vehicle and transport industry, road research experts as well as the community about their experiences on the down-track.

We undertook a community survey and three industry roundtables to work through the complex issues, challenges and interdependencies that impact on safety on the South Eastern Freeway down-track. We received hundreds of comments and a diversity of opinions about what solutions might improve safety on the South Eastern Freeway down-track. These included:

- reducing speed (for heavy vehicles) is not the answer and many people are concerned it will have big impacts on their commute/travel time
- an extra lane on the down-track could better accommodate current heavy vehicle traffic
- support for a heavy vehicle bypass—reducing the amount of heavy vehicles using the South Eastern Freeway down-track
- effective driver education is a key part of the solution.

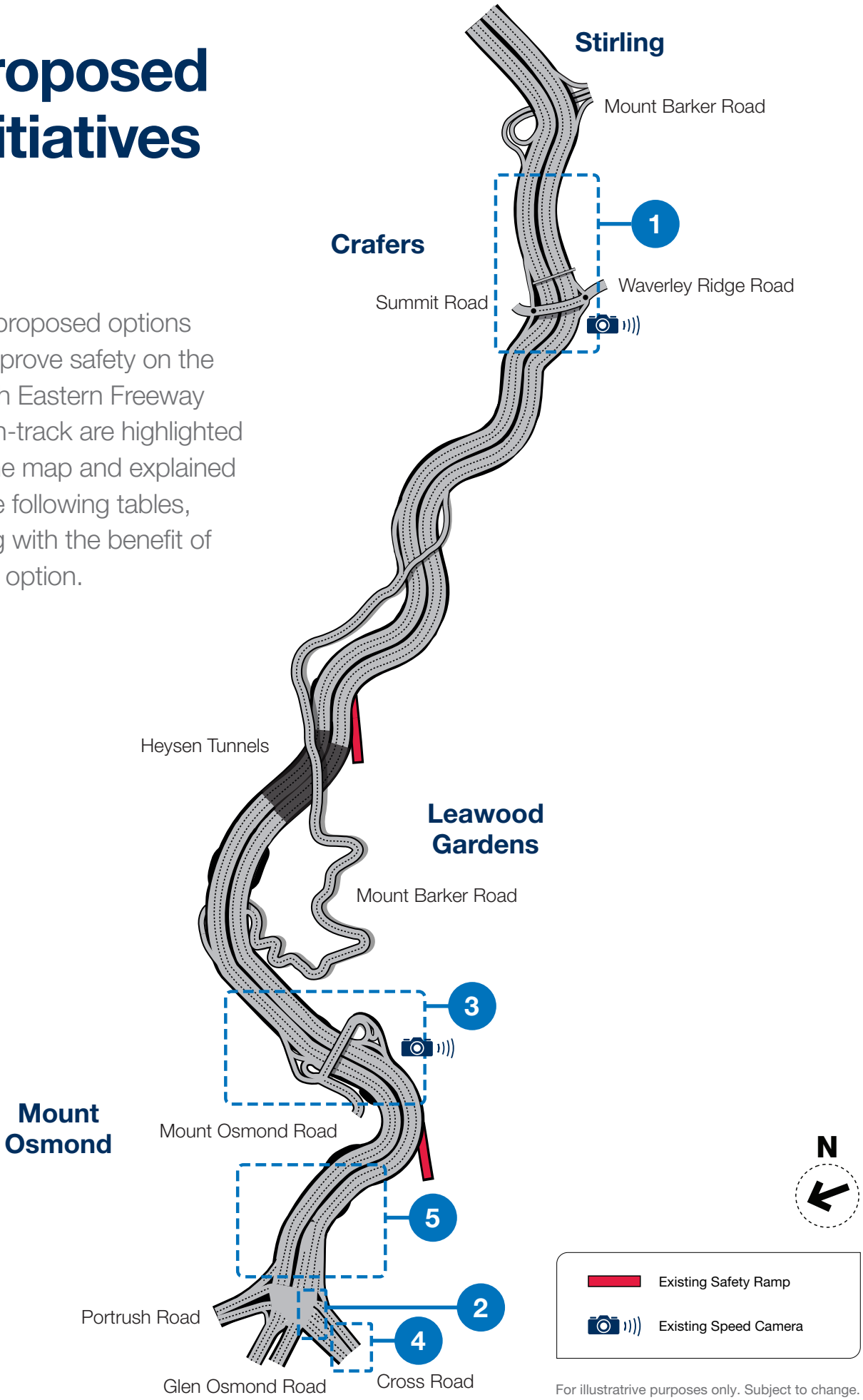
Following the consultation, we developed a long list of potential solutions—many of which were suggested to us by community and industry. We then worked with industry representatives and experts to develop a short list.

This process of shortlisting ranks and compares options against a robust set of criteria. It considers and balances all opportunities and impacts—whether they be community (social), environmental or economic.

Our shortlist of options is a mixture of short-, medium- and long-term initiatives. Several options can be delivered immediately to reduce the likelihood of another out-of-control heavy vehicle on the South Eastern Freeway. Others need to be investigated in more detail to determine their feasibility and the best way to design or implement them. Many proposed options will require business cases to secure funding for further design and construction.

Proposed initiatives

The proposed options to improve safety on the South Eastern Freeway down-track are highlighted on the map and explained in the following tables, along with the benefit of each option.



For illustratrive purposes only. Subject to change.

Short term (up to 18 months)

Solution	Description	Benefit
Education and awareness marketing and communications campaign	The campaign will target the road freight sector in both in South Australia and interstate. The campaign can include: • publishing informative webpages and social media posts on relevant government online platforms such as the Department, MyLicence, sa.gov.au etc. • using existing platforms, such as RAVnet, and adding messaging and links to heavy vehicle route maps • creating educational material on safe descent operation, such as journey planning, driver education and training, and legislative obligations.	More drivers and operators know how to do the right thing—reducing the likelihood and severity of an incident, if it were to occur.
Work with National Heavy Vehicle Regulator (NHVR) to send education material to fleet operators	This initiative may include: • using Automatic Number-Plate Recognition cameras to identify operators who are not regular users of the South Eastern Freeway and contact them directly with information and resources on safe Freeway descent • sending letters to registered owners to advise them of the descent and provide links to training and other related resources.	
Review Chain of Responsibility requirements for steep descents to be included in primary duty of responsibility	Look into improving steep hill descent requirements that can be added to regulation, legislation and/or industry education, such as roadworthiness, maintenance, and descent-specific requirements for companies or operators.	
Make improvements to South Australian licensing and driver training	Implementation of a South Australian-specific hill descent training package.	
1 **Implement a short slower zone prior to the top of the hill (at Crafers) to enable low gear engagement by trucks**	Implement a short 40km/hr speed limit zone prior to the top of the hill (at Crafers), and signage and pavement markings on the South Eastern Freeway at Crafers to enable heavy vehicles to select and stay in the correct appropriate gear on the descent. This could be implemented initially as a short-term trial and add in other measures such as vehicle type detection technology as subsequent stages.	Low gear will reduce heavy vehicle speed where it is most needed—putting less reliance on brakes (unless urgent) to slow the vehicle as it descends the down-track and reduce the chance of mechanical failure.
2 **Relocate Cross Road stop bar at the Freeway intersection**	Move the painted line indicating where vehicles should stop further away from the centre of the intersection.	In the case of an out-of-control heavy vehicle occurring, cars are not queued near the centre of the intersection and potentially in the path of the vehicle.

Solution	Description	Benefit
Revise South Eastern Freeway signage on-road and at rest areas	Update and refocus existing road signage and messaging to reduce unnecessary signage and encourage safer behaviour on the South Eastern Freeway and the use of safety ramps.	Make sure drivers are aware of the steep descent and are driving to the conditions, for example, heavy vehicles lowering gears and speed.
Enhanced compliance powers for efficient compliance and incident response	Prepare legislative amendment submission to: • enable National Heavy Vehicle Regulator (NHVR) compliance officers to make u-turns on the Freeway • recognise NHVR as an issuing authority under the *Expiation of Offences Act 1996* for the purposes of the *Road Traffic Act 1961* and *Motor Vehicles Act 1959* • enable the Department's compliance officers to have some exemptions to the Australian Road Rules to enable them to respond more efficiently and safely.	Allows compliance staff to more easily and quickly respond to potential dangerous vehicles or driver behaviour before an incident happens. Deters drivers from doing the wrong thing. Acts as an incentive for heavy vehicle operators to make sure their vehicles are mechanically sound.
Continue to investigate enhanced communications to drivers or vehicles	This could be implemented through: • enhancing route mapping systems, e.g. RAVnet • continuing to determine geo-fencing and radio break-in systems • continuing technology investigations for road to vehicle communications and alerts (requires further investigation).	Make sure drivers and operators are aware of the steep descent and allow communications to drivers of out-of-control heavy vehicles.

Medium term (18 months to 4 years)

Solution	Description	Benefit
3 **Create a heavy vehicle 40km/h slow checking zone below Mount Osmond Interchange**	Encourage vehicles to use the lower safety ramp through a new short section of speed reduction.	Allows for earlier detection of brake failure by drivers and cameras while there is still a safety ramp before the approaching the intersection.
Detection technology for out-of-control heavy vehicles combined with Intelligent Transport Systems	Use roadside detection devices to detect the size and speed of heavy vehicles in order to detect out-of-control vehicles. This can then trigger electronic signs along the South Eastern Freeway, alarms in the Traffic Management Centre and active emergency-stopping signals on the Cross Road approach.	Allows for earlier detection of heavy vehicles travelling too fast and directs them to a safe exit from the South Eastern Freeway while they can still do so.
4 **Install emergency stopping signals on Cross Road prior to the intersection**	This could be implemented in two stages. The first would use manual activation by the Traffic Management Centre operator. Longer term, this could be replaced by automated activation with detection technology.	In the case of an out-of-control heavy vehicle occurring, the intersection is clear of vehicles, potentially reducing the severity of an incident.

Long term (more than 4 years)

Solution	Description	Benefit
5 **Build a new (third) safety ramp**	Develop a business case to fund a ramp between the lower safety ramp and the intersection.	Creates an additional safe exit from the South Eastern Freeway at the point where drivers may realise they are experiencing brake failure or unable to regain control of their vehicle.
Further investigation for localised widening of road shoulders for emergency stopping	Increase sealed road shoulder width at various locations along the South Eastern Freeway descent. Both partial-and full-width shoulders are considered.	Provides more opportunities for vehicles to pull over in emergency situations
Further investigation study for targeted stopping station for heavy vehicle inspection and educate drivers	Develop a business case for funding. Look into potential locations for stopping station prior to and/or along the descent. Targeted pull-overs through Automatic Number-Plate Recognition that identifies operators or organisations that are not common users of the South Eastern Freeway.	Unsafe vehicles or inexperienced drivers are detected before they start going down the South Eastern Freeway—reducing the likelihood of an incident. Acts as an incentive for heavy vehicle operators to make sure their vehicles are mechanically sound.
Make improvements to National licensing and driver training	Work with the Commonwealth and other state/territory transport departments to implement a national hills descent training package as part of the Austroads project on the National Heavy Vehicle Driver Competency Framework.	More drivers know how to do the right thing—reducing the likelihood and severity of an incident, if it were to occur.

Other initiatives

Separate to this review, the Department is undertaking a study into a Greater Adelaide Freight Bypass that connects South Australia from the north and west to the southeast, without needing to go through the metropolitan area.

However, heavy vehicles will still need to travel through and service the metropolitan area as well as the Adelaide Hills and surrounds, which requires using the South Eastern Freeway down-track. The Greater Adelaide Freight Bypass would provide an alternative for some, but not all, heavy vehicles.

This planning study is currently underway and will aid in the planning and design of future public investments towards improving freight productivity.

Next steps

Now that we have a program of proposed options, these will be provided to State Government for further consideration.

We are already implementing some of the communications and behaviour change initiatives.

We will also collaboratively pursue initiatives with state and national licencing and compliance organisations.

Some of the more complex and long-term solutions will require more planning and business cases prepared that will enable the department to seek funding from the Commonwealth and State Governments.

Stay in touch

Find the latest information about the South Eastern Freeway Review on our website:

dit.sa.gov.au/sefreeway

Alternatively, you can contact our team:

DIT.engagement@sa.gov.au

1300 794 880

Published December 2022

Government of South Australia

Department for Infrastructure and Transport